Technological progress, unemployment and universal basic income: An interview with democratic transhumanist James Hughes*

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As the world of technology increasingly intersects with humanity, one name stands out as a guide in this complex and ever-changing territory: James Hughes. In this interview, we had the opportunity not only to learn more about the author's thinking and expertise, but also to explore the perspectives he brings on the technological future.

James Hughes is a sociologist and bioethicist who has dedicated his life to exploring the debate between technology and the human condition. Over decades of research, he has become a leading expert on the issues by which technology shapes and is shaped by society. Hughes has a PhD in Sociology from the University of Chicago, and is recognized for his work as executive director of the Institute for Ethics and Emerging Technologies (IEET), where he leads research and debate on crucial topics such as artificial intelligence, genetics, biotechnology and neuroscience. His many papers, articles and books are recognized for their pragmatic and ethical approach to technology, and have become important reference works in the debate on transhumanism and emerging technologies and their many impacts.

In the following interview Murilo Vilaça (MV), Murilo Karasinski (MK) and Jon Rueda (JR) explore the political implications of emerging technologies, the relationship between bioethics and transhumanism, the discussion of the transcendence of the human condition through brain-machine interfaces,

* We thank Fundação de Amparo à Pesquisa do Estado do Rio de Janeiro (FAPERJ – JCNE: E-26/201.377/2021) and Conselho Nacional de Desenvolvimento Científico e Tecnológico (CNPq): APQ/PRÓ-HUMANIDADES (421523/2022-0) and Bolsa de Produtividade em Pesquisa/PQ (315804/2023-8) for their support for Murilo Vilaça.

ISSN 0211-402X (paper), ISSN 2014-881X (digital) https://doi.org/10.5565/rev/enrahonar.1543

as well as fundamental questions of justice, equality and responsibility in the context of human improvement.

Murilo Vilaça (MV): Although there are neo-luddite, denialist and even primitivist movements, there seems to be a reasonable majority understanding that scientific and technological progress is an important human achievement, perhaps the most important. However, to paraphrase something from the Transhumanist Declaration,[1] it is plausible to say that "not all techno-scientific progress is social progress". The seemingly paradoxical plausibility of these two sentences reveals something very fundamental, namely, that science and technology are permeated by or even constituted of ambiguities. Motivations, purposes, uses, applications, effects, consequences, etc. can vary immensely.

Although they are not exactly new, pro-techno-scientific-advance movements, which place significant positive expectations on these advances, have become noteworthy over the last few years. One of them is precisely Transhumanism, which is the target of a lot of criticism and also of unfounded accusations and detractions. One of the main claims of reasonable critics (and here I would just like to say that I don't have in mind someone like Francis Fukuyama) is that the changes advocated by transhumanists could further degrade already fragile democratic society. That is, techno-scientific advances could generate socio-political setbacks, for example, by increasing inequality among citizens. Besides the fact that advances are ambiguous (I mean, they can be positive or negative), access and the distribution of their possible benefits is still a great challenge for democratic, liberal and capitalist societies.

The democratic transhumanism that you developed is a response to challenges like these, and one of its underlying assumptions is, as you state at the beginning of *Citizen Cyborg,*[2] that "people are generally happier when they have more control over their own lives, and technology and democracy are the two key ways by which we can exert more control over our lives." Following that statement, you give a number of positive examples from the past. As a first question, I would like you to update your analysis, considering how technological advances have impacted people's lives and the democratic system today. Also, if possible, as an act of imagination, I would like you to project your analysis into the future, addressing the following question: Do we have strong evidence to bet on an equitable, if not egalitarian techno-progressivism that does not further exacerbate the state of sub-citizenship of the majority of the population in democratic, liberal, capitalist countries? I don't know if it's clear, but that would be my question, if there is evidence to bet on a techno-progressivism that would not affect or even further exacerbate the state of inequality between people.

1. Baily, Doug et al. (2009). *Transhumanist Declaration*, 2009. <http://humanityplus.org/learn/transhumanist-declaration>.
2. Hughes, James (2004). *Citizen Cyborg: Why Democratic Societies Must Respond to the Redesigned Human of the Future*. Cambridge, MA: Westview Press.

James Hughes (JH): Let me start with the fact that I'm primarily a sociologist, and part of my problem has been understanding history outside of a teleological framework – Marxist teleology or Christian teleology. In other words, I don't think it's rational to believe in a dogma of progress, that we are necessarily headed to progress. And I think that every historical period, and my concession to Materialism or my understanding of Materialist history, is that [in] every historical period, the possibilities of what human beings can do are bounded by the technology they are practicing or using. But within those bounds, you have quite a variety of possibilities.

David Graeber's recent work on Primitive Anarchism[3] shows that there are many examples of participatory egalitarian societies in the hunter-gatherer period and so on. So I think it's possible to imagine that we could have had a better road to industrialization, electricity, modern medicine, all the things. A more egalitarian one, one with less imperialism, one without slavery… We could have. But we didn't. There were some that had it and some that didn't. I think the lesson of that for me is that trying to project the new social parameters that emerging technologies are going to create, which are just blowing possibilities open, means that there is an enormous range, an enormous terrain of possible outcomes: from apocalypse to millennium, to utopia; from extremely egalitarian to extremely inegalitarian; [from] a surveillance state to complete privacy – all the different outcomes. And the goal of, I think, people with our political values and our ethical values is to try to set up the present in as egalitarian and liberal way possible so that whatever future emerges is most likely going to be more liberal and egalitarian.

Now, we may get to a point – and this is one of my persistent concerns – where the liberal individualist subject of liberal democratic thought is eliminated. In other words, if we begin to manipulate consciousness, memory, values… Moral enhancement, I think, poses this possibility. If we begin to connect minds, if we begin to upload animals… There's all kinds of things that will begin to destabilize the [idea that] "every human has human rights and every human should be equal," that basis that Fukuyama was worried about, it could be destabilized, and it could theoretically be destabilized in the direction that institutionalizes some kind of biological slavery system – that if you have these characteristics you have rights, then if you have these, then you are property. And that was what I was trying to address with *Citizen Cyborg*.

It was to say that as we approach that future, we may pass a point where our values, you know, John Danaher has pointed to axiological futurism,[4] we

3. See, e.g., Graeber, David (2004). *Fragments of an Anarchist Anthropology*. Chicago: Prickly Paradigm Press. Retrieved from <https://theanarchistlibrary.org/library/david-graeber-fragments-of-an-anarchist-anthropology>; Graeber, David & Wengrow, David (2021). *The Dawn of Everything: A New History of Humanity*. New York: Farrar, Straus and Giroux.
4. See, e.g., Danaher, John (2021). "Axiological Futurism: The Systematic Study of the Future of Values". *Futures*, 132, 1-14. See also: Vilaça, Murilo M. and Karasinski, Murilo (2023). "Interview with John Danaher on Axiological Futurism: In Pursuit of a Better

may get to a point where we can't predict what values are really going to work in that situation, but the values that we have now I would like every creature, whether they are in silicon or biology, to have equal rights on an equal basis. So it was an attempt to think about what it would mean to have cyborg citizenship, to have animals with a certain kind of consciousness be on the same plane as a human with the same level of consciousness. That politics, you know, I'm waiting for it to have a mass appeal. You can see it in speculative fiction. I actually started 30 years ago with a survey of bioethics people, and I asked how much science fiction they consumed, and the more science fiction they consumed, the more they approximated the kind of ethical stance that I'm talking about, the more that they wanted to treat all animals on the basis of their level of consciousness, for instance. The more that they were willing to acknowledge that a robot can have consciousness. So I think that there are pockets of our culture. "The future is here. It's just not evenly distributed." That's what William Gibson said.[5]

So I think there are pockets of our culture that already have the foreshadowing of what the politics of the future will be, and of course, there are pockets of the world where they're still in the 16th century, so we have a lot of work to do. But at any rate, no, I'm not certain of the victory of the good. That would be contrary to rationality, I think. But I'm certain that it's possible to achieve better things. Now, just looking at history, I think that you can make a case for this very brief span of history that we understand, you know, two, three, four thousand years or whatever… that in general, the advance of technology has improved human welfare.

Now, you wouldn't have said that 10,000 years ago, because the evidence is that the transition from hunter-gatherer society to settled agriculture was actually quite bad for us. It was good for the growth of the population and it was good for the growth of social hierarchy, and the growth of territorial kingdoms, but it wasn't good for human health. We got shorter, our life spans got shorter, we lost more teeth because we were eating all the carbs instead of good healthy roots and vegetables or whatever. So, you know, there are particular periods – the early transition to the industrial revolution: miserable. Miserable for lots of people. And when people argue about, for instance, Steven Pinker's historical progressive vision,[6] which I think is basically correct, about violence, they point to enormous amounts of violence, and we all have to acknowledge: the 20th century sucked in a lot of ways! But, even in the 20th century, you were less likely to die of violence than any previous century! So yeah, things still suck, but they suck less! And I think that's the goal.

Understanding of the Relationship Between New Technologies, Risks, and Ethics considering Value Changes". *Trans/Form/Ação*, 46, 13-30.

5. Gibson, William (2003). "The Future is Already Here – It's Just Not Evenly Distributed". *The Economist*, December 4.
6. Pinker, Steven (2012). *The Better Angels of Our Nature: Why Violence Has Declined*. New York: Penguin Books.

Now just one final thought: When I wrote *Citizen Cyborg*, I was still strongly committed to a kind of Buddhist consequentialism, or consequentialism… I was committed to John Stuart Mill, and I was trying to say, "What would John Stuart Mill say about this balance of democracy and individual freedom and technology?" And then I started to work on moral enhancement, and I began to realize that just as consequentialism, just as… Eventually, neurotechnology will not only challenge the liberal individualistic subject, but it will challenge the idea of happiness. You could have parts of your brain stimulated to generate whatever emotion it is that you think is the consequence of good, you know… is what we're trying to get – happiness, contentment, the sense that you have accomplished your goals in life, whatever and however you define consequentialism. You can do that artificially without changing anything about the person's life. And in that situation, I think the idea of a consequentialist idea of social policy evaporates. So I have begun to move more towards a virtues model, kind of like Amartya Sen and Martha Nussbaum's idea of a capabilities approach, that it's not so much whether people are happy as the goal, but how many capacities they have for happiness. And I think that's the big change from when I wrote that. You know, I would no longer try to argue that we can make people happy. We can probably make people happy with pills, and not have to do all this other stuff. But we can't make them freer with pills.

Murilo Karasinski (MK): At the end of *Citizen Cyborg*, you argue that we would need a high-tech vision for a radically democratic future. In this sense, you argue for proposals for a strong transhumanist movement, not only fighting for the future but for a positive future; for a New Left that would be global, as well as, to give one final example, to secure the right of all people to control their own bodies and minds. Considering that it's been almost 20 years since the original publication of the book, how do you see these issues today? Are there points of improvement or worsening in society's terms? And the most important thing is: if you had to rewrite the end of the book today, would you keep those proposals?

JH: I am still pretty happy with that political agenda at the end of the book. I have been a left-wing social democrat my whole life, so one of the things that I thought was going to have more impact than it turned out to be was the collapse of the Soviet Union. I thought that the Left's fantasy with or experimentation with that kind of totalitarian model of social change would not be popular any more. And at least for the pockets of the American Left that I'm still working with, there are still people who defend Stalin and Mao and all the other regimes, and that has been extremely depressing, that people have not learned that these are not liberatory regimes today and they weren't liberatory regimes then! They were some form of bureaucratic class society that used every tool of oppression to keep everybody in line, and that's not my vision of an ideal future.

So I think that's been depressing. And the European Left, of course, has been experiencing this divide between the Pro-Ukraine and the Anti-Ukraine, of course, and this has become quite catalytic, I think, of a rethinking all across the political spectrum about liberal democracy, and whether the global struggle is, as Joe Biden would like to make it, one between liberal democracy and autocracy. Whether the US imperial machine can be trusted to wage a truly democratic international struggle, I'm not confident! But that is the way that I see the global struggle, first, for a liberal democracy. And there has been a democratic recession for the last ten years that is very troubling. And one of the reasons why I turned a lot of my attention away from futurism and towards politics was because the election of Donald Trump showed that the American democracy was much more fragile than I expected. Bolsonaro, the same. You know, I thought Brazil was past that. We all thought Europe was past that, and now we've got Giorgia Meloni and Hungary and Poland, Finland, Sweden, neo-Nazis popping up in, you know, Luxembourg… So it's very, very troubling, the global trends… But, again, if you would take seriously the destabilizing… the possibility of creation of technological change, then you have to look… You know, the hype all around AI [Artificial Intelligence] is: "Oh, is it going to affect work?", "How is it going to affect propaganda?" For me, it's like, this could break everything open. This could put people on the streets. It could enable empowering workers' movements through new AI tools. It could enable forms of surveillance that wake people up to the threat of surveillance.

You know, everything could start to change very quickly from this technological push. So I think that there's a combination of a great sense of possibility, as well as kind of… it's not at all the world that I expected 20 years ago. The other thing that hasn't happened is the emergence of autonomous biopolitics or technopolitics that is truly distinct from existing politics. And what I mean by that is… I was looking for there to be, you know, not only libertarian transhumanists and social democratic transhumanists but also fascist transhumanists and social conservative transhumanists and Christian conservatives who adopted… and it didn't turn out to work that way. Because all the trends and all the evidence that is accumulating suggest that, really, technology attitudes are closely tied to people's attitudes about sexuality, gender, race, nationalism, religion, secularism and so forth, so the dimension of cultural politics, cultural cosmopolitanism associated with the Enlightenment. If you accept, you know, the further you are on that spectrum, the more likely you are to think that artificial intelligence or genetic engineering are going to be OK, or at least acceptable, manageable. And over here, you are going to be more likely to have wild conspiracy theories about how terrible they are, and why people are doing it. So I think that has been the big conclusion I have made about what was wrong with *Citizen Cyborg,* that there is no third dimension of politics. It's all part of our existing politics.

Jon Rueda (JR): My first question is related to technological unemployment and big tech. My question is: Artificial intelligence may become a major force

in job destruction in the future. Generative AI – based on huge linguistic models – has gained recent popularity, especially thanks to the release of ChatGPT. Lately, predictions that generative AI may increase the phenomenon of technological unemployment have been recurrent in the media. In addition, behind the development of these AI tools, there are usually large corporations. What is the responsibility of Big Tech in the phenomenon of technological unemployment? Should a specific tax be demanded from large technology companies derived from automation tasks that destroy human jobs?

JH: Technological unemployment is something that those of us who believe it is coming, like me, should be very careful about predicting, because historically we've been wrong quite often about that. So if you had started to look at the trends in the 2000s of the decline, for instance, in the United States, of the proportion of the population in paid employment, it started to decline after the year 2000. Most of that decline, if not all of it, was because of age. People aging out, the baby boomers aging out of the workforce. It wasn't because of technology. And the low productivity figures, up to the present, of the declining increase in productivity in most industrial economies has not supported the case for technological unemployment. Nonetheless, I believe technological unemployment is coming, and we may be at that turning point now. We just have to be very careful. I am delighted that people are worried about it, because it's something we should be talking about, and it may require technological unemployment to make some of the social policy changes. It may require signs of technological unemployment to convince people that we need to gamble on something like universal basic income, for instance. But universal basic income has policy rationales that don't require technological unemployment. It just may be a convenient nudge in the direction of that.

Now, in terms of whether to tax displacing industries, if you go back historically, would we have wanted to tax plough-makers for displacing farmers? You know, would any industrializing society have thought it was good industrial policy to discourage the automation of farming in order to keep people on the farm so that they wouldn't all be flooding into the cities? They didn't and they probably wouldn't have thought so if they had the idea of an industrial policy. So I think the idea of which industries we tax, and how, and even what employment policy – people required to do work in order to get paid, you know. The idea of UBI [Universal Basic Income], of paying people just to whatever, is only one of the ideas, because expansive work programs have also been a left-wing policy, and I think have more political leg. So some combination of UBI, expansion of access to work, expanded social services, is really my ideal vision of a social policy framework. And how will you fund that fiscally and how you keep an economy going…? If we were just to expand a UBI, in the first place, it wouldn't provide enough for most people to live on, so they'd still have to work. If we took all the social spending of the United States and gave it to people's UBI, about 5,000 dollars a year, which is not enough here to live on… But even if we were to expand UBI, if we have a

fiscal state that taxes income in order to finance redistribution, then you're stuck, because you don't want to destroy the goose that's laying the golden egg. You want to make sure that the economy keeps trading over. So we could be in a situation where, you know, some industry is destroying a lot of jobs, but we don't want to destroy the economic generative activity of that industry by taxing it or weakening it or slowing it down. And this, of course, is a dilemma that many countries, you know, export-defined economies often face. The export sector in their society can be highly distorting. Petrol states are kind of a classic example.

You know, you have one percent of the population that can make money off of petroleum, but it's more money than anybody else is going to see in the whole country. So if you're Norway, you can do that one industry and fund everything else. Then if you're Saudi Arabia, Russia, Iran or whatever, then it all goes into weapons and Swiss banks, but anyway, that's a whole long rabbit hole, but the basic point here is ChatGPT – I'm delighted that it's getting us to talk about technological unemployment. I think we probably are going to see technological unemployment or at least rapid job displacement.

Let me also say something else about education, because I think the effect on education – my ideal vision of a future of education is to have every child be given a learning tool that would know them as intimately as any teacher ever could, and be able to guide them through a self-guided exploration of the world until they have checked every possible pedagogical box. And I think that would be far better education in the future than having a bunch of distracted overworked human beings trying to impart 20-year-old knowledge to them in these other ways. So one of the things that I think is going to happen is that we're hopefully going to begin to become more of a learning society, so that people can, for unfortunate reasons, which is that people will still want work. The work will be constantly changing and disappearing and they will have to, you know, do a six weeks skills seminar in order to understand the software platform that job might require, so that work and learning life will become more iterative through time. So we will also have to change our educational systems in order to adapt to this new future, and that's the other depressing thing. I don't think higher education in the United States is at all ready for what's coming.

MV: So there is a concern with the possibility of having this technological unemployment. You have been talking about this for a long time now. You wrote many texts about this point of the debate, and in *Democratic Transhumanism 2.0*,[7] you listed eight points that should be included in a program for Democratic Transhumanists. The eighth point out of eleven is: "Provide job retraining and an income to the structurally unemployed." So this proposal of either a UBI or a Universal Basic Income Guarantee (BIG) is present in

7. Hughes, James (2002). *Democratic Transhumanism 2.0.* <http://www.changesurfer.com/Acad/DemocraticTranshumanism.htm>.

several of your texts and was even the object of analysis in a whole issue on technological unemployment and basic income that was published in 2014 in the *Journal of Evolution and Technology*.[8] The idea seems interesting and pertinent to me, and I would tend to bet on it in an ideal plan. But listening to you, it seems like the actual possibilities of making it true are not very promising. In your text, when you presented this issue, you said something like, "Once the political class begins to accept that expanding the social wage is inevitable, there may be an opportunity for a Left-Right coalition for a Basic Income Guarantee". But you said, "I argue that it is likely to be shattered once the expropriation required to finance a decent basic income becomes clear." So my question is about the feasibility of this basic income, because it seems that it's a solution but at the same time it's a solution that is stillborn, you know, once it is born it's already compromised and it won't have a future. So I'd like to know if you considered the interests that are at stake, if this basic income is still, in your understanding, a possible solution for a possible problem, which is technological unemployment.

JH: The political fracturing between Right and Left versions of the UBI has been with us ever since the origin of the welfare state. We have had, you know, the British National Health Service staunchly defended by Britons. Whenever Margaret Thatcher or anybody else tried to get rid of it, the Britons say "No", but it is one of the most poorly funded health systems in the industrial world. In terms of… it's the cheapest in terms of GDP [Gross Domestic Product]. It's cheap also because of efficiency, but it's also… it could improve services if it was better funded. So the Britons are always fighting over how well-funded the National Health Service should be, and that is true of every social welfare program in the world. There are demonstrations going on in China right now, because the Chinese government, just like Macron, is trying to dial back retirement pension benefits for senior citizens, which they are going to have a huge problem with. And this is the other dimension of all of these social changes and the kind of predictability of the future. We can predict fairly certainly that there is going to be an increasing number of old people who are going to be expecting to retire and a shrinking number of working-age people who are going to want to pay taxes. So one of the things that always looms over this debate is: pensions and social security systems in general are going to become fiscally unstable. There are going to be huge fights across the world between young people who don't want to pay taxes and older people who want those taxes. And for me, UBI and universal programs in general are the way to break the political deadlock of means-tested, age-focused social policies.

In other words, in the United States, instead of having a generous health insurance plan for everybody over 65 and nothing for those below, we should

8. Hughes, James (2014). "Are Technological Unemployment and a Basic Income Guarantee Inevitable or Desirable?". *Journal of Evolution and Technology*, 24, 1-4.

have universal health care. Instead of having social assistance only for those over 65 – social security – it should be for everybody. That, I think, is going to be the left wing of the reform demand as we go forward, [which] is to universalize, especially as we live longer. Really, I agree with Macron, I agree with Xi Jinping, at least, that it doesn't really make sense to hold the retirement age to 60 or 65 forever if people are living to 150. I agree. But the caution is not to just tweak it here so that more old people have to work a little bit longer when there might not even be jobs; it is to create universal programs that will create solidarity between younger people and older people. Now, the other thing is to keep in mind the context of the social wage, because the form of the social wage is important, but in general you can… If you plug this hole and this hole and this hole – if you plug enough holes in your society, you've got a good social safety net. It is not as well-thought-out, as rational, as fair as a universal platform but, you know, Germany technically doesn't have universal health care. Germany has, like, five or six different health care plans that, in sum, cover every German, but it is not just one plan. But the advantage of one plan with one set of policies is that those become extremely sticky. Whenever the Republicans in the United States want to try to get rid of Medicare for old people, they have a hard time, because that is a universal program we get – Medicare and social security. But Medicaid, which is just for poor people, a means-tested program, is very easy to attack. And that's true in general. If it's a means-tested program, it has a small constituency. If it's a universal program, even if you have to make it thinner to make it universal, then it becomes universally popular and something that you can't get rid of, and a way to respond. So even if we were to give every American just a dollar a month, you know, just say if we had that commitment, as we did during COVID, to give everybody something, then when technological unemployment comes, or when we have major meltdowns because of the old age dependency ratio shifting, we will have a tool to respond within social policy.

So I don't think that the political feasibility of UBI has declined. It's going up. It's becoming much more… Since COVID, since the AI anxieties, it's becoming much more popular. Now, the point about the Right or Left, Andrew Yang, who ran for President in the United States in 2020, he ran more or less on the UBI platform, very much making the connection between technological unemployment and UBI. During his campaign, he was running as a Democrat, so during his campaign, he was mostly being a kind of social democrat of some kind. But after he finished his campaign, a solid half of his base was far-right. Well, not far-right; generally libertarian types who were alienated by Christian conservatives. So they weren't Nazis. They were, you know, crypto bros, and they had become excited about UBI as a way to smash the welfare state! Because that's the other… The right-wing imagination about UBI is that it will allow you to get rid of all the other social welfare programs and shrink the entire welfare state down to a check that they just send to people. And yes, that could happen too. That's not my ideal. I still think you need hospitals and universities and roads and, you know, all the other things.

And UBI has to come as an addition to that, and not instead of that. But the crypto bros are definitely a part of Andrew Yang's imagined political constituency for a new center party. He's created a new third party.

Now, if you look around the world, I don't see UBI being built into the political programs of many parties yet. It has been much on the minds of pirate parties and green parties and some far-left parties, but not so much mainstream social democratic parties as the ones that I would hope to take it up. We'll just have to see. But I know in Brazil there has been quite a discussion. Lula had implemented – it was more of a conditional basic income guarantee and you had to get your kids to school or something like that, but you know, I was very excited by what Lula had done last time.

MV: In Brazil we have a program called *Bolsa Família*, which is a cash transfer program that varies between 400 and 600 Brazilian *Reais* given to each household, and if I'm not mistaken there is an additional 150 *Reais* per child, with an age limit. There is a Brazilian politician from Lula's political party who has defended this universal basic income for a while, but he was never able to get his proposal accepted. People do not take him seriously, so I don't know to what extent Brazil… In Brazil, James, the middle class is particularly resistant to the idea that people should receive a certain amount of money without doing anything for it, because the Brazilian middle class has the idea that what they were able to achieve was by means of their own effort. So there is a cultural resistance in Brazil to establishing a basic universal income. But public policies like… We have a public healthcare system, which has several limitations, but any person, rich or poor, can go to a public hospital and get medical care in a wide range of situations.

JH: Let me just make a point about that, which is that one of the dilemmas of creating a social welfare state is that the more generous it is, the more important it is to build boundaries. The United States let in lots of immigrants when we didn't give them anything. I mean, it's like: "Come in! Work! Go find land! But we're not going to give you a dollar!" But you see in Denmark, for instance, a very generous welfare state, and they are now zealously protecting access to Denmark. They don't want a lot of immigrants. God bless the Germans for having let in all those Syrians. They thought in a more long, foresighted way that Germany was shrinking, they need more workers, etc., but it is kind of a complex thing. If you create a very generous welfare state, you don't want a bunch of people coming in and leeching off of it. So I think the idea that people have – that "We don't want the undeserving poor to benefit from our generosity" – that's a universal idea. In places where it's lowest, it's where you have a lot of social trust. Places like Scandinavia. And in places where people distrust each other the most, places like China, actually. China is a place where people distrust each other a lot! So I can see, you know, if Xi Jinping were to announce that, "We're going to go to UBI", people would go like "Hell, no! I'm not going to allow my yuan to go to Shanghai,

those lazy people in Shanghai!" So it's really complicated, how you get there politically. But I think there's a tipping point when a significant number of people know a significant number of people who have lost their jobs or whatever, whenever that tipping point comes, and it will come.

JR: My next question is also about the basic income guarantee, about its sustainability not in an economic sense, I think you have already talked about it, but more in an environmental sense. It's common to appeal to a "new social contract" when people are defending the basic income guarantee as an urgent policy against technological unemployment, and I think that many other people think that to be as comprehensive as possible, this new social contract should also include the technological impact on future generations and the environment. But recently, I think there is an increasing academic and social debate about the environmental impact of digital technologies, especially AI, so it seems sensible to argue that the debate on basic income guarantee and technological unemployment should also be discussed, not only in terms of economic sustainability in mind, but also in terms of environmental sustainability. So the question is: Does a move towards a future with higher unemployment due to technology also have environmental trade-offs? And do environmental burdens tend to be overlooked too much when discussing this issue?

JH: Well, there's a lot going on in that debate in society. Part of it is that there certainly would be – and we saw this during COVID – there certainly would be environmental benefits from people working less, even if it meant, or especially if it meant that we were all poorer as a consequence – so if people lose their jobs and don't have to go to work, and don't have to burn gasoline to go to work, and the factories don't have to burn gasoline to heat the factory, etc. But that's not the ideal path, you know, that kind of disastrous poor version of the future is not the ideal path. And the other way that you could imagine is that climate catastrophes would be so extreme that we would enact draconian industrial policies, or conservation policies, that would have a depressive effect on employment. So it could happen either way or both ways.

I think the ideal scenario is one where we change the technologies that we're using in all of our processes – extraction, manufacturing, transportation, home heating, you know, all of the different things. We'd change them to be more conservative, and that's already been happening, so that we continue to use less carbon or less energy, in general, as we continue to improve the material comfort of our lives. And I think that that, politically, is the only path, because trying to build… You could imagine, if you had a completely totalitarian control of the state, that you could get away with saying, "Ok, we're all going to work half as many hours, we're going to have the electricity on half as much." You know, North Korea achieves it. North Korea hardly has electricity on at all and they achieve that, but that's not the ideal future.

The ideal future is where we all democratically decide to move in the same direction. That will require it to be at least as materially comfortable as we are

now, if not much better. And I think that's a possibility. I think we're already moving in that direction with, for instance, Europe's adaptation to this last winter. Now, this last winter was very mild, so it was not the winter that Russia was hoping for. But this last winter for Europe proved that they could have done this all along! They did not suffer that much cutting back on their consumption of oil. And we could all move a bit more quickly in the direction of renewables, and so forth.

I think the other huge, pernicious thing, you know, I edited a journal called *EcoSocialist Review* for seven years, and I really saw myself as someone who was trying to build the coalition between the greens and the social democrats, as we saw ourselves. And to figure out what a left… a green social democracy would look like. And part of that, for me, was the complete rejection of population discourse. You know, that "population" was somehow a problem. And now we have the whole debate about effective altruism and long-termism, and their worry that there aren't going to be enough babies and things like that.

Let's just set that aside for a second because I think they're right, basically. They're not right about their policy prescriptions, but they're right about the problem. And it's very difficult to talk about the ideal population of the future, but one thing that we have to reject on the part of environmental discourse is that we do not have a population crisis. If we have a population crisis, it's that we don't have the right kinds of growing population. We need more young babies. Now, if we're not going to put women in purdah and require them all to have babies, then how do you get more babies? Well, you get more babies if you make it as easy as possible to have babies! Everybody who wants access to reproductive technology should have it. Everyone should have free childcare, free healthcare, free higher education, paid sick leave, paid family leave – all the things. You know, you do all of that, like Denmark does, and still don't get more babies…

So we probably are headed towards half as much population in a century as we have now. And I think it's quite feasible in that context to say: If we do this right, if we have the right kinds of technologies, we could become greener and greener as a planet, older and older, and have better and better quality of life for everyone. All of those things are possible. And we don't have to make any sacrifices. So I'm very opposed to the idea of people saying, "We have to approach the future from the perspective of a neo-pastoralism," you know, that the industrial era was a mistake, and we have to go back and learn to garden again. I have a huge vegetable garden. I couldn't survive for one week on what I grow in my garden! So I'm not going back! It's not possible.

MK: In August 2020, Neuralink, one of billionaire Elon Musk's companies, live-streamed a demonstration of a brain-machine interface on a pig.[9] More recently, in April 2021, Neuralink also showed an experiment in which a

9. Available at: <https://www.youtube.com/watch?v=NqbQuZOFvOQ>.

monkey could play videogames with its brain, wirelessly.[10] In 2023, Neuralink applied for authorization to implant its artificial intelligence chip in humans, which was denied by the FDA [U.S. Food and Drugs Administration] at first. Brazilian neuroscientist Miguel Nicolelis, one of the most active researchers in the field of brain-machine interfaces, demonstrated that such technologies can cure, by means of electrical stimulation, diseases such as memory, hearing, vision, or movement loss, chronic pain, and even anxiety, depression, insomnia and addictions. Despite all this, the risk remains that such "cyborg" technologies could usher in a neuro-capitalism, in which Big Techs would have much to gain if they had access to people's mental content. Against this background, we would like to know your opinion on these brain-matching interfaces. What do you think about their use by society?

JH: Nita Farahani, one of the founders of Neuro-ethics in the United States, just published a book called *The Battle for your Brain.*[11] She's a tad more libertarian than I am, but in this context, not a bad thing to be, you know, focused on cognitive liberty as the framework for how to approach brain-computer interfaces. Elon Musk raises the issue that we always have to stand back from the techno hype of the moment in order to assess where we're at with the technology. BCIs [Brain-Computer Interfaces] have been something that people have been experimenting with for decades. One of the first transhumanist papers I ever wrote was for the Cuban Meeting of the International Network for the Definition of Death, back in 1996.[12] They have a conference in Havana every four years, and I wrote a paper on how brain-machine interfaces back in 1986 would make death more difficult to diagnose in the future. And we keep waiting for those breakthroughs to come.

I think Neuralink, the technology that Musk – he didn't invent, that he was funding, that he was supporting – that technology was very promising, it's still very promising. The shortcuts that they took around animal safety, and there were some other things that the FDA didn't take. It's like, OK yes, they should clean [up their act] – Did a company run by Musk take a shortcut? Wow, what a surprise! You know, it's like, yeah, I believe it! – But I think in the end, that technology will be one of many that will make moves forward here. I'm also very excited by neural dust, which is the idea of creating tiny little transistors that have two-way communication capacity that you can just drop into the brain. We need to get to a step where you don't have to do brain surgery on people to do this research, you know. You'd be able to just take a pill, have things just kind of spread around, and do what they do. In the long term, I am a Kurzweilian on this. Ray Kurzweil's kind of model of what's going

10. Available at: <https://www.youtube.com/watch?v=2rXrGH52aoM>.
11. Farahany, Nita A. (2023). *The Battle for Your Brain: Defending the Right to Think Freely in the Age of Neurotechnology*. New York: St. Martin's Press.
12. Hughes, James (1995?). *Brain Death and Technological Change: Personal Identity, Neural Prostheses and Uploading.* Paper presented at the Second International Symposium on Brain Death. Havana, Cuba. <http://www.changesurfer.com/Hlth/BD/Brain.html>

to happen is basically what I believe, which is that things are going to get smaller, faster and cheaper.[13] And we're going to have enough computing power on tiny little robots and chips that we will be able to create very high bandwidth, two-way communication with the brain, and start to augment the brain's capacities eventually with computer capacities – computer memory, computer processing speed, access to the internet, things that we can't imagine yet… immersive virtual reality, all the things that we think about. How long's that going to take?

You know, I'm a sociologist, man. I'm not a brain scientist. But the brain scientists think it's going to take a really long time. Now, if you discount the fact that they are motivated more primarily to be conservative about this stuff, and they're in the trenches, and they can't foresee the unexpected breakthroughs that will come, you know, [and] cut their time in half, I guess. But it's going to come, probably in the next couple of decades. We can see the rapid progress with brain-computer interfaces where we've had [for example], the prosthetic – so just creating a computer chip that can do two-way nerve communication. You can do that on an arm, a hand, a foot. So those breakthroughs have already been made. They're expensive, but we've got prosthetics that do that, that give you haptic feedback and all that. In the next stages, people are putting chips into the spinal cord in order to repair spinal damage. They're putting chips into the brain for all these different neurocognitive problems, and hundreds of thousands of people are walking around with deep brain stimulation devices, not yet with two-way kind of devices we're talking about, but deep brain stimulation anyway. So we're already well on our way into a future of BCIs.

And recently I wrote a paper about how you would structure BCI to do moral enhancement.[14] Most of the people on moral enhancement have been focusing on drugs and usually just one drug. It's like, "What if we gave everybody psychedelics?" or "What if we gave everybody oxytocin?". And I was like, "No, you really need to think about more than one virtue at a time," because everybody from Aristotle and Buddha to the President, no one was just talking about one virtue. "The only thing you need to do is this one virtue!" That's, you know, that's for late-night salesmen. You need an ensemble of virtues to work together in the right way. So if you take that approach to the brain, and you say, "Well, what if you had little machines all throughout the brain that could do different kinds of stimulation in different parts of the brain"? What would we stimulate? If we recognized that you had a problem with compassion, would there be a part of the brain we could light up and make you a little bit more compassionate? And then the question for me is: I want that! I

13. Kurzweil, Ray (2005). *The Singularity Is Near: When Humans Transcend Biology*. New York: Viking.
14. Hughes, James (2023). "Cyborg Virtues: Using Brain Stimulations for Moral Enhancement". In: Dubljević, Veljko and Coin, Allen (eds). *Policy, Identity, and Neurotechnology: The Neuroethics of Brain-Computer Interfaces* (Advance in Neuroethics Book Series). Springer International Publishing.

would love to be able to sit down just with my phone in the morning and say, "Ok, today I've got these responsibilities, I'm going to talk to these Brazilian bioethicists, and so for that I want to be funny, and I want to be insightful, and up my Portuguese comprehension a bit." So you just say your morning settings for your brain and then, "Oh, I'm going to a party tonight, OK, turn down the Portuguese, don't need that anymore; turn urn up my, you know, *joie de vivre* or whatever!" So I want that kind of control panel. But I only want me to have that control panel! And that's going to be the challenge, I think, that we're already – the debates over social media, the debates over the internet, misinformation and all this – is already one step in this direction. It's like, we want to be able to have access to all the information in the world. We also don't want to have other people know enough about us to be able to trick us into doing things that we didn't want to do! And that's the same question that we're going to have when we have machines inside our heads.

MV/MK/JR: James, many thanks for this interview! It was certainly a valuable opportunity to discuss such important topics of debate on technological progress.