Existential Phenomenology and The Brave New World of *The Matrix*[1]

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The Matrix makes us rethink what we mean by contact with the real world, illusion, freedom, and what is required for human flourishing. Only then will we be in a position to take up the question, raised and answered in the three films, why, if at all, is it better to live in the real world, no matter how impoverished and unstable, than to live in a virtual world that is ordered so as to take care of our needs and let us get on with our everyday lives.

I. The Myth of the Inner

Thanks to Descartes, we moderns have to face the question: how can we ever get outside of our private inner experiences so as to come to know the things and people in the public external world? While this seems an important question to us now, it has not always been taken seriously. For the Homeric Greeks human beings had no inner life to speak of. All their strong feelings were expressed outwardly. Homer considered it one of Odysseus' cleverest tricks that he could cry inwardly while his eyes remained dry.[2] A thousand years later, people still had no sense of the importance of their inner lives. St. Augustine had to work hard to convince them otherwise. For example, he called attention to the fact that one did not have to read out loud. In his Confessions, he points out that St. Ambrose was remarkable in that he read to himself. "When he read, his eyes scanned the page and his heart explored the meaning, but his voice was silent and his tongue was still."[3] But the idea that each of us has an inner life made up of our private thoughts and feelings didn't really take hold until early in the 17th Century when Descartes introduced the modern distinction between the contents of the mind and the rest of reality. In one of his letters, he declared himself "convinced that I cannot have any knowledge of what is outside me except through the mediation of the ideas that I have in me."[4] Thus, according to Descartes, all each of us can directly experience is the content of our own mind. Our access to the world is always indirect. Descartes then used reports of people with phantom limbs to call into question even our seemingly direct experience of our own bodies. He writes:

> I have been assured by men whose arm or leg has been amputated that it still seemed to them that they occasionally felt pain in the limb they had lost — thus giving me grounds to think that I could not be quite certain that a pain I endured was indeed due to the limb in which I seemed to feel it.[5]

For all we could ever know, Descartes concluded, the objective external world, including our body, may not exist; all we can be certain of is our subjective inner life. This Cartesian conclusion was taken for granted by thinkers in the West for the next three centuries. A generation after Descartes, Gottfried Leibniz postulated that each of us is a windowless monad.[6] A monad is a self-contained world of experience, which gets no input from objects or other embodied people because there aren't any. Rather, the temporally evolving content of each monad is synchronized with the evolving content of all the other monads by God, creating the illusion of a shared real world. A generation after that, Immanuel Kant argued that human beings could never know reality as it is in itself but only their own mental representations, but, since these representations had a common source, each person's experiences were coordinated with the mental representations of all the others to produce what he called the phenomenal world.[7] In the early Twentieth Century, the founder of phenomenology, Edmund Husserl, was more solipsistic. He held, like Descartes, that one could bracket the world and other minds altogether since all that was given to us

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1 We would like to thank Rick Canedo for his many helpful suggestions.

2 "Imagine how his heart ached …and yet he never blinked; his eyes might have been made of horn or iron... He had this trick — wept, if he willed to, inwardly." Homer, *The Odyssey*, trans. Robert Fitzgerald (New York: Vintage Classics, 1990), 360.

Of course, the Homeric Greeks must have had some sort of private feelings for Odysseus to perform this trick, but they thought the inner was rare and trivial. As far as we know, there is no other reference to private feelings in Homer. Rather, there are many public displays of emotions, and shared visions of gods, monsters, and future events.

3 Saint Augustine, Confessions, trans. R.S. Pine-Coffin (Penguin, l961), 114.

4 Letter to Gibieuf of 19 January 1642; Descartes: Philosophical Letters, trans. Anthony Kenny (Oxford University Press, 1970), 123.

5 René Descartes, "Meditations on First Philosophy - Meditations VI", in Essential Works of Descartes, trans. Lowell Bair (New York: Bantam Books, 1961), 98.

6 Gottfried Leibniz, The Monadology and Other Philosophical Writings (London: Oxford University Press). A monad, according to Leibniz, is an immaterial entity lacking spatial parts, whose basic properties are a function of its inner perceptions and appetites. As Leibniz put it: A monad has no windows.

7 Immanuel Kant, *Critique of Pure Reason*, trans. Norman Kemp Smith (New York: The Humanities Press, 1950).

directly, whether the world and other minds existed or not, was the contents of our own "transcendental consciousness."[8] Only recently have philosophers begun to take issue with this powerful Cartesian picture. Starting in the 1920ies existential phenomenologists such as Martin Heidegger[9] and Maurice Merleau-Ponty,[10] in opposition to Husserl, contested the Cartesian view that our contact with the world and even our own bodies is mediated by internal mental content. They pointed out that, if one paid careful attention to one's experience, one would see that, at a level of involvement more basic than thought, we deal directly with the things and people that make up our world. As Charles Taylor, the leading contemporary exponent of this view, puts it:

> My ability to get around this city, this house comes out only in getting around this city and house. We can draw a neat line between my picture of an object and that object, but not between my dealing with the object and that object. It may make sense to ask us to focus on what we believe about something, say a football, even in the absence of that thing; but when it comes to playing football, the corresponding suggestion would be absurd. The actions involved in the game can't be done without the object; they include the object.[11]

In general, unlike mental content, which can exist independently of its referent, my coping abilities cannot be actualized or, in some cases, even entertained (consider imagining how you tie your shoe laces) in the absence of what I am coping with. This is not to say that we can't be mistaken. It's hard to see how I could succeed in getting around in a city or playing football without the existence of the city or the ball, but I could be mistaken for a while, as when I mistake a façade for a house. Then, in the face of my failure to cope successfully, I may have to retroactively cross off what I seemingly encountered and adopt a new set to act or readiness (itself corrigible) to encounter a façade rather than the house I was set to deal with.

II. Brains in Vats

So it looks like the inner/outer distinction introduced by Descartes holds only for thoughts. At the basic level of involved skillful coping, one is, Merleau-Ponty claims, simply an empty head turned towards the world.[12] But this doesn't show that The Matrix is old fashioned or mistaken. On the contrary, it shows that The Matrix has gone further than philosophers who hold we can't get outside our mind. It suggests a more convincing conclusion– one that Descartes pioneered but didn't develop – that we can't get outside our brain. It was no accident that Descartes proclaimed the priority of the inner in the 17th Century. At that time, instruments like the telescope and microscope were extending human beings' perceptual powers. At the same time, the sense organs themselves were being understood as transducers bringing information from the objective external world to the brain. Descartes pioneered this research with an account of how the eye responds to light energy from the external world and passes the information on to the brain by means of "the small fibers of the optic nerve."[13] Likewise, Descartes used the phantom limb phenomenon to argue that other nerves brought information about the body to the brain and from there the information passed to the mind. It seemed to follow that, since we are each a brain in a cranial vat,[14] we can never be in direct contact with the world or even with our own bodies. So, even if phenomenologists like Heidegger, Merleau-Ponty, and Taylor are right that we are not confined to our inner experiences, it still seems plausible to suppose that, as long as the impulses to and from our nervous system copy the complex feedback loop between the brain's out-going behavior-producing impulses and the incoming perceptual ones, we would have the experience of directly coming to grips with things in the world. Yet, in the brain in the vat case, there would be no house and no city, indeed, no real external objective world, to interact with, and so we might seem to be confined to our inner experiences after all. As Morpheus says to Neo in the construct:

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8 Edmund Husserl, *Cartesian Meditations: An Introduction to Phenomenology*, trans. Dorion Cairns (The Hague: Martinus Nijhoff, 1960).

9 See, Martin Heidegger, *Being and Time*, trans. J. Macquarrie & E. Robinson (New York: Harper Collins, 1962).

10 See, Maurice Merleau-Ponty, *Phenomenology of Perception*, trans. C. Smith (London: Routledge & Kegan Paul, 1962).

11 Charles Taylor, "Overcoming Epistemology," *Philosophical Arguments* (Cambridge, MA: Harvard University Press, 1995), 12. See also, Samuel Todes, *Body and World* (Cambridge, MA: MIT. Press, 2001).

12 *Phenomenology of Perception*, 355.

13 René Descartes, "Dioptric," *Descartes: Philosophical Writings*, ed. and trans. Norman Kemp Smith (Modern Library, l958), 150.

14 The point has been made explicitly by John Searle: "[E]ach of us is precisely a brain in a vat; the vat is a skull and the 'messages' coming in are coming in by way of impacts on the nervous system." *Intentionality: An essay in the philosophy of mind* (Cambridge University Press, 1983), 230.

> How do you define "real"? If you're talking about what you can feel, what you can smell, what you can taste and see, then "real" is simply electrical signals interpreted by your brain….

But this Cartesian conclusion is mistaken. The inner electrical impulses are the causal basis of what one can taste and feel, but we don't see and taste them. Even if I have only a phantom arm, my pain is not in my brain but in my phantom hand. What the phenomenologist can and should claim is that, in a Matrix world which has its causal basis in bodies in vats outside that world, the Matrix people whose brains are getting computer generated inputs and responding with action outputs, are directly coping with perceived reality, and that reality isn't inner.[15] Even in the Matrix world, people directly cope with chairs by sitting on them, and need baseballs to bring out their batting skills. Thus coping, even in the Matrix, is more direct than conceived of by any of the inner/outer views of the mind's relation to the "external world" that have been held from Descartes to Husserl. Yet, wouldn't each brain in the Matrix construct have a lot of false beliefs, for example that its Matrix body is its real body whereas its real body is in a vat? No. If the Matrix dweller has a pain in his damaged foot it's in his Matrix foot, not in his brain, nor in the foot of a body in a vat – a foot that is not damaged and about which he knows nothing at all.[16] It's a mistake to think that each of us is experiencing a set of neural firings in a brain in a cranial vat. True, each of us has a brain in his or her skull and the brain provides the causal basis of our experience, but we aren't our brain. Likewise, the people in the Matrix world are not brains in vats any more than we are. They are people who grew up in the Matrix world and their experience of their Matrix body and how to use it makes that body their body, even if another body they can't even imagine has in its skull the brain that is the causal basis of their experience.

After all, the people who live in the Matrix have no other source of experience than what happens in the Matrix. Thus, a person in the Matrix has no beliefs at all about the vat-enclosed body and brain that is his causal basis, and couldn't have any. That brain is merely the unknowable cause of that person's experiences. Since the only body a Matrix dweller sees and moves is the one he has in the Matrix world, the AI programmers could have given him a Matrix body radically unlike the body in the vat. After all, the brain in the vat started life as a baby brain and could have been given any experience the AI programmers chose. They could have taken the brain of a white baby who was going to grow up short and fat, and given it the Matrix body of a tall, athletic African-American.[17]

But at least one problem remains. The Matricians' beliefs about the properties and uses of their perceived bodies, as well as about chairs, cities, and the world may be shared and reliable, and in that sense true, but what about the causal beliefs of the people in the Matrix? They believe, as we do, that germs cause disease, that the sun causes things to get warm, gravity causes things to fall, and so forth. Aren't all these beliefs false? That depends on one's understanding of causality. People don't normally have explicit beliefs about the nature of causality. Rather, they simply take for granted a shared sense that they are coping with a shared world whose contents are causing their experience.

Unless they are philosophizing, they do not believe that the world is real or that it is an illusion, they just count on it behaving in a consistent way so that they can cope with things successfully. If, however, as philosophers, they believe that there is a physical universe with causal powers that makes things happen in their world, they are mistaken. And, if the causal theory of perception requires this strong sense of causality for perceptions to be veridical, they are not perceiving anything. But if they claim that belief in causality is simply a response to the constant conjunctions of experiences as David Hume did, or that causality is the necessary succession of experiences according to a rule, as Kant held, then their causal beliefs would be true of the causal relations in the Matrix world, and most of their perceptual experiences would be veridical.[18]

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[15] This is true for the phenomenologist describing the first person experiences of those inside the Matrix. From a third person perspective of someone outside the Matrix, however, the Matrix world is not connected to the causal powers of the physical universe, and so the experiences of those in the Matrix world do not count as perceptions. In that sense, the Matrix world, while not "in the mind," is merely virtual, although, since it is an intersubjective experience, it is still not like a dream.

[16] The Matrix foot, moreover, can have its "reality" confirmed by coping (kicking a football, walking around in a city), whereas a phantom foot cannot help its owner get around in the world.

[17] There are limits of course. The Matrix programmers can't give a human being a dog's body. It's also unlikely they could make a brain in a female body the causal basis of a man's body in the Matrix world. The hormones of the body in the vat wouldn't match the physical attributes and emotions of that person in the Matrix world. Indeed, a good way for the AI programmers to prevent bodies being rescued to the hovercraft would be to give each brain the experience of a radically different body (within whatever limits are imposed by biology) in the Matrix world than the body that brain is actually in. If rescued, such people would quite likely go crazy trying to reconcile the body they had experienced all their life with the suddenly alien body on the hovercraft.

[18] Likewise, their beliefs about entities such as viruses and black holes would be true if, like empiricists, they held that theoretical entities are just convenient ways to refer to the data produced by experiments. See Bas van Frassen, *The Scientific Image* (Oxford: Clarendon Press, 1980).

Kant claims that we organize the impact of things in themselves on our mind into our experience of a public, objective world, and science relates these appearances by causal laws, but we can't know the ground of the phenomena we perceive. Specifically, according to Kant, we experience the world as in space and time but things in themselves aren't in space and time. So Kant says we can know the phenomenal world of objects and their law-like relations but we can't know the things in themselves that are the ground of these appearances.

The Matricians are in the same epistemological position that we are all in according to Kant. So, if there are Kantians in the Matrix world, most of their beliefs would be true. They would understand that they are experiencing a coordinated system of appearances, and understand too that they couldn't know the things in themselves that are the ground of these appearances, that is, that they couldn't know the basis of their shared experience of the world and the universe. But Kantians don't hold that our shared and tested everyday beliefs about the world, and scientists' confirmed beliefs about the universe, are false just because they are about phenomena and do not and cannot correspond to things in themselves. And, as long as Kantians, and everyone in the Matrix, didn't claim to know about things in themselves, most of their beliefs would be true.

Nonetheless, the implicit philosophy of The Matrix obviously does not subscribe to the Kantian view that we can never know things in themselves. In The Matrix one can come to know reality. Once Neo's body is flushed out of the vat and is on the hovercraft, he has a broader view of reality and sees that his previous understanding was limited. But that doesn't mean he had a lot of false beliefs about his body and the world. When he was in the Matrix, he didn't think about these philosophical questions at all.[19] But once he is out, he has a lot of new true beliefs about his former vat-enclosed body — beliefs he didn't have and couldn't have had while in the Matrix. We have seen that existential phenomenologists acknowledge that we are sometimes mistaken about particular things and have to retroactively take back our readiness to cope with them. But, as Merleau-Ponty and Taylor add, we only do so in terms of a prima facie new and better contact with reality. Likewise, in The Matrix version of the brain in the vat situation, those who have been hauled from the vat into what they experience as the real world can see that much of what they took for granted was mistaken. They can, for example, understand that what they took to be a world that had been around for millions of years was a recently constructed computer program.

Of course, things are not so simple. Most of Neo's current beliefs might still be false. His experience might, after all, be sustained by a brain in a skull in a vat, and the AI programmers might now be feeding that brain the experience of Neo's being outside the Matrix and in the hovercraft. Given the conceivability of the brain in the vat fantasy, the most we can be sure of is that our coping experience reveals that we are directly up against some boundary conditions independent of our coping — boundary conditions with which we must get in sync in order to cope successfully. In this way, our coping experience is sensitive to the causal powers of these boundary conditions. Whether these independent causal conditions have the structure of an independent physical universe discovered by science, or whether the boundary conditions as well as the causal structures discovered by science are both the effect of an unknowable thing in itself that is the ground of appearances as postulated by Kant, or even whether the cause of all appearances is a computer, is something we could never know from inside our world. But Neo, once he seems to be on the hovercraft, does know that, as in waking from a dream, his current understanding of reality supersedes his former one.

III. An Ethical Interlude

The distinction between a Matrix person and the body that is the causal basis of that person has serious ethical implications. In the movie innocent people doing their job, like the Police Officers in the opening scene, are killed with casual unconcern, if not with relish by Morpheus and his band. Morpheus justifies these killings by explaining that the Matricians have been told that the intruders are dangerous terrorists and so the police and other defenders of law and order will kill Morpheus and his friends if they don't strike first. But when we remember that each time a Matrician is killed an associated human body somewhere in a vat dies, it seems that the killing of a virtual person in the Matrix must be morally wrong because it causes the death of a real human being.

But this can't be the right way to think about the moral issue. The bodies in the vats are not people; they are the causal basis of the people in the Matrix. They happen to be human bodies made of protoplasm but they could just as well be computers made of silicon as long as they process the inputs and outputs the way the human brain does. It is important to bear in mind that a body in a vat doesn't have a human personality apart from the active, vulnerable, feeling person in the Matrix of whom it is the causal basis.

Thus, when Neo is in the Matrix world, there are two Neo-related bodies. One is an active embodied Neo coping in the Matrix world, and the other is a non-coping, Neo-causing body in a vat (or chair) outside the Matrix world, but there is only one Neo and he stays the same in the Matrix world and later in the hovercraft because he has the same concerns, memories,

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[19] Indeed, his coping skills were presumably not based on beliefs at all. See, Ludwig Wittgenstein, *On Certainty*, Harper Torchbooks, l969.

etc. – whatever accounts for personal identity – and there never was a Neo in the vat, anymore than there is a person in your skull because to be the causal basis of a person is not to be a person.

It follows that when Morpheus and his followers kill the people in the Matrix world, it is murder, not because the killers cause a human organism in a vat to die, but because they kill Matricians who have personalities, act freely, love, suffer, and so forth. True, the way the Matrix world is set up, if one were to kill a body in a vat, the associated person in the Matrix would die. But the point to note is that the moral priorities are the reverse of one's first intuitions. The killing of a person in the Matrix world is intrinsically wrong because killing a person is wrong, and incidentally it results in the death of a human body in a vat; while killing the human body in the vat is wrong only as long as that body is at least potentially the causal basis of a person in the Matrix world. In our world, the tight causal connection between our biological body and our personhood keeps us from noticing these moral distinctions.

IV. A New Brave New World

We are now in a position to try to answer the question: Why live in the miserable and endangered world the war has produced rather than in a satisfying and stable world of appearances? Some answers just won't do. It doesn't seem to be a question of whether one should face the truth rather than live in an illusion. Indeed, most of the beliefs of the average Matrician are true; they can cope by acting in some ways and not others. When they sit on a chair it usually supports them, when they enter a house they see the inside, when they walk around it they see the back. People have bodies that can be injured; they can kill and be killed. Even their background sense that in their actions they are coping with something independent of them and that others are coping with it too, is justified. As we have seen, Kant argued that, even if this were a phenomenal world, a world of appearances, most of our beliefs would still be true. Likewise, living in the Matrix world does not seem to be less moral than living in our everyday world. The Matricians are dealing with real people, and they are free to choose what they will do; they can be selfish and betray their friends like Cypher, or they can be loyal to their friends and ready to risk their lives for them, like Trinity and Neo do for Morpheus. So, what, if anything, is wrong with the Matrix world?[20] To understand what's wrong with living in the Matrix we have to understand the source of the power of the Matrix world. Part of the power comes from the way the inputs and outputs from the computer are plugged directly in the brain's sensory motor-system. These correlations produce a powerful perceptual effect that is impervious to what one believes, like the wrap-around IMAX illusion that forces one to sway to keep one's balance on a skateboard even though one knows one is sitting in a stationary seat watching a movie, or like when the moon looks bigger on the horizon even though one believes it is always the same size. The inputs to the perceptual system of the brain in the vat produce an experience of a perceptual world whether we believe it is real or not, but once one realizes that the causality in the Matrix world is only virtual, since one's beliefs concerning what is causing what is not built into our perceptual system, one can violate the Matrix's causal programs. By the end of the movie, Neo can fly; if he wanted to, he could bend spoons.[21] About the causal principles governing the Matrix world, Morpheus tells Neo, "It is all in your mind." In the Matrix world, then, if one doesn't believe in the causal laws governing appearances, one is free from the causal consequences. One's disbelief in the Matrix world somehow forces the computer to give one the experience of the causal consequences one wills to have. To take a simple example, if one doesn't believe in the existence of a spoon, when one decides to see the spoon bending, the computer is forced to give one the visual input of the bending spoon. This is a literal example of what Morpheus calls "bending the rules." Likewise, if one believes that one can stop bullets, one will look for them where one stopped them and the computer will obediently display them there. So, after he learns that his experience of the Matrix world is not caused in the normal way,

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[20] John Haugeland suggests that Cypher's choice is, from some ethical points of view immoral, because, in asking that when he returns to the Matrix world all his memories be erased, Cypher is in effect committing a kind of existential suicide, even if the body in the vat, which has been the causal basis of Cypher up to now, will live on in the Matrix as the causal basis for as a powerful actor named Reagan.

[21] Granted it's hard to resist believing in the Matrix even where causality is concerned, nonetheless, Neo learns he can stop believing in it. This new understanding of reality is described by Morpheus talking to Neo near the beginning of the movie, and by Neo at the end, as like waking from a dream. But the brains in the vats are not literally dreaming. Their world is much too coherent and intersubjective to be a dream. Or, to put it another way, dreams are the result of some quirk in our internal neural wiring and full of inconsistencies, although when dreaming we don't usually notice them. They are not the result of a systematic correlation between input and output to the brain's perceptual system that is meant to reproduce the consistent coordinated experience that we have when awake. That is why we correctly consider them private inner experiences. True, when someone from the hovercraft returns to the Matrix world, it looks like their hovercraft body goes to sleep, but they do not enter a private dream world but an alternative intersubjective world where they are normally wide awake, but in which they can also seem to dream and wake from a dream, as Neo does after the Agents take away his mouth.

Neo doesn't see things differently – the impulses to his brain still control what he sees[22] – but he is able to choose to do things that he couldn't do before (like choose to stop bullets) and that allows him to see different things (the bullets stop). Unfortunately, how this suspension of belief in causality able to affect the output of the brain's perceptual system is not explained in the film. What, then, is the source of the sinister power of the Matrix world that keeps people conforming to the supposed constraints of a causal universe, even though there are no such constraints? If it isn't just that they are locked into the sensory motor correlations[23] of their perceptual world, what sort of control is it? It has to be some sort of control of the Matricians' intellectual powers — powers that, as we have just noted, are free from the control of direct sensory-motor computer correlations. It must be some sort of mind control. It seems that the Matrix simply takes advantage of a sort of mind control already operating in the everyday world. We are told that what keeps people from taking control of the Matrix world is their taking for granted the common sense view of how things behave, such as, if you fall you will get hurt. More generally, what keeps people in line is their tendency to believe what the average person believes, and consequently keeps doing (and not doing) what one does and doesn't do. (As in one eats peas with a fork, one doesn't throw food at the dinner table, and one goes out the door rather than the window.) Heidegger describes the resulting conformism as letting oneself be taken over by "the one" (Das Man).[24] Aldous Huxley similarly lamented the conformity of the brainwashed masses in Brave New World. Thus, The Matrix can be seen as an attack on what Nietzsche calls herd mentality. Nietzsche points out that human beings are normally socialized into obeying shared social norms, and that it is hard to think differently. As he puts it, "as long as there have been humans, there have also been herds of men (clans, communities, tribes, peoples, states, churches) and always a great many people who obey, ... considering, then, that nothing has been exercised and cultivated better and longer among men than obedience, one may fairly assume that the need for it is now innate in the average man."[25] Waking in the movie, then, amounts to freeing oneself from the taken for granted norms that one has been brought up to accept. But how is this possible? Heidegger claims that human beings dimly sense that there is more to life than conforming. How fitting then that a barely expressible unease like a splinter in his mind seems to pervade Neo's life and prompts him to begin the process of asserting his non-conformity by becoming a hacker and breaking all the rules.

V. A Really Brave New World

One might reasonably object that all the talk of dreaming in the film, even if it should not be taken literally, is too strong a religious metaphor to refer merely to what Heidegger calls living a tranquillized existence in the one. And waking seems to be more than becoming a non-conformist. After all, there are all those mentions of Jesus in connection with Neo collected by Colin McGinn.[26] There can be no doubt that Neo is meant to be a kind of Savior, but what kind? It's tempting to think that The Matrix is a Gnostic, Buddhist, or Platonic/Christian parable, in which what we take to be reality turns out to be a dream, and we are led to wake from the world of appearances to some kind of higher spiritual reality. On this reading, Neo would lead his people out of the illusions of Plato's cave, the veil of Maya, or the darkness of the world into a higher disembodied life. But this association would be all wrong! In the film, salvation means the opposite of the traditional religious vision. True, the ones who see through the Matrix can get over some of the limitations of having a body as exemplified by their flying.[27] But such flying takes place in the Matrix world. In the real world to which Neo "awakes," and which we learn in the

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22 There is one unfortunate exception to this claim. At the end of the movie, Neo catches a glimpse of the computer program behind the world of appearances. This is a powerful visual effect meant to show us that Neo can now program the Matrix world from the inside, but, if what we've been saying is right, it makes no sense. If the computer is still feeding coordinated sensory-motor impulses into Neo's brain when he is plugged into the Matrix world, then he will see the world the program is producing in his visual system not the program itself. What the sight of the streaming symbols is meant to do is to remind us that Neo no longer believes the Matrix is real but now understands it, and can manipulate it, as computer program. But even so, he should continue to see the Matrix world.

23 Even Agent Smith shows a kind of individual freedom when he deviates from his mission of maintaining order in the Matrix and tells Morpheus how disgusted he is with the Matrix world. But, in The Matrix, the Agents as computer programs in a programmed world don't have freedom to radically change that world. Later in Reloaded we learn that Agent Smith has a new freedom to act outside of the Matrix because he has some of Neo mixed up in him and has taken over the body of Bains, but even then there is no sign that has or needs the freedom to be creative.

24 Not to be confused with Neo as "the One" who will save people from the Matrix. For Heidegger's account of the power of the one, see his *Being and Time*, and also H. Dreyfus, *Being-in-the-World: A Commentary on Heidegger's Being and Time*, Division I (Cambridge, MA: MIT. Press, 1991), Chapter 8.

25 Friedrich Nietzsche, *Beyond Good and Evil: Prelude to a Philosophy of the Future*, trans. Walter Kaufman (New York: Vintage Books, 1966). # 199.

26 See, Colin McGinn's essay, "The Matrix of Dreams."

27 Given the kind of bodies we have: that we move forward more easily than backwards, that we can only cope with what is in front of us, that we have to balance in a gravitational field, etc., we can question to what extent such body-relative

last film of the trilogy will be available to all human beings, there will be no more flying. People will have earth-bound, vulnerable bodies and suffer cold, bad food, and death. It may look, at the end of the first film, as if Neo evades death, but his "resurrection" in the hovercraft is not into a world where death has been overcome by a miraculous divine love, rather, he has been saved by an earthly intervention — a sort of tender CPR — quite within the bounds of physics and chemistry. So he still has his vulnerable body and will have to die a real death one day. What he presumably has gotten over is not death but the herd's fear of death, thereby overcoming what, according to Heidegger, leads people to flee into tranquilized conformity in the first place. Indeed, if bending the rules that are accepted by the average person just amounts to being able to bend spoons, fly, and stop bullets, it doesn't seem to be any kind of salvation. Breaking free of conformity must mean more than just being disruptive.[28] We are led to expect that, in return for accepting everyday vulnerability and suffering, the people liberated by Neo will be reborn to a new and better life in Zion. But what is wrong with life in the Matrix? It seems clear that, if the AI intelligences do their job and make a complete simulation of our world, the people in the Matrix world should be able to do everything and experience everything that we can. Like them, we all have a causal basis in a brain in a vat. True, the causal link between their brains and the physical universe is different from ours, but why should that be a problem? How can the Matrix be, as Morpheus claims it is, "a prison for the mind," any more than our dependence on our brains and their causal inputs imprison us ? Morpheus has no idea of what such a prison would be but talks, nonetheless, about enslavement and control. Early in the first film, he says: "What is the Matrix? Control. The Matrix is a computer-generated dream world, built to keep us under control." James Pryor, at the end of his essay, "What's so Bad about Living in the Matrix," tries heroically to make sense of this claim by speculating on what the AI programmers might do to control the Matrix dwellers, such as resetting their world back to 1980 if they so chose. In so far as the machines have done such things, Pryor has the right to say as he does:

> In the movie, humans in The Matrix are all slaves. They're not in charge of their own lives. They may be contented slaves, unaware of their chains, but they're slaves nonetheless. They have only a very limited ability to shape their own futures. [...] For most of us, the worst thing about living in the Matrix would not be something metaphysical or epistemological. Rather, the worst thing would be something political. It would be the fact that Life in the Matrix is a kind of Slavery.

In so far as the Matrix makers interfere in the lives of the Matricians, they are controlling them, but the moments of interference in the film (the taking away of Neo's mouth, inserting a bugging device in his gut and then making him think it was a dream, and the changing of a door into a brick wall to trap Morpheus and his crew) do not show that the Matricians, in so far as they are being used as batteries, are not in charge of their own lives. In principle, no such interference should be necessary. The police should to be able to keep the Matrix dwellers in order. As the police officer says at the beginning of the film, they can take care of lawbreakers and presumably hackers too. The Agents have been introduced to take care of people who hack into the Matrix from outside and those, like Neo, whom these intruders are trying to recruit. They do not and need not limit the lives of ordinary, Matricians but only the lives of those who are resisting the Matrix.[29] What is important is that those who live tranqulity in the Matrix – the vast majority of human beings whom Heidegger calls inauthentic --have just as much ability to shape their everyday lives as we do, so having your causal basis used as batteries does not amount to being controlled and enslaved. We, therefore, have to conclude that Morpheus and Pryor are simply mistaken. If you're a slave, there must be a master who controls what you can do or, in Brave New World, who even controls what you want to do, and,

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constraints can be violated in The Matrix if what is going on is still to make sense. To test these limits, the filmmakers occasionally blow our minds by using a wrap-around point of view from which action looks so far from normal as to be awesomely unintelligible. At the same time, they have successfully met the challenge of discovering which body-relative invariances can be intelligibly violated and which can't. For example, in the movie, gravity can be overcome — Neo can fly — but he can't see equally in all directions, cope equally in all directions, nor can he be in several places at once. What would it look like for a single person to surround somebody? Time too has a body-relative structure that can't be violated with impunity. The way we experience time as moving from the past into the future and leaving the past behind depends on the way our forward directed body enables us to approach objects and then pass them by. (See Todes, Body and World). Could we make sense of a scene in which someone attacked an enemy not just from behind, but from the past? If, in the movie, the liberated ones were free of all bodily constraints governing their action we couldn't make sense of what they were doing and neither could they. They wouldn't be liberated but would be bewildered, as we often are in our in our disembodied dreams.

[28] Although being disruptive is the best one can do in the Matrix world. That's why Neo, a hacker who, as Agent Smith says, has broken every rule in the book, is the natural candidate for savior.

[29] In the course of their work the Agents do take over the bodies of innocent bystanders, but such interference is gratuitous and does not show that being used as a battery is intrinsically enslaving. Likewise, if, as we are told in Reloaded, there is an anomaly in each Matrix world, unless such an anomaly can be shown to be disruptive, it doesn't show that humans' being used as batteries requires AI intervention to keep order.

of course, if you knew you were in such a world you would want your freedom. Having their causal basis used as a battery, however, doesn't interact with the Matricians' psychic lives and so doesn't limit what they can decide, what they can desire, or what they can do. What Morpheus doesn't understand (and Pryor doesn't bring out) is that having your causal basis used for some extraneous purpose is not per se enslaving. That is, although the Matricians' causal basis is being used to generate electricity; the Matricians themselves are not being used. Their "enslavement" in the Matrix is like our relation to our selfish genes. We don't feel that we are being controlled even if our DNA is using our bodies to propagate itself. Likewise, the simple fact that the bodies the Matricians are serving some purpose outside their lives can't be what's wrong with living in the Matrix. Indeed, as we see in Revolutions, what makes a reconciliation with the machines possible is that, if people are allowed to live in the Matrix without interference, most of them will be content to remain there. And, if this sort of freedom is all they want, they are right to do so. Even if they are being used as batteries there is no in principle limitation on their everyday choices, and no issue of mind control and enslavement. The Matrix Trilogy never tells us why some people would want to leave the Matrix, that is, we are never told what, in principle, is wrong with the Matrix world, so we have to figure it out for ourselves. Our only clues are that Morpheus tells Neo there is some sort of limit on what people in the Matrix can think and experience, and Neo says at the end of the film that the AI intelligences don't like change. But what kind of internal change is so dangerous they can't leave it to the police to keep it under control? And why don't they like it?

The answer turns out to be barely hinted at in the film and figuring it out requires our going over some familiar philosophical ground as well drawing on Heidegger to help free us from certain Cartesian prejudices. Part of the answer is that, to make a Matrix world just like our world, the AI programmers have to copy the way that the electric impulses to and from our brains in our vat-like skulls are coordinated. For us, as Descartes already understood, physical inputs of energy from the universe impinging on our sense organs produce electric outputs that are sent to the brain and there give rise to our perceptual experience of other people and of things. This experience in turn, along with our dispositions, our beliefs, and our desires causes us to act, which produces electric outputs that move our physical body. How we act, alters, in turn, what we see, and so on, in a continual loop. The correlations between the perceptual inputs and the action outputs are mediated by the way the things and people in the world respond to being acted upon.

If each brain in a vat were cut off from the people and things in the world, the AI intelligences, in order to simulate the sensory-motor loops, would have to model how people and things respond to all types of actions. In the Matrix, however, the AI programmers don't have to model people's reactions. Since the brains in the vats that are the causal basis of the people in the Matrix world respond as people in our world do, their responses can simply be fed back to the other envatted brains. But, since there is no world of things impinging on the sense organs of the people in the vats, the AI intelligences have to program a computer simulation of our world. They can't model the world on the physical level, however, since modeling how the atoms are moving and interacting is beyond any theory and beyond any computations that could actually be performed. We can't even model and predict which way a pencil balanced on its point will fall, or where the planets will be in their orbits 1000 years from now. Moreover, even if we had such a model, it might well take more atoms than there are in the universe to predict how things will behave and look. So the AI intelligences have wisely decided not to model on the physical level how everyday things behave, For example, since they are unable to model how a swarm of electrons in the universe behaves like a bird, they, instead, model of how birds in the everyday world behave.

As the Oracle says in *Reloaded*:

> See those birds? At some point a program was written to govern them. A program was written to watch over the trees, and the wind, the sunrise, and sunset. There are programs running all over the place.

Such a model, like the program for a shuttle simulator, would enable computers to produce the same correlations of electrical inputs and outputs, and therefore the same experiences of the correlation of perceptions and actions, in the world of the Matricians that the physical universe produces in our world. If you appear to walk to close to a Matrix bird, the program will make it appear to spread its wings and fly away. Such programmed sensory/motor correlations would leave the higher brain functions unaffected, and, indeed, we are told that the Matricians are free to form their own desires, beliefs, goals, and so forth. Morpheus is being a Cartesian when he holds that the simulated Matrix world is "a prison for the mind." It no more confines us to our minds than do the correlations between the physical inputs from the universe and the action outputs of our brains imprisons us in our minds. Nor does there seem to be any problem with change. The Matrix world-model and the everyday world it simulates must be capable of being changed by people's actions in just the ways ours is, and nonetheless remaining stable just the way our does. As we shall see, this is what the machines rely on in the end when they promise not to interfere in the Matrix world. So it looks like there is no reason for the machines to be "afraid of change," yet, at the end of the first film, Neo says they are.

So we are back at the question: What's wrong with the Matrix? How could a successful simulation of the electrical impulses to and from the brain, be "a limit on what we can think and experience." If there is an answer, no one in the film seems to know it. It must be subtle and hard to grasp. Indeed, it must be something that those who are in the Matrix can't grasp, and those outside find it almost impossible to articulate, just as Morpheus gets it wrong when he says that those in the Matrix are slaves. To suggest a possible answer will require a detour through Heideggarian philosophy, since Heidegger claims there is

something in our experience that, like the Matrix itself for the people in it, is nearest to us and farthest away. That is, something so pervasive that it has no contrast class to distingish it from, so that, like water to the fish, it is amost impossibe to see and describe. Maybe this is what the AI intelligences have failed to simulate, and rightly fear.

Heidegger calls it "being." Being, according to Heidegger, is "that on the basis of which beings are already understood."[30] One might say that the understanding of being is the style of life in a given period manifest in the way everyday practices are coordinated. These shared practices into which we are socialized provide a background understanding of what counts as things, what counts as human beings, and what it makes sense to do, on the basis of which we can direct our actions towards particular things and people. Thus the understanding of being opens up a disclosive space that Heidegger calls a clearing. Heidegger calls the unnoticed way that the clearing both limits and opens up what can show up and what it makes sense to do, its "unobtrusive governance." For example, sociologists point out[31] that mothers in different cultures handle their babies in different ways that inculcate the babies into different ways of coping with themselves, people, and things. For example, American mothers tend to put babies in their cribs on their stomachs, which encourage the babies to move around more effectively. Japanese mothers, contrariwise, put their babies on their backs so they will lie still, lulled by whatever they see. American mothers encourage passionate gesturing and vocalizing, while Japanese mothers are much more soothing and mollifying. In general American mothers situate the child's body and respond to the child's actions in such a way as to promote an active and aggressive style of behavior. Japanese mothers, in contrast, nurture a greater passivity and sensitivity to harmony in the actions of their babies. What constitutes the American baby as an American baby is its style, and what constitutes the Japanese baby as a Japanese baby is its quite different style.

The style of the culture governs how people and things show up for the people in it. The way things look reflects what people feel they can do with them. So, for example, no bare rattle is ever encountered. For an American baby a rattle-thing looks like an object to make lots of expressive noise with and to throw on the floor in a willful way in order to get a parent to pick it up. A Japanese baby may treat a rattle-thing this way more or less by accident, but generally we suspect that to them a rattle-thing looks soothing like a Native American rain stick. So the rattle has a different meaning in different cultures depending on the style of the culture, and no one in AI has any idea how to program a style.[32]

But why should that be a problem? Perhaps, the different understandings of what it is to be a rattle, and what it is to be in general, don't have to be explicitly programmed since they are in the dispositions and beliefs of the people and, as we just saw, are passed on through socialization. If what happens when we perceive is that physical energy coming into the sense organs is taken up by the perceptual system and perceived as bare perceptual objects, the AI programmers could capture cross cultural input/output perceptual experiences in their programs and leave the meaning and style of the bare perceptual things to the interpretive powers of higher symbolic mental activity. This is in fact the way philosophers from Descartes to Husserl have pictured the relation of perception to meaning. Husserl claimed in Cartesian Mediations that mere physical things are encountered first and then afterwards are given meaning as cultural objects.[33] But Heidegger contends we don't normally experience bare physical objects and then interpret them in terms of what we can do with them. That is, we, don't first experience bare objects on the basis of the physical input to our perceptual system, and then assign each bare object a function predicate as Descartes thought and symbolic AI researches still believe. As Nietzsche already said, there is no immaculate perception. Or, to take Wittgenstein's convincing example, the same physical input to the visual system from the same lines on a page can be seen, not just interpreted, as a duck or a rabbit.

And, if a change in our understanding of things changes how they look, there is, indeed, a problem for the AI intelligences programming the Matrix. For example, if you are making a world-model and want to include programs for simulating the experience of rattles, you will have to take account of what they will solicit one to do with them, and that means they will have to look like missiles or pacifiers. Likewise, if you want to simulate the experience of seeing birds, you will have to simulate the different ways birds look in different cultures. For the Greeks, according to Heidegger, things like birds appeared to well up from nature and then need nurturing. For the Medieval Christians "the birds of the air" looked like creatures of God. Thus they were painted in loving detail, fed by St. Francis, and seen as showing the way those with faith

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30 Being and Time, 25, 26.

31 W. Caudill and H. Weinstein, "Maternal Care and Infant Behavior in Japan and in America," in C.S. Lavatelli and F. Stendler, eds., *Readings in Child Behavior and Development*, (New York: Harcourt Brace, 1972), 78. As long as we can use it get a sense of how a cultural style works, we needn't be concerned as to whether this sociological account is accurate or complete.

32 Among AI researchers, Douglas Hofstadter has seen this most clearly, See, D. Hofstadter, "Metafont, Metamathematics, and Metaphysics," in *Visible Language*, Vol. 16, (April 1982).

33 "An existent mere physical thing is given beforehand (when we disregard all the..."cultural" characteristics that make it knowable as, for example, a hammer...)...." *Cartesian Meditations*, Martinus Nijhoff, l960, 78.

were free of cares and the need to plan their lives. Descartes and modern mechanists, on the contrary, saw birds and all animals as machines. Perhaps, we are now beginning to see them as endangered species in need of preservation.

If this phenomenological description of the richness of perception is right, one can't just model the way the world is organized by the perceptual system by writing programs to simulate the experience of bare objects, and leave the rest up to the mind. But, then, if the understanding of being in a culture could change so that objects looked different, that would pose a serious problem for the Matrix programmers. If a culture's understanding of being switched from aggressive to nurturing, say, everything would need to be reprogrammed. The case would be parallel to the one described to Morpheus by Agent Smith, when the AI intelligences had to scrap their program simulating a perfect world because humans did not feel at home in it, and program one like ours with conflict, risk, suffering, etc. In order to do this reprogramming, the Matrix had to be shut down and in the process "whole crops were lost." Unforntuately for the machines, where style is concerned, this sort of problem seems bound to recur. As Heidegger observes, the understanding of being that governs perception and action in our culture is not static, but has gone through a series of radical changes. In each stage, objects presented different possibilities for action and so looked different, and there were even different objects. For the early Greeks being meant welling up, and what whooished up for the Greeks were gods, and heroes suddenly doing marvelous things, while the medieval understanding of being as being created by God made possible the appearance of miracles, saints and sinners, and things looked like they offered rewards and temptations. With Descartes and Kant, people in the Modern World became inner, autonomous, self-controlling subjects and things looked like objects to be controlled. While now in the Postmodern World, things and even people look to us like resources to be optimized. Thus, many people, like Cypher, try to get the most out of their possibilities by maximizing the quality of their experiences.[34] If, as seems quite possible, we all came to believe in the Gaia principle and feel called to save the Earth, nature will again look different to us.

One might think that this is still no problem for the Matrix programmers and their world model. If individual Homeric Greeks saw gods, and Christians saw miracles, it could be just something inner — a private dream or hallucination, and the Matrix apparently has no trouble dealing which such malfunctions in which the brain generates electric impulses that don't connect up with the world model. The AI intelligences could presumably even deal with collective hallucinations of gods or miracles. And what else could all these changed things be, since the physical universe presumably remains unchanged and has no place in it for gods and miracles? So it might seem, then, that all these Heideggerian different worlds and how things looked in them could be treated as private deviations from the one shared Matrix world produced by the programs for everyday objects and events. The perceptual world would then remain stable across changes in understandings of being. The Heideggerian objection to this way of thinking is that a change of style is neither a private nor a collective hallucination, nor is it a change in the physical universe; it is precisely a change in the public shared world. Heidegger holds that such changes in the understanding of being, like more local style changes, begin as local anomalies. These marginal practices then get focused by a Savior like Jesus, a thinker like Descartes, or an entrepreneur like Ford, so that they produce a world-wide change of style.[35] If Heidegger is right, the best the AI intelligences could do to avoid having to reprogram the Matrix and so lose whole crops of baby batteries, would be to try to stamp out the local anomalies and marginal practices before they produced a major style change. Thus, they are quite rightly afraid of change, and so introduce the Agents into the Matrix. The Agent's job, unlike that of the police who enforce the law, would then be to suppress all anomalies, legal or not, that could bring about an ontological revolution, i.e. a change in the current understanding of being.[36]

But a hard question still remains. Now that we know what is missing from the Matrix – what Matricians can't think and experience – viz. the possibility of radical cultural change; we still have to ask why they need to think and experience it? And to account for what's wrong with life in the Matrix, and so why it is admirable to confront risky reality rather than remain in the safe and tranquilized Matrix world whatever the quality of experience in each, we need an account of human nature, so we can understand what human beings need and why the Matrix world fails to provide it. But, in our pluralistic world, there are many different cultures, each with its own understanding of human nature. As we have just noted, even our own culture has experienced many different worlds, created by new interpretations of human nature and the natural world, that changed what sorts of human beings and things could be perceived. But doesn't this just show, as Sartre famously observed, that there is no human nature? Here Heidegger makes an important meta-move. As the history of the West suggests, our nature seems to be able to open up new worlds and so to transform what is currently taken to be our nature.

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[34] See Martin Heidegger, "The Question Concerning Technology," in *The Question Concerning Technology*, trans. W. Lovitt, (New York: Harper Torchbooks, 1977).

[35] See Martin Heidegger, "The Origin of the Work of Art," in *Poetry, Language, Thought*, trans. A. Hofstadter, (New York: Harper & Row, 1971).

[36] But it might be that there is no danger of radical change because, once a world model is fixed, a change of world become impossible. The question whether ontological revolutions in the Matrix are a serious treat to the machines or whether they are no danger at all because they are impossible, is never explicitly addressed in the three films; but, as we shall see, it is plausibly resolved at the end of *Revolutions*.

Perhaps that is our nature; human beings may be essentially world disclosers. If being world disclosers is our nature, that would explain why we feel a special joy when we are being creative. Once we experience even a hint of world disclosing, we understand why it's better to be in the real world than in the Matrix, even if, in the world of the Matrix, one can enjoy stability, steak and good wine. As Nietzsche so well puts the alternatives: "To be a public utility, a cog, a function, is … the only kind of happiness of which the great majority are capable, which makes intelligent machines of them."[37]), but a few can "become those we are — human beings who are new, unique, incomparable, who give themselves laws, who create themselves."[38] Heidegger would call the vast majority inauthentic and the rare individuals authentic. What's ultimately important to us, then, is not whether most of our beliefs are true, or whether we are brave enough to face a risky reality, but whether we are locked into a world of routine, standard activities or are free to transform the world and radically change our own lives. Creating new types of human beings and new worlds need not be as dramatic as Jesus creating a new world by defining us in terms of our desires rather than our actions, or Descartes inventing the inner and so helping usher in the Modern World. On a less dramatic scale, poets like Dante and entrepreneurs like Ford change the world. Even an actress like Marilyn Monroe changed the style of the world of women and how they were related to men.[39] It is just such a freedom to open up new worlds that the Matrix world lacks. Perhaps, this lack of possibilities for radical change is what Neo experiences as the splinter in his mind. He does say to the AI intelligences at the end of the film, "I know you are afraid … of change." There is, then, a subtle way that the AI computers have limited what the Matrix dwellers can think and experience, but it is not by limiting the possibilities available to them in their world. The limitation in question has nothing to do with not knowing whether we are brains in vats, nor whether the world is virtual or real. Nor, as long as the inputs to the brains are modeled on the way things normally behave in the world, and the outputs depend on the Matrix dwellers' own decisions, is there a problem of who is in control. The problem isn't epistemological, nor metaphysical, nor (*pace* Morpheus and Pryor) political. The problem is what Heidegger would call ontological. It has to do with the Matricians' freedom to choose all right, but not with a limitation on choice in the current world, but a limitation on their freedom to disclose new worlds – to transform their understanding of being. Heidegger holds that our freedom to disclose new worlds is our special human essence, and that this freedom implies that there is no pre-existent set of possible worlds. Each world exists only once it is disclosed. So it makes no sense to think that a computer could be programmed with a world-model that would anticipate the creation of all possible worlds in advance of their being opened by human beings. Artificial Intelligences couldn't program for such a radical openness if they wanted to. In fact, programmed creativity is an oxymoron.[40] By having no way to introduce radical freedom into their world-models and so, fearing all unconventional behavior, the AI intelligences have found it necessary to prevent any expression of the Martricians' ontological freedom. In this way, and only this way, could the Matrix world-model be said to limit what the Matricians can experience and think. And in only this way could the Matrix world be understood as a prison for the mind. On this Heideggerian reading, the ending shows that both the machines and the human beings acknowledge this limitation on the Matrix world. But it also shows that this need not pose a problem. Since most people prefer the guidelines and comfort of the everyday world, and, as Nietzsche says, "live like intelligent machines," they can live in the Matrix world in harmony with the AI intelligences. Indeed, since in the Matrix world radical change turns out to be impossible, the AI intelligences can afford to leave the inauthentic Matricians alone to evolve in the static style of the end-of-the-twentieth-century Matrix world. And, since there are only a few human beings like Morpheus, Trinity, and Neo who miss being able to be world transformers and so feel restricted in the Matrix, the AI intelligences can afford to let these few leave their vats and go live authentic lives in Zion. There, radical change is possible but it is no threat to the tranquility and stability of the everyday Matrix world, and so no threat to the energy supply of the machines.

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37 Friedrich Nietzsche, *The Anti-Christ*, Trans. R.J. Hollingdale, (London: Penguin Classics, 1990), 191.

38 F. Nietzsche, *The Gay Science*, (Vintage Books Edition, March 1974), # 335.

39 See Charles Spinosa, Fernando Flores, and Hubert Dreyfus, *Disclosing New Worlds: Entrepreneurship, Democratic Action, and the Cultivation of Solidarity* (Cambridge, MA: MIT. Press, 1997).

40 This is not to say that a world generated by computer algorithms couldn't exhibit radical novelty. Perhaps Artificial Life does. But it seems to be taken for granted in the film that the AI intelligences are operating with rules and symbolic representations and so rightly consider any deviation from their Matrix world modeled on the world of the late 20th Century, an anomaly which signals a potential breakdown of their simulation.