Spinoza and Engels on the View from Eternity

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The Russian revolutionary and Marxist intellectual, Gregori Plekhanov claimed that he once asked Frederick Engels whether "old Spinoza" was right to consider thought and extension two attributes of eternal substance. Engels replied that old Spinoza was indeed correct. Whether or not the story is apocryphal, there is no doubt that Engels had high regard for Spinoza's work. He saw the philosopher as a dialectical thinker, like another radical Jew with whom he was familiar. In this respect, he quoted approvingly a proposition widely held to be Spinoza's, although it never occurs in his writings in precisely this form: *omni determinatio est negatio* (every determination is a negation). Engels also thought of Spinoza as a precursor of the great materialists of the French Enlightenment, such as Diderot, Holbach, and La Metrie. The reason is that, like them, he sought "to explain the world from the world," as Engels puts it.[1] God (i.e. substance) is not a transcendent being for Spinoza, but identical with nature. What can this mean but that the infinite and absolute substance is an essentially material being? It is controversial whether Spinoza was either a dialectical thinker or a materialist, as Engels believed, but that makes no difference here. The purpose of this paper is simply to show that Engels' book, *Dialectic of Nature* is a Spinozist work, and to derive from it a lesson about acquiescence of the mind as a revolutionary virtue.

Some scholars have argued that Marx's early *Critique of Hegel's Philosophy of Right* was influenced by his reading of Spinoza's *Theological-Political Treatise* and passages from the Letters, both of which Marx excerpted in notebooks compiled while still a student.[2] But the case for a Spinozist strain in the young Marx requires an effort of creative interpretation, since he never mentions Spinoza in the *Critique*. The case for Spinoza's influence on Engels' work is much easier to make. It is clear from explicit references to Spinoza as well as the use of his basic concepts that Engels was a Spinozist, though perhaps an heretical one, in the part of his work most independent from that of Marx; his philosophy of nature. He especially converges with Spinoza in his attempt to see the world – including the human, historical world – *sub specie aeternitatis* (under a form of eternity).

The *Dialectic of Nature* is an unfinished work.[3] Engels wrote most of it during the decade preceding Marx's death in 1883. After "the Moor" passed away, his friend and collaborator became preoccupied with the time-consuming task of getting *Capital*, volumes 2 and 3 in publishable form, and so largely abandoned further work on his own book. The text of the *Dialectic of Nature* that has come down to us consists in finished chapters, articles written for other purposes, notes, fragments, Preface, and Introduction. Engels apparently intended to rewrite the Introduction, since it was found in his literary estate in a folder titled "Old Introduction," while no New Introduction was discovered. The text of the Introduction is discontinuous, with the first part discussing the origin of modern science in the sixteenth century and some of its major achievements to date, while the second part discusses contemporary cosmology, focusing on the problem of the universal heat death.

When Engels was writing, the inevitability of a universal heat death was widely regarded as a cosmological implication of the Second Law of Thermodynamics, which states that entropy

increases in isolated systems. The physicist, Hermann von Helmholtz, whom Engels cites repeatedly, played a major role in disseminating the theory in the 1860s, at a time when Engels was compiling material for his book. The idea of the heat death is easy to grasp intuitively. Heat flows from a hot region to a contiguous cold one until there is no longer a temperature difference between the two. The flow of heat is the capacity to do work in the physical sense (i.e. to change the disposition of kinetic or potential energy),[4] but since the flow results in temperature uniformity, it ends by exhausting that capacity. Temperature dispersion is what thermodynamics means by increase in entropy. Since all regions of space are contiguous and the universe is an isolated system, the total amount of entropy will increase until the universe is at a uniform temperature. At that time, all capacity to do work will be fully depleted, including the work involved in physical, chemical, and life processes. The universe will come to everlasting stasis without any further ability to sustain life or mind.

The hypothesis of the heat death is a cosmological challenge to Enlightenment progressivism, of which Marxism is generally regarded as one version. But in his discussion, Engels does not proceed by defending the idea of endless progress. On the contrary, his conception of the fate of the universe – or rather of the thinking mind within it – is tragic. But it is not despairing.

The universe Engels describes is, in broad outlines, close to the universe as we know it a century-and-a-half later. It contains solar systems, nebulae, and "island universes" (galaxies), burned-out stars and those in the process of being born. Engels is off in his estimate of the number of stars our galaxy contains, putting it at around 20 million, while we now believe there are around 300 billion stars in the Milky Way, but only a few orders of magnitude are involved in the difference. Solar systems have developed from gaseous nebular masses, in accordance with the Laplace-Kant hypothesis, which is still the accepted theory. Only a small part of the light originating in regions of the cosmos most distant from ours has had time to reach us. All bodies are subject to cooling, though the smallest bodies, such as moons, asteroids, and meteors, cool most rapidly. Since Engels' century was unfamiliar with nuclear fusion and its interaction with gravity, he assumes that stars die through simple loss of heat as well.

When solar systems develop, planets of course are born. If water is present in a given case, planetary cooling may interact with geological processes in such a way that the planet acquires an atmosphere with meteorological phenomena. If heat is equalized over enough of the planetary surface, and if other, chemical preconditions are present, then proteins may develop and acquire proto-biological capacities, such as digestion, excretion, movement, reaction to stimuli, and reproduction. After thousands of years, these shapeless proteins may produce the first cells with differentiated nuclei and cell walls, at which point the evolutionary mechanisms Darwin describes come into play. Species and genera emerge over the course of millions of years, until, late in the evolutionary game, vertebrates arise, at least on our planet. The most advanced vertebrates evolve into those with opposable thumbs and relatively big brains. By means of the evolutionary advantage established by guiding primitive forms of work, vertebrate brains increase in size and complexity. The result is a laboring animal capable of thought, namely, us.

In his Introduction, Engels continues this story in summary form through the emergence of human history from natural history, and its development in accordance with the dialectical tension between forces and relations of production that Marx identified in his materialist theory of history. The transition from classless to class societies gives way to a succession of class-divided social formations, until the advent of capitalism, with its scientific discoveries and

associated development of the forces of production on an unprecedented scale. The emergence of the proletariat, and the recurrent crises caused by the conflict between relations of production based on private ownership and the objective socialization of productive forces, form the preconditions for socialist revolution. In the socialist society that is bound to ensue, human beings will replace market regulation of the economy with social planning, and thereby complement the conscious control of nature that modern science permits with conscious control of the social forces human historical development has unleashed.

However, none of this increase in mastery of the material and historical conditions of life will have any effect on the fate of the universe as a whole. That is a matter of physical processes inexorably occurring in accordance with unchangeable natural laws. Stars will continue to radiate their heat into empty space, raising average temperature by only an infinitesimal degree. Like every other star, the fires of the sun will one day burn out. As that day approaches, the human species, no matter how advanced, will huddle around the Earth's equator until the advancing cold snuffs out the last survivor. All other living things will also perish. The planets, stars, and other celestial bodies will join the sun and earth in their fate.
Henceforth nothing more than burned out husks, all will continue their lifeless, eventless journeys through the dark, cold emptiness of space. The stasis predicted by the heat death theory will indeed occur.

However, according to Engels, that is not the end of the story. His argument against the terminal character of the heat death is where he draws on Spinoza, though without saying so directly. He refers to:

> … an eternal cycle in which matter moves… a cycle in which every finite mode of existence of matter [*jede endliche Daseinsweise der Materie*], whether it be sun or nebular vapor, single animal or genus of animals, chemical combination or dissociation, is equally transient, and wherein nothing is eternal but eternally changing, eternally moving matter and the laws according to which it changes.[5]

In this formulation, Spinoza's substance appears as matter. Matter is eternal and (by implied contrast) infinite, although it expresses itself in each of its transient and finite "modes of existence." Engels thus makes Spinoza's distinction between infinite, eternal substance and finite, transitory modes. But he also has a place for what Spinoza calls "the immediate infinite mode" of extended substance, motion and rest and the "mediate infinite mode," the face of the entire universe.

In his book on Spinoza's metaphysics,[6] Edwin Curley develops a convincing interpretation of the attribute of extension as consisting in "basic nomological facts" about extended substance, such as, presumably, those that accord with the principles of geometry (my example). On his interpretation, the immediate infinite mode, motion and rest, consists in "derivative nomological facts," such as those coming under Galileo's law of falling bodies (Curley's example). Both kinds of nomological facts are universally true of extension, or matter. It seems evident that the infinite immediate mode comprises the eternal laws of nature that Engels refers to in the paragraph quoted above (my point). Curley is less convincing when he tries to apply his nomological model to the mediate infinite mode, the face of the entire universe. Spinoza's conception of the mediate infinite mode does not involve a subset of the laws of nature

as Curley claims. If we consider the treatment of complexity and individuality in Book 2 of the *Ethics*, then we can see with a little interpretation that the face of the entire universe is the universe as an infinitely complex individual being, the components of which are all other material objects of varying orders of complexity. The "eternal cycle in which matter moves" is the equivalent in Engels of the face of the entire universe in Spinoza, regarded as a dynamic, though eternal being.

Engels uses the word attribute (*Attribute* in German) in the Introduction in a way that differs from Spinoza's usage. What Spinoza regards as an attribute of substance, namely, matter, Engel regards as substance itself. Thought is an attribute of matter, according to Engels - just as it is an attribute of substance for Spinoza - but so are all other forms of "motion," including change of place, heat, light, electricity, magnetism, chemical processes, and those specific to life. None of these forms is reducible to any of the others; each is qualitatively distinct. Engels applies the principle of the "indestructibility of motion" (more commonly known as the conservation of energy) to all of the forms of motion, which is merely one way of saying that all are eternal. Eternity of course is characteristic of an attribute in Spinoza's sense of the term. The idea of a universal heat death as the terminal state of the universe is incompatible with the principle of the indestructibility of motion in Engels' expanded formulation. Material substance is incapable of losing any of its eternal attributes, which in this case means any of its qualitatively various forms of motion. But this means that chemical action, life, and mind as well as simple change in place are never really destroyed. The entropic dispersion of heat ends, not the universe itself, but merely one of its cycles. Physical processes which we do not yet understand are bound to convert the dispersed heat into other forms of motion, and use them to power a new cycle in the unending history of the cosmos.

Clearly, Engels and Spinoza understand eternity in different ways. For Engels, eternity is duration without beginning or end, while Spinoza draws a sharp distinction between infinite duration and eternity. For Spinoza, eternity is the "infinite enjoyment of existence" that is possible only for that being whose essence implies its existence, or, in other words, that being which is self-caused. This formulation comes to Spinoza from medieval philosophy, ultimately from Anselm's ontological proof of God's existence. That is why Spinoza is justified in using his well-known expression, "God, or Nature," rather than simply "Nature" as a synonym for infinite substance. Necessary existence belongs to substance. Infinite duration, on the other hand, pertains, not to substance, but rather to the universe as the totality of finite modes and their law-governed interactions. His died-in-the-wool atheism obviously prohibits Engels from making a similar distinction. For him, duration without beginning or end *is* eternity. Accordingly, Engels must revise Spinoza's conception of *causa sui* if he wishes to apply it to his own version of eternity. He attempts this, but in the process misunderstands the original idea.

In one of the later sections of *Dialectic of Nature*, Engels identifies *causa sui* in Spinoza's work with the idea of reciprocal action.[7] If A acts on B, thereby eliciting B to act on A, then, Engels appears to reason, A acts on itself by means of acting on B. If this an accurate reconstruction of Engels' unstated argument, then he is wrong to regard reciprocal action as self-causation. In order to be an example of *causa sui* in Spinoza's sense, A would have to cause its own existence by causing B to exist which in turn causes A to exist. But there is a difference between 1) A causing an event involving B (say gravitational attraction), and B causing a reciprocal event involving A (say ocean tides on A's surface), and 2) A (say the planet Earth)

causing its own *existence* by means of causing the existence of B (say the sun) which in turn causes A to exist. For Spinoza, all reciprocal actions are contained within the infinite series of causes and effects that comprises the universe as *natura naturata*, or, as Spinoza says in the *Short Treatise on God, Man, and His Well-Being*, the universe as (immanently) "created being." But God, or Nature as creative activity – *natura naturans* – is cause of its own *existence* as well as that of the totality of finite modes and the laws of nature that govern their interactions.

The view, then, of the universe as self-caused that Engels develops is one that Spinoza would reject. We can imagine the latter asking: "What sustains the existence of the totality of finite modes and their causal interactions, since we can conceive of them as failing to exist?" Engels would need to dismiss this query as a pseudo-question. For he thinks, as does Marx, that the infinite duration of the universe requires no explanation. It is a simple fact that the universe has always existed and always will exist. Any attempt to get beneath the sheer fact that the universe is simply *there* so as to reach a self-explanatory cause would have to invoke the existence of God as a necessary being, and this Engels is not prepared to do. The result is that the view of things *sub specie aeternitatis* for Spinoza is the view of things as necessary expressions of God's essence, while the view from eternity for Engels is a view from the perspective of the universe as infinitely enduring matter in its various forms of motion.

For Spinoza, the ability to view the universe and its constituents, including ourselves, from the viewpoint of eternity is the province of the third and highest form of knowledge, in which the knower immediately and intuitively understands the essential properties of finite modes as expressions of the eternal attributes they modify. In every such act of understanding, the knower experiences a joy very different than ordinary joy, an active, self-generated emotion that Spinoza identifies as a state of bliss or beatitude. In that act, the finite mind is nothing other than one of the thoughts in the absolutely infinite intellect – the mind of God. Beatitude is a form of mental acquiescence (*acquiescentia*), a joyful acceptance of things as they are as necessary expressions of God's nature.

It is important to recognize that acquiescence in this sense does not involve a decision to refrain from action. It is not a kind of quietism. Instead it is itself the highest form of activity - understanding by means of the third form of knowledge - and one that bathes all other actions in its epistemic light. It is easy to forget that Spinoza was a radical political activist. His *Theological-Political Treatise* was an intervention in the life-and-death struggles of the Dutch Republic. Its democratic, anti-clerical radicalism enraged his enemies and sent his friends running for cover. The decision to write and publish the *Treatise* was undoubtedly difficult for Spinoza since he had a constitutional antipathy to conflict. But he nevertheless decided to participate in the tumultuous political conflicts of his day. He did so with emotional engagement, as anyone who reads the *Treatise* can see. Yet it is an engagement without hatred, an opposition, in the name of friendship, to the ignorance, cupidity, and lust for power that prevent human beings from being friends. It is an exercise in one of the highest virtues that Spinoza identifies in the *Ethics*, the one he calls *generositas*, which can perhaps best be translated as the capacity for solidarity. Since human solidarity augments our powers by combining them with one another, it creates the social context necessary for cultivating the third form of knowledge and the acquiescence it entails. The trick is to struggle without being infected by what Gilles Deleuze, in his book on Spinoza, calls the "sad passions" that sap rather than augment our powers. In order to accomplish that difficult task, the radical must be able to view the current political and social struggles *sub specie aeternitatis*. She or he must keep one foot in time and the other in eternity.

There is a similar recognition implicit in the *Dialectic of Nature*. Viewing the universe *sub specie aeternitatis* in the manner of Engels involves a recognition that is both tragic and consoling. There is an infinity of worlds in infinite time just as there are innumerable worlds in infinite space:

> ... however often, and however relentlessly, this cycle [of the movements of matter] is completed in time and space, however many millions of suns and earths may arise and pass away, however long it may last before the conditions for organic life develop, however innumerable the organic beings that have to arise and to pass away before animals with a brain capable of thought are developed from their midst, and for a short span of time find conditions suitable for life, only to be exterminated later without mercy, we have the certainty that matter remains eternally the same in all its transformations, that none of its attributes can ever be lost, and therefore, also, that with the same iron necessity that it will exterminate on the earth its highest creation, the thinking mind, it must somewhere else and at another time again produce it.

How many disappointments Engels suffered. First there was the defeat of the revolutions of 1848, in which he fought as a soldier. Then the exile in England and the anxious wait for the revolutionary moment to repeat itself. Then the recognition that revival of revolution was a false hope. Then the struggles within the International Working Men's Association that ended with its destruction. And finally the establishment of the first workers' government in the form of the Paris Commune, and its quick and bloody suppression. The participation of Engels late in his life in the rise of the German Social Democratic Party was partial compensation for these defeats, but he knew that there were struggles that had to be fought within that Party as well as the more momentous ones the Party would have to wage against the *Junkers* and German bourgeoisie.

It is both sobering and exhilarating to view the battles of the revolutionary, the victories and more frequent defeats, against the background of the fate of the universe Engels describes. On the one hand it makes the achievement of revolutionary goals, including the establishment of socialism, seem less important than the militant is wont to think, since even the most highly developed socialist society exists only for an infinitesimal moment on the scale of cosmic time. At best, it will come to an end when the species that creates it does. On the other hand, it makes the revolutionary struggle, but also the ordinary events of life, seem more important, because, like all of the forms of motion, they will never be entirely lost from the universe. The cosmic cycle will go round, other, similar struggles and events will occur, and the cycle will repeat itself for all eternity. This is not quite Nietzsche's Eternal Recurrence of the Same. It is not we who will live again, or the societies we create. We will not repeat all of the experiences we have already had an infinite number of times. For Engels, our mortality cannot be remedied, even repetitively. Instead other planets and other species with thinking minds will arise, and face problems similar to ours. But there is a kind of cosmic solidarity in that recognition. Life and mind wherever and whenever they occur will have to struggle to exist and develop, just as we have had to struggle. However different from ours the bodies and minds of other intelligent species may be, they will share with us the nature of thinking beings who must alter their material environments in order to survive, and create societies in the process of so doing. They too will need to master the social forces they unleash. And they will face the tragic realization that they and their achievements "will be exterminated later without mercy." But perhaps they

will also realize their solidarity with all other intelligent beings, spanning the unending history of the cosmos.

In 1937, at a time when the Fascist imperium was on the march, the philosopher and science fiction writer, Olaf Stapledon wrote his masterpiece, *Star Maker*. Stapledon was a Quaker and a Marxist, a combination that seems less anomalous when we consider the fact that the Quakers were originally both communists and revolutionaries. In the preface to his novel, Stapledon asks whether it is justified to write a story about the beginning and end of the cosmos, and what it means for it to exist at all, when civilization is on the brink of disaster. His answer, in effect, is that some writers can do nothing else but try to write dispassionately about the human predicament, even in the midst of an unprecedented historical crisis. He himself has no talent for action, or even for writing propaganda in service of a cause, and so can serve humanity better by attempting "to see our turbulent world against a background of stars." Such a vision is what Spinoza meant by considering things *sub specie aeternitatis* and what Engels attempted to convey with his idea of an eternal cycle of matter. Stapledon does not hesitate to call the perspective a "spiritual" one, even though he recognizes that the word is likely to raise thunder on the Left as well as the Right:

> This experience, I should say, involves detachment from all private, all social, all racial [i.e. species] ends; not in the sense that it leads a man to reject them, but that it makes him prize them in a new way. The "spiritual life" seems to be in essence the attempt to discover and adopt the attitude which is in fact appropriate to our experience as a whole … This enterprise can lead to an increased lucidity and finer temper of consciousness, and therefore can have a great and beneficial effect on behavior. Indeed, if this supremely humanizing experience does not produce, along with a kind of piety toward fate, the resolute will to serve our waking humanity, it is a mere sham and a snare.[8]

In *Star Maker*, Stapledon is rather more theistic than either Spinoza or Engels would be willing to accept, even though his version of theism has no precedent in any religious tradition. (For him, the maker of the cosmos is a kind of artist with an icy disregard for the fate of the creatures in each of the universes he creates.) Nonetheless, Stapledon's idea of the spiritual life and its heightened lucidity is precisely that of seeing our own experience – including revolutionary experience – from the viewpoint of eternity. The "piety toward fate" and "the resolute will to serve our waking humanity" bring into essential combination the same mental acquiescence and politico-ethical militancy that Spinoza and Engels embraced.

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[1] Engels, Frederick. 1934. *Dialectics of Nature.* Moscow: Progress Publishers. 25.

[2] See Dobbs-Weinstein, Idit. 2015. *Spinoza's Critique of Religion and its Heirs: Marx, Benjamin, Adorno*. Cambridge: Cambridge University Press. 93-107.

[3] I refer to Engels' book as *Dialectic of Nature*, rather than its usual translation, *Dialectics of Nature*. For the past century, the German word *Dialektik*, which is a singular noun, has suffered an unfortunate pluralization of its English form.
[4] Engels writes: "Work, therefore, is change of form of motion regarded in its quantitative aspect." (Engels. 99).
[5] Engels. 39.
[6] Curley, E. M. 1969. *Spinoza's Metaphysics: An Essay in Interpretation*. Cambridge: Harvard University Press. 50-74.
[7] Engels. 231.
[8] Stapledon, Olaf. 2004. *Star Maker*. Middletown, Ct: Wesleyan University Press. 5.