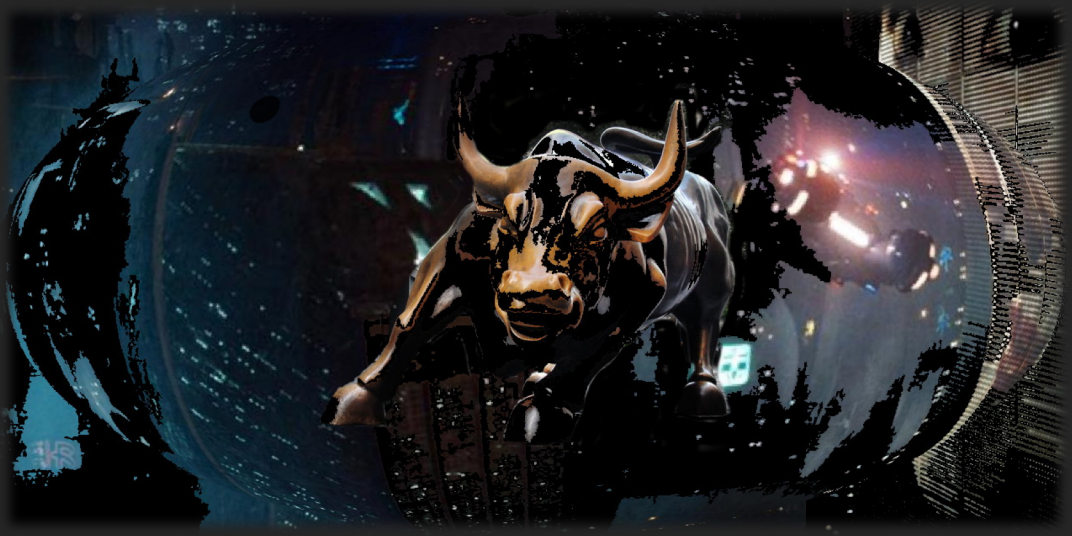
ALIENOCENE – THEORY/FICTION

UNPREDICTING THE FUTURE



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SCIENCE FICTION is about futurity. This doesn't mean that it claims, in any way, to predict the future. Rather, if anything, it *unpredicts* the future; it seeks out what is unpredictable, or what is counter-final.

Think of futurity in relation, but also in contrast, to pastness. Americans often like to say that what is past is gone forever, and hence no longer relevant. To say, colloquially, that something or someone is "history," is to say that it no longer matters, that it has receded into obsolescence. And yet, we also know that this isn't really true. As William Faulkner famously put it, "The past is never dead. It's not even past." Pastness persists in the present, whether we like it or not, both for good and for ill. Bergson proclaimed that "the past has not ceased to exist; it has only ceased to be useful." Marx lamented that "the tradition of all dead generations weighs like a nightmare on the brains of the living."

How is all this possible? Why does the past continue to weigh on the present, despite its uselessness, and despite its having, well, passed away? Gilles Deleuze writes, summarizing Bergson, that time always involves a

> differentiation into two flows, that of presents which pass and that of pasts which are preserved. Time simultaneously makes the present pass and preserves the past in itself.

The present moment passes away, but it is thereby also preserved "in itself," preserved as *having passed*. Indeed, there could be no sense of a living, moving present, if it were not also able to pass away, one moment giving way to the next. The other side of this is that every moment, even as it passes, leaves behind traces and scars. These leavings are its legacy to what succeeds it. Every new moment, every new present, refers to a past, assumes a past, in the very action of surpassing it, of diverging and differing from it. The past is never really dead, because it subsists underneath the present. Pastness is a supplemental dimension of time, that continually haunts the present. The past is *virtual*, in Gilles Deleuze's sense of this term:

> The virtual is opposed not to the real but to the actual. *The virtual is fully real in so far as it is virtual*. Exactly what Proust said of states of resonance

> must be said of the virtual: 'Real without being actual, ideal without being abstract'; and symbolic without being fictional.

If this is the case for the past, then what about the future? Can we also say that futurity is virtual? Remarkably, Alfred North Whitehead, in 1929, uses the same phrase to describe the future that Deleuze uses in 1968 to describe the past: "the future is merely real, without being actual." Futurity is real, because the present moment is not entirely self-contained; it is always in motion, and it points beyond itself. If we say that the past *subsists* beneath the present, then we may also say that the future *insists* within the present. Futurity *haunts* the present, pointing beyond it. In other words, futurity is *potentiality*: something that is not actual, because it hasn't happened yet — but that *may* be actualized (be made actual) at some point — though it does not have to be.

In Western thought, the notion of potentiality can be traced back at least as far as Aristotle. But this notion has not always been used in the same way. For Aristotle and other classical thinkers, potentiality implies a pregiven goal or purpose. For example, an acorn contains the potential to become a mature oak tree; indeed, it is intrinsically defined by this potential. Understood in this way, potentiality is finite, limited, and closed; it points to a definite end, which can be fully known in advance.

Modern thought has a much more open understanding of potentiality. Outcomes are not pregiven, but at best probabilistic. The acorn's DNA does not contain anything like a blueprint for an oak tree. Rather, under the right conditions its "instructions" help to set into motion a cascade of interrelated and mutually influencing operations. These operations are themselves not only determined by the code of the DNA, but also by varying environmental conditions, epigenetic modifications to DNA expression, and many other factors — not to mention the possibility of mutations. If these operations continue for long enough, and build upon one another — that is to say, if the organism does not die — then the result is likely to be an oak tree. But this will always be a particular organism, with its own peculiarities. It is not a realization of some supposed fundamental form of oakness. For modern thought, potentiality is open and indefinite. It can lead in many directions. Not all these directions are viable; many of them may be blocked; but this

does not mean that the transformations which succeed are therefore somehow intrinsically preordained.

More generally, the biologist Stuart Kauffman speaks of what he calls the *adjacent possible*. This consists of "all those [entities] that are not members of the actual, but are *one reaction step away from the actual*." Something is adjacently possible if it can be actualized in a single step: like a point mutation, or a chemical reaction leading to a new configuration of matter. Through genetic recombination, mutation, or environmental encounters, an elephant may develop a new way to use its trunk, or enhanced mental powers that allow it to better escape ivory hunters. On the other hand, an elephant is not going to suddenly develop the ability to fly; while this is not *logically* impossible, it would require massive changes in its body plan, and probably changes in the laws of aerodynamics as well. Elephant flight is therefore not a part of the adjacent possible — but greater problem-solving ability is. Steven Johnson, amplifying Kauffman's idea, describes the adjacent possible as "a kind of shadow future, hovering on the edges of the present state of things, a map of all the ways in which the present can reinvent itself…. What the adjacent possible tells us is that at any moment the world is capable of extraordinary change, but only *certain* changes can happen."

When Marx writes about human social and economic systems, he similarly introduces the notion of "tendencies" or "tendential processes." Such processes are intrinsic to the actual state of things, but they are not themselves fully actual. Rather, they indicate inclinations or biases that inflect future developments in certain directions rather than in others. According to Marx, there is an inherent tendency for the rate of profit to fall as capitalism becomes more widespread, and develops more powerful technologies. But Marx also reminds us that a tendency is not the same thing as an absolute necessity. A tendency, can always be modified in its action, or even blocked altogether, by "counteracting factors." As the overall rate of profit threatens to fall, capitalists develop strategies to get it to rise again. The tendency itself is objectively real, but in the existing state of things it has not (or not yet) been actualized.

The social theorist Steve Fleetwood suggests that Marx's tendencies may also be understood, more widely, as the "powers, affordances, abilities,

capacities, dispositions, forces, liabilities, potentialities, potencies, predilections, processes, propensities" that are possessed by various entities. For instance, a sharp knife has the tendency — or the potential — to cut things. This is why you have to handle it carefully. The knife's potential or power to cut is altogether real, even if the knife has never actually cut anything, and never encountered any particular object that it might be able to cut. It is still real even when the knife encounters something that it is unable to cut, like a stone. The knife's ability to cut is real in itself, but it can only be actualized in particular circumstances: when it encounters something, like a loaf of bread, that is vulnerable to its particular powers.

The philosophers Stephen Mumford and Rani Lill Anjum argue that all relations of cause and effect result from the manifestation of powers or potentialities. This means that causality is less than necessity: no thing will ever cause all of the effects that it is theoretically capable of causing. There are cuttable things that will never actually be cut by this particular knife. But Mumford and Anjum's assertion also means that causality is real; it is ridiculous to assert, as the philosopher Quentin Meillassoux does, that "any cause may actually produce any effect whatsoever, provided the latter is not contradictory." Potentiality is less than absolute necessity, but it is more than mere logical possibility (or simple non-contradiction). Futurities are real, regardless of whether or not they are ever transformed into actual futures. They insist within the present, as pressures towards actualization.

In this way, pastness and futurity are both virtual dimensions of the present. But they are different in one crucial respect. The past is what it is, and it cannot change. It has already passed through the process of actualization. But the future is *not yet* actualized; which means that it is not yet entirely determined. There is only one past, but there are many futurities or potentialities. We can only grasp futurity in the plural. We anticipate it, but we do not know it. Something will happen; *some* potentiality will become actual: but not all. We always need to wait — to pass through an experience of duration — before the determination (the actualization of the future) actually happens. As Bergson says, "if I want to mix a glass of sugar and water, I must, willy-nilly, wait until the sugar melts." We are time-bound, and we never reach the future all at once, or once and for all. The future remains before us, like a mirage in the desert that continually beckons,

but that we are never able to reach.

The financial mechanisms that dominate our lives today are best understood as machines for taming and containing potentiality. They work — or at least they are supposed to work — to capture the future, by making it commensurate with the present. Derivatives and other arcane financial instruments — which, tellingly, used to be known as "futures contracts" — are ways of calculating and pricing future contingencies. There are no assured outcomes, but only probabilistic distributions of multiple potential developments. Each of these developments must be priced according to its likelihood as well as its profitability. "Hedge funds," which buy and sell derivatives, are so called because their ostensible function is to allow economic actors to "hedge" their bets, and come out ahead no matter what happens. The point is always, as Maurizio Lazzarato puts it, one of

> reducing what will be to what is, that is, reducing the future and its possibilities to current power relations. From this perspective, all financial innovations have but one sole purpose: possessing the future in advance by objectivizing it.

However, in practice this all gets turned inside-out. Speculative finance is not representational, but performative. That is to say, it doesn't seek to measure, register, and predict future happenings in the world economy, so much as it actively *produces* those happenings. Derivatives don't stand apart from the economy and model it; rather, they are an active part of that economy, and have a predominant influence upon it. Financial speculation is often blamed for causing market volatility and economic instability. In fact, however, these are not unintended side-effects of derivative trading, but its very means for producing new potentialities, in order thereby to extract profit from them.

Financial speculation by corporations and the rich is only one side of the way that futurity is managed and actualized in our globalized, neoliberal economy. The other side is consumer and household debt. The economy would immediately collapse, were it not for the purchases we all make on credit. The debts we accumulate, just in the course of living our lives and reproducing our conditions of existence, are never actually paid off. They

are just recycled and endlessly deferred. As the sociologist Lisa Adkins observes,

> The schedules of securitized debt are geared to *payment* rather than repayment…. calculations of household debt loading and debt schedules hinge on… the capacity of debtors to *service* rather than repay debt…. The rewriting of the relationship between debt and income is evidenced in loans and mortgages outrunning working – and lived – lives… and in debt loading which, if indexed to current income, is impossible to repay.

The result is that I am continually compelled to manage, control, and carefully invest my own "human capital," subordinating all my future possibilities to the need for keeping up with a pressing schedule of monthly payments. I cannot project or anticipate a future free from debt, but only an indefinite extension of the present, in which I continue to accumulate new debts at least as rapidly as I pay off the old ones. I am not deprived of time so much as burdened with "*too much* time" (as Adkins puts it), a futurity that stretches endlessly, without ever offering any sort of qualitative difference from the present. The two-sided mechanism of derivatives speculation (for the wealthy) and continual debt servicing (for everybody else) governs potentiality, and keeps it relatively closed. The future is captured, and forcibly made commensurate with the present.

What is the place of science fiction in this grim scenario? Like any other form of cultural production today, it has its place within the cycles of social reproduction and capital accumulation. It has become a major target of speculative investment — just think of *Star Wars* and other blockbuster, transmedia franchises. And it has become a form of speculative capture of futurity in its own right, as is evidenced in its increasing use for so-called scenario planning, as science fiction writers are hired to write "customized stories for the likes of Visa, Ford, Pepsi, Samsung, and NATO" (Nick Romeo, *The New Yorker*). The result is that science fiction itself "is now a research and development department within a futures industry that dreams of the prediction and control of tomorrow" (Kodwo Eshun).

I would like to believe, however, that this is not the entire story. To the extent that science fiction is explicitly about futurity — in terms at least

of its content, if not of its form — this means that it envisions, or presents to us, potential futures that are not yet actual — and indeed, that may never be actualized. This is why it has the capacity, at least, to be (as I said at the beginning of this essay) *counter-final*, or to *unpredict* the constrained future that neoliberal finance has shackled us with. Science fiction at its best consists in shards of futurity. Even when science fiction is written in the past or present tense — as its narratives most often are — it is still oriented forward, towards anticipation (what has not yet been actualized) rather than backward, towards memory (what has already been actualized, and has already passed). Its mood is not declarative, but subjunctive. The Romantic poet Percy Bysshe Shelley proclaimed two centuries ago that

> Poets are the hierophants of an unapprehended inspiration; the mirrors of the gigantic shadows which futurity casts upon the present; the words which express what they understand not.

This visionary, prophetic, or poetic function bends toward the future rather than the past: towards unforeseeable potentiality, rather than towards memory and its concretization in debt. Since this futurity is not (or at least is not yet) actual, its reality can only be invoked in oxymoronic terms. Thus Shelley speaks of an inspiration that is efficaciously felt, and yet that is not actually apprehended; a shadow in advance of the light that casts it; an expression that cannot be understood. These are all potentialities, so far unactualized. It is only when they do become actual — if they ever do — that these oxymoronic descriptions can be replaced by something definite and determined.

Today, in our contemporary global technoculture, it is science fiction that comes closest to performing Shelley's poetic function. (Indeed, the cultural passage from poetry to science fiction was adumbrated in the novel *Frankenstein*, written by Percy's wife Mary Shelley, and often regarded as the first science fiction novel). To adopt the terms suggested by the great Marxist philosopher Ernst Bloch, mainstream mimetic fiction, like Western philosophy from Plato to Heidegger, is concerned with "*anamnesis*, a re-remembering of something seen before"; whereas science fiction is rather concerned with anticipation, or with what Bloch calls the "Not-Yet-

Conscious" and the "Not-Yet-Being."

This is also what distinguishes science fiction, not only from supposedly realist or mimetic fiction, but also from other speculative genres. Lawrence M. Schoen's novel *Barsk: The Elephants' Graveyard*, which envisions a future in which elephants (together with other mammals) have attained human or more-than-human levels of sentience, is science fiction. But Dr. Seuss' wonderful book *Horton Hatches the Egg*, which envisions the birth of a flying elephant, is not science fiction but fantasy. Both books engage the virtual, and both narrate (or represent the actualization) of counterfactual happenings. Indeed, both books are concerned with duration: the thickness of time, and the existential truth that, even in the living present, things cannot be given, and do not happen, all at once. But Schoen's book does these things in the mode of futurity, whereas Seuss' book, for all its charms and its inspirational power, does not.

I don't want to end this essay on a note of rigid boundaries and exclusive genre distinctions. Literary genres do not have precise or unchanging definitions; at best they are fuzzy concepts, useful for pointing out what Wittgenstein calls "family resemblances." And indeed, many of the best recent works of speculative fiction are ambitious hybrids, concertedly crossing genre boundaries and scrambling their codes. N. K. Jemisin's *Broken Earth* trilogy (consisting of *The Fifth Season*, *The Obelisk Gate*, and *The Stone Sky*), commingles science fiction and fantasy, by drawing equally on the virtualities of a not-yet-accomplished future and of an immemorial, but still all-too-oppressive, past. The Afrofuturist project more generally mobilizes both the past and the future against a tyrannical present: think, for instance, of Sun Ra's invocations of Egyptian pyramids on the one hand, and of space ships from Saturn on the other. But even in their hybridity, works like these testify to the way that anamnesis on its own is insufficient; a sense of real-but-not-actual futurity is needed to break the nightmarish weight of past forms of oppression, and to propose counter-finalities that break with the ways the dominant order seeks to program and to capitalize the future.