

Dinosaurs are Proletarians

“[Life] finds a way.”¹ Stated by Michael Crichton’s surrogate character Dr. Ian Malcolm² in the 1990 science fiction thriller *Jurassic Park*, this quote is central to the main theme of the novel: the philosophical relationship between science and nature. Malcolm’s use of chaos theory to explain the park’s inevitable failure echoes ideas present in Theodor Adorno and Max Horkheimer’s *Dialectic of Enlightenment*.³ Crichton, Adorno, and Horkheimer have similar thoughts on post-Enlightenment scientific reasoning⁴ but also hold contrary positions on the efficacy of mathematics as a lens through which to view the world. Most importantly, however, all three maintain a negative opinion of the type of formal logic that was popularized during the Enlightenment. They agree that scientific representations of objects are inherently false, that reasoning is a tool for exerting control over subjects, and that science replaces the role of traditional mythology.

The primary idea underlying both *Jurassic Park* and *Dialectic of Enlightenment*, that scientific representations of objects are inherently false, is based upon the concept of abstraction. Abstraction is the classification of objects based on their characteristics. Because it relies solely on what can be scientifically defined, it must always fail at capturing those things that science cannot define. Adorno and Horkheimer write that “[equivalence] makes dissimilar things comparable by reducing them to abstract quantities. For the Enlightenment, anything which cannot be resolved into numbers, and ultimately into one, is illusion; modern positivism consigns it to poetry.”⁵ Here they argue that assigning scientific representatives to objects, as Plato begins

¹ Michael Crichton, *Jurassic Park*, 179, ISBN-13 9780345538987.

² Quotations and paraphrases of Dr. Malcolm will be cited as such, while the ideas behind them will be cited as Crichton’s.

³ Theodor W. Adorno and Max Horkheimer, *Dialectic of Enlightenment*, trans. Edmund Jephcott, ISBN-13 9780804736336

⁴ Adorno and Horkheimer use the terms “reason,” “science,” “enlightenment,” and “logic” interchangeably.

⁵ Adorno and Horkheimer, *Dialectic of Enlightenment*, 4–5.

to assign geometric figures to his Forms, is only possible through the reduction of the objects to some less qualitative form that can then be equated to the reduced forms of other objects. A side effect of this obsession with abstraction is that it disregards everything inexplicable and illogical, things that Adorno and Horkheimer argue are necessary and good. Crichton agrees that science cannot explain everything as Malcolm says that “there are great categories of phenomena that are inherently unpredictable.”⁶ Malcolm also addresses the book’s venture capitalist John Hammond about his reduction of re-created dinosaurs. “You create new life-forms, about which you know nothing at all. Your Dr. Wu does not even know the names of the things he is creating.”⁷ Adorno, Horkheimer, and Crichton all clearly show that defining something in purely scientific terms creates distance between objects and representatives. When scientists work purely with representations instead of objects, as Dr. Wu works with the genetic code of the dinosaurs instead of the actual dinosaurs, they lose touch with the influence of nature. The characteristic lost when an object becomes a representation is a chaotic and sentimental force that gives meaning to the inexplicable and provides an emotional and moral component to the object. For example, identical twins are composed of the same genetic material and seemingly grow up in the same conditions, yet they are still two distinct individuals with their own passions and inclinations. The difference may be because of tiny factors that are difficult to measure but is most likely the simple fact that they are two separate people who are imbued with their own respective natures. To Adorno and Horkheimer, this element of nature that is present in all things that exist is termed *mana*. *Mana* is a definitive term for the indescribable quality of nature being a “murky, undivided entity;”⁸ “the moving spirit.”⁹ This so-called spirit is at the forefront of Adorno and

⁶ Crichton, *Jurassic Park*, 178.

⁷ Crichton, *Jurassic Park*, 342.

⁸ Adorno and Horkheimer, *Dialectic of Enlightenment*, 10.

⁹ Adorno and Horkheimer, *Dialectic of Enlightenment*, 10.

Horkheimer's philosophy of logic when they discuss the ethical shortcomings of science.

Crichton also references these shortcomings when Malcolm discusses the failure of science to dictate its own moral usage.¹⁰ For Adorno, Horkheimer, and Crichton, *mana* and nature's influence are lost by reducing objects to their false representatives.

The most important practical consequence of reductionist scientific thought is the broad presence of totalitarian systems of control. Such systems are only possible when both the rulers and the subjects rely on scientific worldview alone. As Adorno and Horkheimer succinctly put it: "Bourgeois society is ruled by equivalence."¹¹ They proceed to describe in a bit more detail the relationship between science and nature; how nature is forced into subjectivity by science. "Enlightenment stands in the same relationship to things as the dictator to human beings. He knows them to the extent that he can manipulate them. The man of science knows things to the extent that he can make them."¹² This idea is directly reflected in Crichton's work, especially when Malcolm is addressing Hammond about the re-creation of dinosaurs and tells him: "You expect them to do your bidding, because you made them and you therefore think you own them; you forget that they are alive [...] and you forget how little you know about them."¹³ The totalitarian power dynamic stems directly from abstraction because only once something has been reduced to a mere number can it be commanded just as the mathematician commands the variables in their equations. When a person or other creature becomes not itself, but a data point, it exists at the mercy of science. With the repressive equality of representations comes a bourgeois collective that equally rules over non-equal proletarians. This sort of equality gained immense popularity and served as the main motivator of the French Revolution. Human rights, in

¹⁰ Crichton, *Jurassic Park*, 349–351.

¹¹ Adorno and Horkheimer, *Dialectic of Enlightenment*, 4.

¹² Adorno and Horkheimer, *Dialectic of Enlightenment*, 6.

¹³ Crichton, *Jurassic Park*, 342.

eighteenth-century European thought, are scientific guarantees that ensure that all individuals are treated as exactly equal despite any real differences they may have. The French people overthrew the monarchy not only because of the extreme flaws in its leadership but also because of the idea that one person would never deserve to maintain that sort of power over others. In doing this, contrary to their intentions, they made themselves victims to science where they do not exist as individuals, but as members of the scientific classification Humans. As this unity under abstraction progresses, science is used to justify the genocidal works of the mid-twentieth century. The Nazis were able to prove the logic of their antisemitism by dividing the Humans classification into Aryans and non-Aryans. Since these classes are given meaning through science which inherently ignores certain characteristics of the objects (or people) being classified, the only objection to reallocating these classes is ethical and relies on *mana*, therefore any objections are nullified because they are illogical; “any intellectual resistance it encounters merely increases its strength.”¹⁴ This “ungovernable science”¹⁵ is a series of false equalities, manipulated to cause harm because it cannot be checked by dissent.

To Adorno, Horkheimer, and Crichton, science usurps traditional mythologies like Hellenistic Paganism, Judaism, and Lutheranism. Adorno and Horkheimer write of Enlightenment science supplanting myth by saying that, for the Enlightenment, “all gods and qualities must be destroyed,”¹⁶ and “myth becomes enlightenment and nature mere objectivity.”¹⁷ Crichton also refers to science taking the place of religion when Malcolm says that “the old medieval system [...] of feudal politics and religious dogma and hateful superstitions fell before science.”¹⁸ Where these older myths are ways of understanding the behavior of nature and

¹⁴ Adorno and Horkheimer, *Dialectic of Enlightenment*, 3.

¹⁵ Crichton, *Jurassic Park*, 350.

¹⁶ Adorno and Horkheimer, *Dialectic of Enlightenment*, 5.

¹⁷ Adorno and Horkheimer, *Dialectic of Enlightenment*, 6.

¹⁸ Crichton, *Jurassic Park*, 349.

dealing with *mana*, science offers a way of controlling nature by ignoring *mana*. Both myth and science are used to exert control over their followers and require faith in the teachings, yet where myth is bounded by being wholly tied to *mana*, science's control is not bounded by anything except itself. This fact allows people to submit to science such that their own identity no longer exists. While Judeo-Christian religions advocate for a similar relinquishment of the self to unity under God, they maintain that the self still plays an important role; everyone is different and unique yet can still work together for the common goal of uplifting His name. If each person is an equal part of ensuring a general function, traditional myth holds that they have distinct values and the function fails without their special contribution. In science, however, the person is viewed the same as all others, and their specific characteristics cease to exist while the function succeeds no matter what person or how many people it uses. Science's structural systems of power and proposed explanation of nature allow it to take the place of myth in people's lives, yet it is infinitely more dangerous because it is not grounded in anything other than its own abstractions.

Adorno, Horkheimer, and Crichton all agree that the scientific reasoning of the Enlightenment is a means of justifying unspeakable evils through its manipulation and self-sustaining accumulation of power. The issue lies with abstraction assigning inherently false representations to real objects and disregarding *mana*; this abstraction can be manipulated into perpetuating systemic totalitarianism. Because it replaces myth for certain parts of society, it has created its own set of followers who are willing to realize its bourgeois implications. Logic is easily all-consuming to those who do not have an external understanding of *mana* to use as an ethical check against the propagation of power. *Mana*, the living spirit, is a force that affects all

things and shows its face in scientifically inexplicable chaos. Even in a world of science, life makes itself known. Life cannot be forgotten.