PHI315, Aug 30 Lesson Plan: What is Science Fiction?

On Monday, we discussed what it is that I take philosophy to be. You may disagree, but that is the view of philosophy that I adopt for the purpose of the framework I am establishing for you to use in the course of this class. The fundamental idea is using philosophy in conjunction with science fiction as a means of exploring possibilities. I will discuss running them together on Friday. Today, I want to focus on what I take science fiction to be.

We are, once again, going to play the "what is in a name" game in regard to the name "science fiction". I do not like definitions, so instead we are just going to explore what we think it is. So, then, tell me what you think science fiction is. **What is science fiction or sci-fi?**

There are two words here, *science* and *fiction* that we need to explore. Let us begin with *fiction*. **What does *fiction* mean?**

We generally distinguish between works based on whether they are fiction or not. A textbook is not fiction, a biography on Steve Jobs is not fiction, and a science book on space is not fiction. Such books may use fictional analogies to explain things, but the things that they explain, these things are non-fictional. So, perhaps, we can say that works divide, as it were into fictional and non-fictional works.

What is this dividing that I am doing? This methodology is called the method of division, first practiced by Plato, where something is delineated from other things based on difference. For example, suppose we want to determine what a cat is. We do so by saying that there exist animals, and of animals, there are those with scales and those without. Those that are without scales are either four legged or two legged. Those that are four legged are either evil or good. Those that are evil, four legged, without scales are cats. This is a simple example, but the point is that we give a determination (note, not definition) of cat by pointing to explicit features that it exhibits. We do not make the mistake of thinking that we get at the essence of catness by so determining it, rather, we get at the general features of a thing that makes us recognize it as a cat. Whether these are essential features or merely superfluous is unclear. But the idea is to point to traits and features that approach essential properties. Plato did not explicitly think he was defining terms in this way, rather, for him, it was an attempt to get at the essence of a thing to identify it. This is not definition, because definition implies the full articulation of the essence, while I suspect Plato was wise enough to know that we do not grasp forms in full, at least in this life. It is a recollecting, not a grabbing.

So, back to the distinction we were making, there are works that are fictional and non-fictional. Non-fictional works seem to be about that which is, or that which exists. Non-fiction is associated with a kind of dry, objective, realism. It has artistic flair as all works do, but the idea is that a non-fictional work is to convey the truth in a way that is non-distorting. It attempts to capture Truth and Reality as they are, as they happened. ***Non-fiction is about the world as it is.***

What can we then infer about fiction then? If non-fiction is about how the world actually is, fiction is about the world could be. If something is imaginable, then in principle it possible. Thus, any imagined world is a possible world, a possible way our world could have been should the conditions been different. The talk of possibility versus necessity is referred to as modal talk. When we speak of modality, in philosophy, we speak about possibility and necessity. We will discuss possibility and necessity on Friday.

I should clarify this further. When we speak about what *could have been*, for example, we speak about the way in which our current world could have unfolded. In so doing, we presume that in principle, things could have been otherwise. We also speak about what *could be*, and in so doing, we discuss a potential way for our world to unfold, suggesting we do not take it to be deterministic. Nobody knows whether the world is deterministic. This is not because physics is not true. Rather, the world is so complex that it is impossible to determine the way in which things can unfold. Moreover, at the quantum scale, the world is fundamentally probabilistic. This means that there are several possible ways for things to unfold, and while this is still determined, it simply means that we do not know how things will unfold.

Thus, fiction is fundamentally work that is about the way things could have been and the way things could be, both presently and in the future. Fiction about the way in which the world could be now is temporally interesting, since the present does seem to depend on the past, but in terms of language, we say the same *could be* in referring to the present and the future. I think there is something interesting here to pursue, but I am unsure of what it is exactly, and it seems to be beyond the scope of this lecture, however, do think about this and do talk to me if you have thoughts on the matter.

We have a tentative determination of fiction: *work about that which could have been or that which could be, either presently on in the future*. The task now is to determine what fiction that is scientific is. What is, in other words, science fiction?

Let us continue with this line of thought, namely, the idea of the method of division. We know that fiction comes in different varieties. We also know that scientific is a genre, a genre altogether different from, say, magical fiction. So we can now divide fiction into magical and non-magical. What is the justification for this division?

Magic and science are similar of course. Show a phone to an Ancient Greek and he will think you a magician. The way science works is kind of magical if you think about it. Think about computers. Computers rely on silicon, specifically, on silicon etched a certain way so as to instantiate a set of controllable transistors. But silicon is a crystal and in antiquity we thought that crystals could be charged with spells and etched to perform functions. But, programming is kind of like that. Programming is whispering to a silicon rock full of convoluted rune like etches in an esoteric language with the hope it will perform certain things for you. Computers are in a sense both scientific and magical. Anytime I write a program, I think of myself as performing an incantation. When I do machine learning, I think of myself as summoning a demon.

But that being said, we generally think that science is distinct from magic. We

know that works like Lord of the Rings and so on, I do not read such works, but we know that these are based on magic. Science fiction we seem to notice to contain technology heavily, since technology is the pay off of science. We do science for the sake of technology, not for some abstract purpose. This is where many abstract scientists and academics, usually mathematicians and pure theoretical physicists that are largely mediocre will lie to you and tell you that science is done for the sake of the truth and it self and so on. Have you heard this before? The mediocre say this because they have not produced any technology. Talk to any great mind in history of science, and they will tell you concrete problem that drove them to activity and to research. Oppenheimer was theoretical, but he made the bomb. This is the crucial insight I convey here, science is the amplification of the world via technology and learning.

When one does science, one enters the theoretical mode to learn about the world around oneself, as a means to accomplish some practical task. This is what most people forget. So science fundamentally is practical, because no one does it without hopes of making some technological discovery that revolutionaizes the world in a practical way. So, then, science is that which is concerned with how theoretical inquiry leads to technological progress.

Science fiction therefore is work about the way in which the world could have been, or could be, either now, or in the future, should the science either progress, has progressed, or will progress, in such a way so as to bring about technology that makes the fictional world significantly other than ours is.

This is a confused definition though, and is very wordy. Instead, we can say the following. Fiction is about how the world could have been or could be, now or in the future. Science fiction is when the difference between the real and the fictional world is due to something pertaining to science. That means either the technology is more advanced, different, or altogether transformative. The crucial aspect of science fiction is that it is more approximate to us than magical fiction. For example, there is no planet heading for us now, but in principle, some planet could get knocked off its orbit and head for us, leading to extinction. It is a fiction that is consistent with science, and requires no magical explanation. What is special about science fiction is that it is a kind of fiction that is genuinely possible in our world. We can far easier imagine what it would be like if robots become sentient, than say if someone casts a spell on us.

This was not always this way. People used to believe in witches and wizards. Here in America we killed some that one time in New England, and now everyone talks about it (nobody talks about how many were killed in Europe). So, for some time, magical fiction was more relatable to people than science fiction, namely because science was not a thing.

I do not want to discourse on the nature of science for two reasons. One, it would take a week of class for me to carefully delineate what I take science to be. Two, my interpretation of science is controversial, and I do not think that many of you, who major in a field under science, would find it amenable. I am right of course. Here I am making a joke. It is mostly reason one. But that being said, science is essentially the mode of our relation and interpretation of the world–it is far more plausible to imagine developments in science than it is to imagine that suddenly some guy is going to throw a fireball at you. The

boundary is blurry, but it works for our class.

So, let us now articulate for the last time the determination of science fiction. Science fiction is any and all work that is about how our world could be different if the science and technology was different. Science and technology is the driver of the modal change–it is that which is responsible for the difference between our world as it is necesserily, and how it could possibly be otherwise. So, if fiction is about a possible world, science fiction is about a possible world that is possible but non actual because it is different due to technology or science in general. It is different, hence not real, hence possible but not actual, due to science and technology. Friday we will discuss modality in more detail–what possibility, actuality, and necessity mean in relation to philosophy. We will also talk about the role of philosophy in relation to science fiction. In toto, we will put together a cohesive methodology for you to use in this class. I will also explain your paper assignment.