

Alain Connes

I wrote this book *The Specter of Atacama* with Danye Chéreau and Jacques Dixmier, so one is literary, the other is a great scientist, a mathematician and the general theme, the general idea, it's a scientific novel, it's a new genre and we want, in fact, to make the reader discover deep ideas both about mathematics and physics, but in such a way that they are accessible, that gets to get a feel for it by really reading the book like a novel. The story, the novel, which is an adventure novel, features three characters, who are three scientists; on the one hand, there is a mathematician who well knows physics; there is a computer scientist who will play an essential role; and there is a physicist who is a survivor of a stay in the quantum. In fact, the central character, we can say at the scientific level, it is the spectrum. This notion of spectrum is a notion that is common to physics and mathematics. It was first identified by Newton when he decomposed light with a prism. And that's what we see in rainbows, but it has also become an essential concept in mathematics at the beginning of XXth century. And we realized at one point that the two notions coincided, that is to say that we could explain the spectra of physics, the spectra that we receive for example from very distant stars, galaxies, that we could explain them by mathematics. And what we tried to do, I hope that we have succeeded in doing it, is to make this theme perfectly understandable, to make it sensitive, to pass it without being dogmatic, that is to say without quantities of explanations, etc., but by reading the book, by reading it like an adventure novel.

It can really be read as an adventure novel, there are scenes, really, that are happening and that are quite extraordinary. Through this reading, there is an osmosis that occurs and we come to understand what are specters, what is the music of the form, and the message must get across. There is another message which is important in the book, and basically I can summarize it in the following form : is that we are living in a transition period that everyone knows, I want to say that there are more and more machines and in particular there is what is called the machine learning which will replace, soon, when we call a company, instead of having "press the 1 button, etc.", and then finally, we have somebody, we will never get somebody, we will only have machine learning. So in fact, this novel is a plea for concepts; it's a plea to try to resist to this drift of the world that makes us abandon our individuality and we do it consciously, that is to say that people who are on facebook, etc. they consciously give up, it is them who do it, who give their individuality, and in fact, there is a message very important at the end of the book, which is that we have to save our souls, we have to save our souls by escaping this temptation, this temptation that would make everyone of us a kind of cell in a much larger body, whose soul we would totally escape. And the role in the book of machine learning is held by the Devil and fortunately, there is another central character who intervenes, who is spirituality, and that finishes the book in an optimistic way, that is to say that there is a message

Transcription of a video that can be played here <https://www.youtube.com/watch?v=qPA5DywLFeI>

that we have to listen to, and that basically sums up this idea that concepts are so much more important, and human-made concepts like the topos, the concepts are so important compared to this current drift in which we let ourselves slide ...