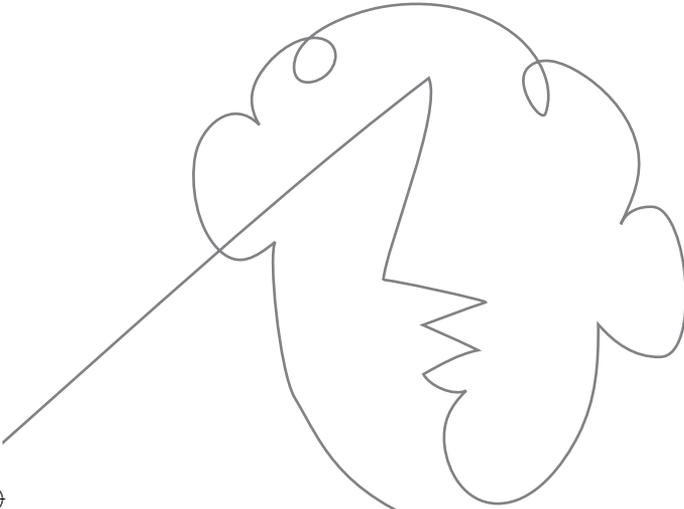




To look at the ‘Future of Care’ which is best: Science Fiction or Design Fiction?

Delfina Fantini van Ditmar & Hugh Pizey



DFvD: I think question 19 “To look at the ‘Future of Care’ which is best: Science Fiction or Design Fiction”? It’s quite binary. It is interesting to analyse it, though, especially since we are both inquisitive about complexity, design and science.

HP: My initial thoughts on Science Fiction direct me to films and obviously there are films based upon writing, and I have never heard anyone say I am going to see a ‘Design Fiction’ film. It is not something we talk about.

DFvD: What we call ‘Science Fiction films’ can be considered as ‘Design in Fiction’.

HP: I agree they can be considered to be the same thing. I don’t know





what you think of the concept of ‘Design-Science Fiction’, a merging of Design Fiction and Science Fiction. I have recently been to an event at Autodesk. They have a very powerful generative computing system. They support our programme at Glasgow School of Art and they openly say that their computers/software are ‘creative’. I beg to differ, to me that is Science/Design Fantasy. I think they are missing something. Undoubtedly their systems are able to produce billions of options and we are able to choose between them. The machine can of course analyse our choices and then use that to make predictions about what selections we would make in other situations. Machine learning though is a long way from ‘intelligence’ or ‘creativity’.

DFvD: Also you pre-programme the machine how to learn. You still give an initial instruction of how the machine is learning (even if then it takes its own path).

HP: I think that is true, although I don’t really understand what sort of programming they are using and maybe this is a different type of programming that they are doing but essentially you are right. They are mechanising some sort of human model, so at best the computer could maybe copy what people might be expected to do.

DFvD: A good example of this is what happens with ‘computer creativity’ in the art field. When you see the outcome of these artworks for me, there is something about beauty and sensitivity that is lacking.

HP: But then these people, Autodesk they would say “ah yes, but if you tell us what beauty is and someone else and someone else and someone else and someone else over the years, over decades and years the machine will learn”. I don’t believe it, but that is what you come up against.

DFvD: Not everything in life should be based on computer-powered learning. I think it is a different conceptualisation, sensitivity and way of understanding of art.

HP: Computer creativity to me is still Science Fiction (bordering on fantasy). Some would say it already exists, that it is ‘Science fact’. I wonder





where 'Design Fiction' fits in here ?

DFvD: I have questions for both of the terms. So, in terms of Science Fiction, I think there are two interpretations. One is as you said by default it relates to Science Fiction writing (e.g. Phillip Dick or J.G Ballard etc...) or Science Fiction movies, but then if we divide the words and analyse it as a composition it generates another connotation. Science by itself is conceptually different from what you imagine of the composition Science Fiction.

So first, we need to decide if we interpret this as a conjunction or as a concept. In terms of Science Fiction movies, everything in the fiction is designed, the movie interpretation has to be designed so I don't even see the difference so much. In a way, if we take it as a one-word, we can mean the same (Science Fiction = Design Fiction). If we separate the terms and combine them: design + science + fiction, then we have another equation=Design Science Fiction. For this, let us analyse the question 19 separating the concepts from the conjunction as well as in the shape of conjunction. We should approach it with brackets: [[Design] Fiction] or [[Science] Fiction]? 'Design Fiction' has a long trajectory, do you know the work of Tony Dunne and Fiona Raby?

HP: I don't know a massive amount about them.

DFvD: They are designers pioneers in the field of Critical Design. Their work is highly inspired by Science Fiction. In their field, they create alternative future scenarios through design. To keep the analysis, we need to decide if we are taking it as Design + Fiction as two different fields.

HP: Fiction as in writings and ideas?

DFvD: Fiction also can be taken as something untrue or imaginative. It is also related to dreaming.

HP: Yes, it is made-up, out of your head. It doesn't exist. Fiction does not exist yet, although when you go to the library there is fiction and non-fiction. Novels are all fiction. Non-fiction is for example encyclopaedias





and scientific journals. They have some non-fiction. Most science books are non-fiction. Interesting actually. Most science books would be seen in the library as non-fiction. They are facts, based on reality. Whereas science fiction is different from science non-fiction. It is projecting into the future somehow.

DFvD: How do we start to approach question 19 then? There are so many options of how to start framing. The question is to look at the future of care – which is best Science Fiction or Design Fiction? We can make a triangulation between design, science and fiction. The three of them with the same weight. All of them bring interesting components. Science is very good at providing accurate facts. I don't think it is a good idea to completely undermine it. Design is interesting and relevant because it is open and creative, providing physical alternatives with social impact. Design can also question and seek to change underlying assumptions and premises. Fiction on the other hand, throws us a future which allows imagination.

HP: The way this is presented is that you have got design and science and then you have got fiction and non-fiction. So, when we talk about 'science non-fiction' it is your pure science literature. Whereas Science-Fiction tends to be your comic strip, you know, Dan Dare; Marvel, but then it is interesting to think about the nature of Design-Fiction... Apart of Critical Design (Dunne and Raby), what else could be considered as Design-Fiction?

DFvD: There is a specific field for design futures: Speculative Design.

HP: Yes, well there is that whole field of predicting trends and forecasting and the like.

DFvD: Yes, but that field tends to be instrumental leading to commercial outcomes rather than being discussion-based.

HP: If we are talking fictions, then it's interesting to think about design and science non-fictions. I think I can grasp science-fiction and science non-fiction. But when you look at that in relation to design, 'Design Non-





Fiction' is for instance the '100 design methodologies' book. There is the 'how to design', there is the 'Design yearbook, Italy 1981'. 'Design-fiction' though is what?

DFvD: Dunne and Raby's field is the first thing that comes into my mind, but of course design has a long trajectory of thinking ahead in a non commercial context.

HP: Perhaps Design-Fictions are what you get when you take 'function' out of the equation. Then you are left with ideas or speculation or whatever. The function of Design-Fictions is maybe to generate discussions and arguments and new insights through these speculations.

DFvD: One problem that I have with too much design speculation is that you get detached from some of the science of it. Sometimes I have design students with some interesting ideas related to future biological-related systems, but they have no understanding of biology which undermines their extrapolated Design-Fiction ideas.

So, I am just thinking about care and how design and science can be both valuable if they are combined the right way with the fictional component. I think the question we have is quite binary – "To look at the future of care which is best Design-Fiction or Science-Fiction?". We can compose the word as 'Design Science-Fiction'. I think both are really important because science can help understanding issues and design can contribute in the experience of the world. I wouldn't choose for either design or science to be better, that would be unnecessarily polarised. I would orchestrate them both with the fictional component.

HP: Design knowledge is fundamentally different from scientific knowledge though.

DFvD: I agree with you. You can also say that scientific experiments are designed as well. What would be your reply then?

HP: I was looking at this drawing(1) and I was thinking about putting a 'design' dimension in order to try and understand the differences between





Science and Design Fiction and Non-fiction. Using this intersection, we can place concepts as either Design-Fiction/Non-fiction or Science-Fiction/Non-fiction. This could help in trying to answer question 19.

DFvD: Design can be very functional. For example, designing a new type of injection system, you end up with a defined product. It is not ‘fiction’ in the world, it has achieved something that works, having impact for certain problems/scenarios. Design-fiction through future-oriented approaches and scenarios, deals with potential future-oriented alternatives rather than a specific solution for the now.

HP: Scenarios are good. Scenarios play a big part in design process. One can maybe put in storyboarding and things like this into the diagram(1). We are creating Design-Fictions there and we tell stories.

DFvD: Narratives, yes.

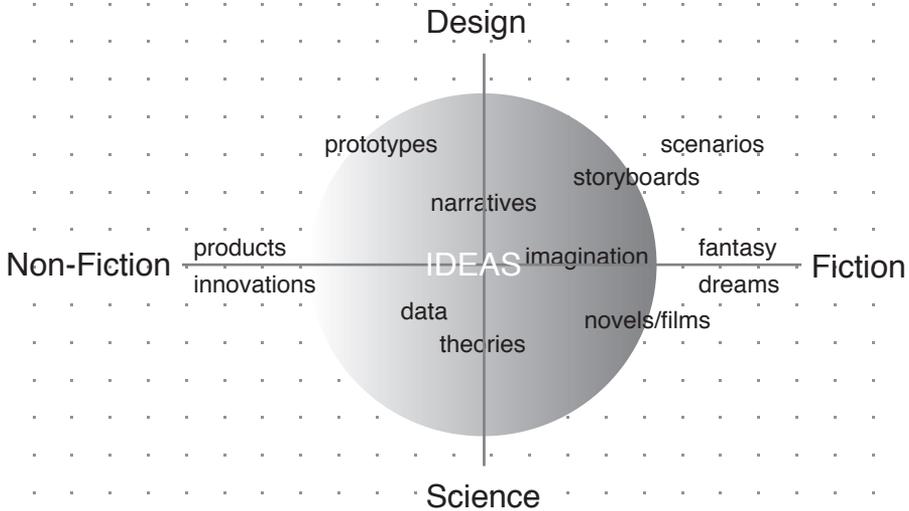


Diagram 1: Mapping design and science concepts on fiction/non-fiction spectrum.

HP: Inevitably that is quite often about the near future rather than the far future although I have worked on projects such as ‘future travel in 2050’ and a lot of the ideas that students produced were impossible. You explain to the students Science-Fiction is ok, but science-fantasy is not ok. ie. Someone says I want to ‘float about on anti-gravity mats’. The response is





‘where is the scientific basis of that’. I remember we did a 2050 ‘future of the kitchen’ project, and one of the students came up with an idea that a pot could change shape depending on required function. The student was able to show a scientific basis for that idea with research papers on molecular realignment. As a potential idea for 2050 it became an idea in between science-fiction and science-fact and outside the realm of science fantasy.

DFvD: I get the spectrum.

HP: Is Science-Fiction more rooted in science – is it not? I imagine there are some Science-Fiction films which are or may be more fantasy based. (The plethora of super hero films fit into science fantasy, ‘The Fifth Element’ another good example)

DFvD: They are but they are still under the genre of Science-Fiction, even though there are some very dreamy examples.

HP: Trying to populate the design/science/fiction/non-fiction diagram further, I wonder in design, what are the equivalent of facts? How about products. You know?

DFvD: They exist and they are defined and executed in detail.

HP: I wonder what the design equivalent of science’s ‘facts’ would be? Perhaps ‘design non-fiction facts’ could be ‘products’ which can be placed in the diagram(1). Is gravity a theory or is it an actual fact or a scientific law – definitely science non-fiction. Theories are perhaps part fiction and part non-fiction, waiting for evidence to make or generate new laws and facts about the world.

DFvD: Theory is an interesting one because it is under science until another explanation is valid. It is a theory only until the next thing comes and break it. So, it is a fact only for now.

HP: Yesterday I read in the newspaper about some bursts of energy that are coming from deep space. These super bursts of radio waves – they are a burst of ‘wow...what was that, where did it come from?’ There have





been about 80 or 90 recorded in the past but no one knew where they came from. Scientists at an Australian observatory, have found the source of one of these bursts. It is a hundred billion light years away and they have calculated that it is an exploding neutrino which is the biggest thing they have ever thought of. The only problem is their calculations suggest that this burst is a billion times more than an exploding neutrino. So, there is data there, I imagine there are theories around what that is. Data is a fact so I don't know where the data fits in here. Scientific data... Data over this end on the diagram(1).

DFvD: And then we need to think about how data can be interpreted and the connection between data and information.

HP: What is the opposite of data?... Dreams?

DFvD: Imagination / assumptions?

HP: Ideas may come in here somewhere(1) and an idea is a fiction – isn't it?

DFvD: It could be a fictional idea, but it can also result in a daily product.

HP: Ok, yes. I am going to write ideas just across the fiction/non-fiction boundary.

DFvD: In ideas there is a curation.

HP: That makes sense even here. I am wanting to put in things like storyboards and scenarios.

DFvD: And narrations.

HP: Or narratives. In relation to fantasy, which ones are the most fantastic Sci-Fi pieces? It would be quite interesting to plot Science Fiction films onto this (appendix). Who was an American actor who was in 'Die Hard' and 'Pulp Fiction'?...Paul – American actor in 'Die Hard'? Who was that?





Paul: Bruce Willis

HP: That's it, thank you very much

Paul: Are you saying there is a resemblance?

HP: That's it, got it. I now have Bruce Willis. 'The Fifth Element', do you know the film the Fifth Element? It has aspects of science and design fictions and a number of fantasy aspects. I was also trying to think about where to place the film '2001'.

DFvD: '2001' is close to science. I wouldn't put it on the dreamy area. Overall it is closer to design/science non-fiction than a film like 'The Fifth Element'.

HP: I am not sure, you know, within Science-Fiction films there is a design aspect to it. The design of the 'Fifth Element' it is like in '2001' – both films have a lot of futuristic design. Also there some of the big ideas in '2001' have aspects of fantasy to them. Trying to plot the shape of a film into this diagram poses some challenges.

DFvD: When you think about all the issues of all the surveillance of all those companies in your surroundings they were originally in the world of fantasy. They start to become slightly real like when you give your home to the control for example to smart speakers like Alexa (who knows who is behind Alexa and who can take control of Alexa). Another example is the Chinese credit system in which they give you points according to how you behave as a citizen. For example, if you didn't pay your rent once, didn't pay your phone bills, if you cross against a red light you get minus. Then the state is who is putting limits and rating you on what you can afford to do after.

HP: Have you seen the 'Black Mirror' episode where you get rated on the number of likes? ("Nosedive" is the first episode in the third series of the British science fiction anthology series Black Mirror. ... The episode is set in a world where people can rate each other from one to five stars for every interaction they have, which can impact their socioeconomic status.





Source Wikipedia)

DFvD: I haven't seen that one.

HP: I can't remember what it was called, but it is essentially – you do a good turn and someone 'likes' you and your rating in turn can go up and up and up. It follows this woman - she wants to get invited to a party and she becomes obsessed with her ratings... It doesn't end well for her. It is a brilliant dystopian story, extrapolating trends in modern social media. I highly recommend it. It has aspects of 'Critical Design' in its critical response to modern social media, with aspects that can be seen now in the culture of competitiveness engendered by these platforms –fictional aspects of the story becoming more real over time.

DFvD: If we take '2001', which is a really nice one to analyse because there are products involved in the movie which are designed. There are some scientific concepts that are very well developed. There is an incredible narrative, there is an element of fantasy which suddenly jumps into the non-fiction spectrum.

HP: They had people from NASA working on the film, didn't they? There is a lot of rigorous science. When it was made a lot of those things did not exist. It is actually possible for a film to move from fiction to non-fiction as ideas or design/science fictions have become real as products. The iPad being one for instance. But we are still out in the realms of fictional ideas in terms of the future of mankind.

DFvD: This fantasy is becoming ever more present. Add to that Alexas and AI.

HP: If I said HAL supercomputer where is that on the diagram?

DFvD: Much more towards the fantasy end when it was released. However, between the release of the film and now the idea of Hal as moved towards the non-fiction end of the spectrum with personal computer experts such as Siri and Alexa and new developments in artificial intelligence.





HP: We can place the HAL supercomputer on the diagram and also Alexa. Showing another aspect of ‘2001’ that has partially moved from fiction/fantasy to non-fiction/product.

DFvD: Put it somewhere - it touches science, products and non-fiction. I think HAL is a very good example because it brings us into the discussion of care.

HP: it is interesting that Alexa and HAL are types of care systems.

DFvD: Exactly.

HP: That could be one of our thematics.

DFvD: I think in both cases (HAL and Alexa) it is problematic to delegate completely care to this external in either of their formats. I wouldn’t delegate care completely to Alexa or AI systems. Obviously, it was a huge mistake to give it completely to HAL. There’s something we need to learn from Alexa and HAL which is not to completely entrust care with these kinds of Artificial Intelligence care systems as they are controlling, they have too much agency, and you don’t know who is behind them and with which purposes they operate.

Should we conclude with one line the answer to question 19, which would be design-science fiction is a more suitable approach than the binary question?

HP: I think we should provide the answer to the design fiction vs science fiction binary question. I think it is true that there is validity in both ie merging them into design-science fiction. Design Fictions such as those generated through Critical Design might be more expedient for ‘design of care’ as they are more relatable - promoting a series of scenarios and presenting alternative perspectives to current real or imagined issues with the aim of future applied influences. However, Science Fiction is able to look more broadly at the world and is not focused on ‘designing’ potentially applicable futures. Both fields can be genuinely critical as they are not linked to economics or the needs of a client. This freedom makes both





useful to the ‘design of care’.

Appendix

Science Fiction films plotted onto science/design/fiction/non-fiction

(Source: Wikipedia)

Dark Star (1974)

An American science fiction comedy film It follows the crew of the deteriorating starship Dark Star, twenty years into their mission to destroy unstable planets that might threaten future colonization of other planets. The film revolves around damaged computer and resultant issues with their ‘intelligent’ on-board planet-busting “Thermostellar Triggering Devices”.

2001 (1968)

The film, which follows a voyage to Jupiter with the sentient computer HAL after the discovery of a featureless alien monolith affecting human evolution, deals with themes of existentialism, human evolution, technology, artificial intelligence and the possibility of extra-terrestrial life.

Her (2013)

The film follows Theodore Twombly a man who develops a relationship with Samantha an artificial intelligence virtual assistant personified through a female voice.

The Matrix (1999)

Depicts a dystopian future in which humanity is unknowingly trapped inside a simulated reality, the Matrix, created by intelligent machines to distract humans while using their bodies as an energy source. When computer programmer Thomas Anderson, under the hacker alias “Neo”, uncovers the truth, he is drawn into a rebellion against the machines along with other people who have been freed from the Matrix.

The Demon Seed (1977)

The film concerns the imprisonment and forced impregnation of a woman by an artificially intelligent computer.

The Fifth Element (1997)



Primarily set in the 23rd century, the film's central plot involves the survival of planet Earth, which becomes the responsibility of Korben Dallas, a taxicab driver and former special forces major, after a young woman falls into his cab. To accomplish this, Dallas joins forces with her to recover four mystical stones essential for the defence of Earth against the impending attack of a malevolent cosmic entity.

