

# Contact - Art as the outer limits of the Universe

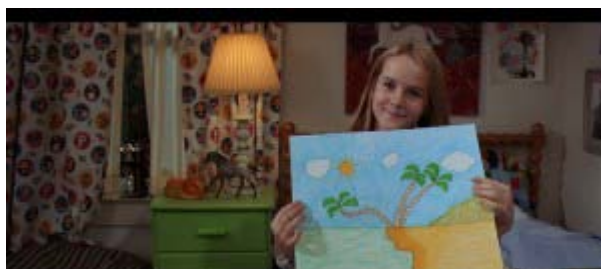
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The movie 'Contact' (1997) explores different aspects of the traditional positions of science and faith; what is faith and how does faith differ from scientific deduction. It cleverly raises a few questions about the validity, or reality, of individual experience versus 'objective' experience. The most interesting point however, is that it (unintentionally?) provides a definition of art, and a way to look at art as playing a fundamental part in the construction of reality.

In the beginning of the movie young Ellie Arroway is sitting behind a shortwave-radio trying to make contact with other radio enthusiasts. After a brief conversation with a man from Pensacola, Florida (the farthest away from her home so far), she makes a drawing of how she believes it looks there - a nice beach and some palm trees. According to her caring widower-father it's 'a beauty'. Shortly after, her father dies of a heart attack, leaving Ellie calling out for him on her shortwave radio.

Twenty years later Ellie is a passionate astronomer searching for extraterrestrial life using large radio telescopes. Eventually, she receives a signal, which apparently comes from very far away. Through a series of events the signal is decoded and a giant 'machine' is constructed using the instructions given in the signal. What this machine is supposed to do is unclear, but it is believed it will create a wormhole allowing 'the passenger' to travel to 'the other end of the universe'. Having been chosen to be the passenger, Ellie takes place inside the machine, and, from her perspective, travels through a series of tunnels of light and eventually awakens on a beach, which closely resembles the drawing of Florida she made many years earlier. There she meets an entity which appears to her looking like her father. Baffled by the scenery and seeing her dead 'father', she assumes that her mind 'has been downloaded' by the aliens in order to create a non-threatening setting. After a brief talk with the entity she suddenly 'wakes up' again in the machine - according to her experience (and the recording equipment she carried) 18 hours later, according to the onlookers from the machine control center an instant later.

The final stages of the movie deal with questions concerning the veracity of Ellie's individual experience ("I cannot explain it, but it was real") as opposed to the multiple concurring observations made from the control center ("We didn't see anything"). Eventually, Ellie gives into the accepted narrative, that "...some things just can't be explained". (From a feminist point of view, this is when the strong heroine breaks and becomes vulnerable, and is eventually swept off in a limousine by her male, Christian protector, who only then says, that he "...for one, believes her story." She's finally been reigned in.) At the end of the movie Ellie tells a group of school kids that nobody knows how big the universe is, but that *"...it's bigger than anything anyone has ever dreamed of."*



This final statement is a typical example of the hierarchical incongruity between our perception of subjective experience and 'objective' reality . Ellie has just traveled to the far ends of the universe and found it to be a real version of a drawing she herself made, and her conclusion is that the universe is somehow "...bigger than anything anyone has ever dreamed of"!?! It seems to me that she sees *exactly* what she herself had dreamed the farthest place from home would be and that, by implication our dreams and visions define our universe. Even though she applies an explanation that makes sense from her technologically based world view ("downloading my mind" ), the fact remains, that she walks in a world constructed by her own brain. Now, normally we dismiss that as hallucination, but what we then overlook is that *everything anyone ever experiences* is a construction of the brain. It makes no sense to talk of one experience being a construction of the brain and the other not. It is how we choose to incorporate these experiences into our shared construction of reality that matters.

We are used to thinking of the universe as a pretty solid construction where everything is ordered according to certain deducible laws; given enough time we will find out all there is to know about the workings of the universe, and consequently our position in it. This is a remainder of Cartesian dualistic thought which, although discredited by science, still seems to determine the everyday world view of our (Western) culture. It proclaims the division between mind and matter, and thereby reinforces the notion of 'mind over matter' which in turn is used to justify the proclaimed superiority of Western culture (as the 'head' of the world). However, the same science which was fathered by this dualistic world view has long since found that the universe is not as ordered as it once thought . It makes no sense to speak of mind and matter as separate phenomena. Our experience of the world is determined by sensory experience and expectations of this experience, which in turn are determined by the structure of our brain and nervous system. The world we experience (and it makes no sense to speak of any other) is a construction of our brain and extended nervous system, which are extensions of cellular structures working to feed themselves. In order for the brain to maintain an ever-growing metabolism, at some point self-consciousness gradually evolved. This caused a growing division between an 'inner' and an 'outer' world. Some sensory experiences were interpreted to deal with an 'outside' world, some with an 'inside' world (to the brain there's no difference). Thus the experience of 'me', of a personality linked to 'my body', was gradually born. In order for several 'me's' to share and experience the same reality we need to be able to speak of the same reality, consequently the more complex a society becomes the more the need for 'objectivity' (a shared communicable reality) arises. Over time 'I' becomes so ingrained in thought, language and culture that the division between 'me inside' and 'the world outside' becomes near impossible to bridge. Eventually this leads to the idea of a world disconnected from our experience of it. Descartes distills this idea in his meditations and proclaims that we can't trust our senses to show us the 'real' world and subsequently he places consciousness ('I') 'above' a mechanical world. However, as Ellie learns on the other side of the universe, the world is an expression of the brain, our consciousness is a consequence of dealing with the world - the brain is simultaneously *creator of* and *actor in* the world.

In the movie Ellie finds herself at a point, or in a place, outside of the shared reality. She 'travels' in a machine, which tests the outer limits of Einstein's theories, our shared understanding of the universe. It is simple to speak of infinite mass, the speed of light and creating a singularity in mathematics, but imagine a machine that actually *does it*. What would it look like if you were transported to a place where time, matter and energy approach infinity? How would the brain help the consciousness make sense of it? In Ellie's case, it produces a world, based on a familiar image, related to suitable concepts . Had she never made that drawing, never envisioned what 'the place farthest away from home' might look like, she would probably have experienced something entirely different - perhaps, a scenery from a science fiction movie, an Escher-inspired world or nothing at all. However, the conceptual link (or neurological link) between the image and the concept makes it the 'logical' choice for her brain. It constructs a world, which allows her to deal with the new reality in which she finds herself, without breaking down the conceptual framework of her everyday reality. This way her 'self' can incorporate the new reality alongside the shared reality.



Nobody follows Ellie through the machine, but imagine her experience had been taken seriously (and while doing so, reflect upon why it was not), the next passenger would then expect to arrive at a beach with palm trees. Perhaps he would start to explore the beach further, walking beyond the trees. Upon his return he would confirm that he had traveled to the 'same' beach and thereby begin to establish the shared experience of 'the beach in space' as a real place you can travel to. In time more people would go there and a consensus would arise on how to define 'the beach'. After a while it might not look anything like the original beach anymore, perhaps someone would cut down the trees or build a house, start measuring distances, defining 'natural laws' etc., but the foundation of the beach would always be Ellie's first experience, based on her drawing.

Much like the Australian aboriginals who tell of how their forefathers in the Dreamtime sang songs which solidified and became the world, Ellie's drawing, or rather the neurological processes (her 'pre-conscious'<sup>1</sup>) which 'inspired' the drawing, becomes the new world. Although we do not have access to a machine like Ellie's, the processes described here can be used to describe the origin of the foundations of our world as well. From the caves of Lascaux to the perspectival visions of the Renaissance or the definition of Cyberspace by William Gibson, the foundation of our shared reality is an artistic vision, an artist's rendering of pre-conscious neurological processes. The scientific goal is the exploration of this rendition - how does it work, how can it best be described, what does it do, how can we best use it?

Art plays a much more fundamental part in the construction of reality than we usually accredit it with. Art is not something that develops in a society as a means of 'exploring emotions', analyzing current political trends or keeping the masses content. Without art there is no society. It is neither passive nor descriptive, it is active in its creation, it is literally *creative*. Not as an exercise in metaphor or symbolism, but the concrete experience we know as reality. Art enables the construction of a shared reality, which can be used as foundation for the world and eventually, civilization. It is not at odds with science, it is the precursor to science and the scientific world view. Or, as Ellie stammers when she travels through the wormhole, 'No, no words can describe this...they should have sent a poet'.

What she doesn't realize is that they did.

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<sup>1</sup> I use the term pre-conscious not in the Freudian sense, but as a term for the neurological fact that e.g. decisions are shown to be already decided upon in the brain before the decision becomes conscious. We may think 'we' decide but our consciousness merely acts out decisions taken at a 'deeper' level of the brain, the 'pre-conscious'.