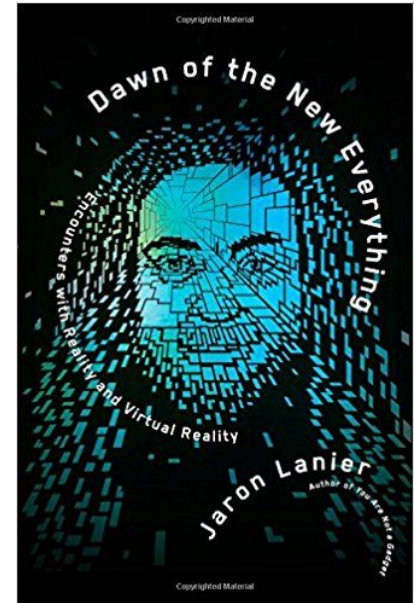


# Definitions of Virtual Reality

From *Dawn of the New Everything*, by Jaron Lanier

1. A twenty-first-century art form that will weave together the three great twentieth-century arts: cinema, jazz, and programming.
2. A simulated new frontier that can evoke a grandiosity recalling the Age of Exploration or the Wild West
3. Hope for a medium that could convey dreaming.
4. The substitution of the interface between a person and the physical environment with an interface to a simulated environment.
5. A mirror image of a person's sensory and motor organs, or if you like, an inversion of a person.
6. An ever growing set of gadgets that work together and match up with human sensory or motor organs. Goggles, gloves, floors that scroll, so you can feel like you're walking far in the virtual world even though you remain in the same physical spot; the list will never end.
7. A coarser, simulated reality fosters appreciation of the depth of physical reality in comparison. As VR progresses in the future, human perception will be nurtured by it and will learn to find ever more depth in physical reality.
8. Technology that rallies the brain to fill in the blanks and cover over the mistakes of a simulator, in order to make a simulated reality seem better than it ought to.
9. The investigation of the sensorimotor loop that connects people with their world and the ways it can be tweaked through engineering. The investigation has no end, since people change under investigation.
10. Reality, from a cognitive point of view, is the brain's expectation of the next moment. In virtual reality, the brain has been persuaded to expect virtual stuff instead of real stuff for a while.
11. VR is the most centrally situated discipline.
12. VR is the technology of noticing experience itself.
13. The perfect tool for the perfect, perfectly evil Skinner box.
14. Magic tricks, as applied to digital devices.
15. Instrumentation to make your world change into a place where it is easier to learn.
16. Entertainment products that create illusions of another place, another body, or another logic for how the world works.
17. A general-purpose simulator, as compared to special-purpose ones like flight or surgical simulators.
18. Instrumentation to explore the deep time of nervous system adaptations and preadaptations.
19. Instrumentation to explore motor cortex intelligence.
20. Like lucid dreaming, except that (a) more than one person can take on roles in the same experience, (b) the quality is not as good, and (c) you have to work to program VR if you want to be in control, which you should want. Dreams, meanwhile, are often best if you don't seek to control them. Even Stephen LaBerge seeks to be nonlucid in most of his dreams, since it is in untethered dreams that the brain surprises and renews itself.
21. In comparison to older, grandiose definitions of "nanotechnology," VR lets you experience wild things without messing up the one physical world that others are compelled to share with you. VR



is vastly more ethical. It's also not so nutty. We can see how VR will work without weird speculations or apparent violations of fundamental physical laws.

22. A preview of what reality might be like when technology gets better someday.
23. VR is sometimes compared to LSD, but VR users can share a world objectively, even if it's fantastical, while LSD users cannot. VR worlds will require design and engineering effort, and will be best when you are willing to make the effort to create and share your own experiences. It will be like riding a bike, not a roller-coaster ride. Although there will be thrilling VR experiences, you'll always be able to take off the goggles. You won't lose control. VR will typically be "lower quality" than reality or dreams or psychedelic trips, although it will be up to you to hone your senses so you can notice the difference. LSD is ready now and VR won't be really good for a while. It might be more for your kids or their kids.
24. A cybernetic construction that measures the probing aspect of human perception so that it is canceled out.
25. A media technology for which measurement is more important than display.
26. A media technology that prioritizes stimulating the cognitive dynamics by which the world is perceived over accurately simulating an alternate environment.
27. A medium in which interactive biological motion is emphasized.
28. The digital medium that fights the hardest against time.
29. A cultural movement in which hackers manipulate gadgets to change the rules of causality and perception in demos.
30. A technology in which internal data and algorithms are intelligible as transformations of real-time, point-of-view human experiences and thus inspire curiosity to look under the hood.
31. You are having interesting experiences but look preposterously nerdy and dorky to onlookers.
32. The technology that is often misrepresented as being able to make so-called holograms float impossibly in the air.
33. The ultimate media technology, meaning that it is perpetually premature.
34. Instrumentation that might just enable telecommunications with honest signals someday.
35. Training simulators for anything, not just flight.
36. A way to try out proposed changes to the real world before you commit.
37. Instrumentation to present data as lucidly as possible.
38. The ultimate way to capture someone inside an advertisement. Let's hope it is done as little as possible.
39. Digital implementation of memory palaces.
40. A generalized tool for cognitive enhancement.
41. A training simulator for Information Age warfare.
42. Digital puppetry.
43. A new art form that must escape the clutches of gaming, cinema, traditional software, New Economy power structures, and maybe even the ideas of its pioneers.
44. The term you might have used in the 1980s if you were partial to those weirdos at VPL Research.
45. A person-centered, experiential formulation of digital technology that hopefully inspires digital economies in which the real people who are the sources of value aren't ignored.
46.  $VR = -AI$  (VR is the inverse of AI)<sup>15</sup>.
47. The science of comprehensive illusion.
48. A shared, waking state, intentional, communicative, collaborative dream.
49. The technology that extends the intimate magic of earliest childhood into adulthood.
50. A hint of the experience of life without all the limitations that have always defined personhood.
51. The medium that can put you in someone else's shoes; hopefully a path to increased empathy.
52. A way of using computers that suggests a rejection of the idea of code.