

APPLICATION VIRTUAL REALITY IN PSYCHIATRY

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Abstract:

Virtual reality (VR) is a concept that uses multiple novel approaches to allow interaction with a computer-simulated environment. The simulated environment can be similar to the real world or it can differ significantly from reality. Therapeutic role of VR is into variety of situations like anxiety and stress-related disorders, including fear of flying, fear of storms, fear of heights, fear of bridges, fear of public speaking and posttraumatic stress disorder. VR therapy offers patients a successful alternative to traditional treatment.

Keywords: Virtual reality (VR), computer-simulated environment, therapeutic role

Virtual reality (VR) is a technology which allows a user to interact with a computer-simulated environment, be it a real or imagined one. Most current virtual reality environments are primarily visual experiences, displayed either on a computer screen or through special or stereoscopic displays, but some simulations include additional sensory information, such as sound through speakers or headphones. Virtual Reality is often used to describe a wide variety of applications, commonly associated with its immersive, highly visual, 3D environments. The development of CAD software, graphics hardware acceleration, head mounted displays, database gloves and miniaturization have helped popularize the notion. The definition still has a certain futuristic romanticism attached. People often identify VR with Head Mounted Displays and Data Suits. Users can interact with a virtual environment or a virtual artifact (VA) either through the use of standard input devices such as a keyboard and mouse, or through multimodal devices such as a wired glove and omnidirectional treadmill. The simulated environment can be similar to the real world or it can differ significantly from reality, as in VR games. In practice, it is currently very difficult to create a high-fidelity virtual reality experience, due largely to technical limitations on processing power, image resolution and communication bandwidth. However, those limitations are expected to eventually be overcome as processor, imaging and data communication technologies become more powerful and cost-effective over time. [1]

The term *artificial reality*, coined by Myron Krueger, has been in use since the 1970s but the origin of the term *virtual reality* can be traced back to the French playwright, poet, actor and director Antonin Artaud.

The VR developer Jaron Lanier claims that he coined the term in the early 1980s [1, 2]. The concept of virtual reality was popularized in mass media by movies such as *Brainstorm* and *The Lawnmower Man* (and others mentioned below), and the VR research boom of the 1990s was motivated in part by the non-fiction book *Virtual Reality* by Howard Rheingold.

Morton Heilig built a prototype of his vision dubbed the Sensorama in 1962, along with five short films to be displayed in it while engaging multiple senses (sight, sound, smell, and touch). Predating digital computing, the Sensorama was a mechanical device, which reportedly still functions today. In 1968, Ivan Sutherland, with the help of his student Bob Sproull, created what is widely considered to be the first virtual reality and augmented reality (AR) head mounted display (HMD) system. It was primitive both in terms of user interface and realism, and the HMD to be i