

The Wave-Particle Duality of Michelangelo's Statue of David

As she walked over to the Statue of David, she thought about how long it must have taken Michelangelo to carve this block of stone with only the primitive tools available to him way back when. "Years!" she muttered. "That's insane..." Upon arriving at the statue, she took a good look at it. She looked up, down, and around the sides. She then reached over and ran her fingers over the statue to feel the texture of the stone, patting and tapping it a few times. The middle school student then took off her virtual reality headset, sat down at her desk, and began dictating her report to the computer.

The information obtained by our senses form the basis for our perceptions of the world around us. As that information becomes increasingly mediated before reaching our senses, our perceptions of the world are naturally being increasingly affected by the media. Indeed, the effects may likely cause us to begin questioning many of our most basic assumptions. Who am I? Where am I? Is seeing still believing? Is anything real? Are the above questions entirely meaningless altogether?

Marshall McLuhan argued that the media extend our senses and act as "extensions of man":

During the mechanical ages we had extended our bodies in space. Today, after more than a century of electric technology, we have extended our central nervous system itself in a global embrace, abolishing both space and time as far as our planet is concerned. ... we have already extended our senses and our nerves by the various media.¹

In other words, the media we use become part of our own being. McLuhan argues that the media append themselves to us.

For thousands of years, Native Americans, as well as members of some other cultures, have held rituals in which men take hallucinogens in order to, theoretically, accentuate their senses. The stereotypical psychic Gypsy provides an even more explicit example of sensory extension through media. The Crystal Ball, if it works, can certainly be considered a medium: It is the medium through which its owner claims to be able to converse with the dead or foresee the future. Yet, the line between the powers of the Ball and those of its

¹ McLuhan, Marshall, *Understanding Media: The Extensions of Man*, MIT Press, 1994, pgs. 3-4

presenter is often deliberately blurred by the presenter. So in a sense, she wishes us to believe that she is not simply obeying a powerful glass ball, but that the Crystal Ball actually *gives her the power!* The Crystal Ball supposedly acts as an extender of the presenter's senses!

Many other carnival booths have also used the idea of extending or affecting our senses with the media. Even in the days before the motion picture, mock trains with manually cranked moving backdrops outside the windows allowed visitors to take a first step toward a convincing, yet false, "reality". More recently, the Disney theme park attraction, "Star Tours", combines visual sensations with the sensations of sound and touch to give us an even more ambitious offering for the same purpose. Using a similar technique, IMAX films achieve the sensory modification experience without motion, but with dramatic sounds and images that attempt to cover a large portion of the audience member's field of view in order to engross the viewer.

Besides fooling our senses directly, the media can also affect our perception of the world without any extraordinary effects at all: Every time we read, see, or hear a piece of information, our perception of what the world is changes. After a person reads about the nature of atoms, he may begin to look at every object in the world in a completely different way. When a person hears over the phone about the death of a parent, he realizes that he will never talk to that parent again. A person's world view manages to change drastically due to but a few simple words read or heard over some medium!

This is, of course, why propaganda can be such an effective technique. By simply manipulating what information people receive through the media, one can indirectly manipulate their thoughts! Our perception of the state of the world—of the truth—is malleable.

When standing in front of the original copy of a famed piece of artwork, such as the Statue of David, most people feel a sense of awe. Walter Benjamin would say that this is because the statue radiates an "aura" that is caused mainly by its history and the knowledge of its uniqueness. But just what precisely causes the radiation of this "aura"? What instills the awe?

“The features were very well-defined,” she dictated. “I find it hard to believe that someone could create all the details on that statue manually. The technical skill of Michelangelo pales in comparison with our modern automated shape-definition systems.”

If, as Benjamin says, the "aura" of an object lies in its history and uniqueness, are not those qualities present even if we look at replications? Even if we look at a photograph, we *know* that the object being depicted still has the

history it has. We *know* that the object in question is unique and that what we are looking at is a mediated replication. But looking at photograph or even a video of it just isn't the same, somehow. Something is lost in the process of mediation.

Is it simply because we lose the three-dimensionality? What if we were to project a holographic image of the artwork in question? In that case, Benjamin would still argue that an essential quality of a piece of artwork is its location and presentation. In the case of art that originally had ritualistic functions, even the original social atmosphere under which it was presented was part of its value. "In other words, the unique value of the 'authentic' work of art has its basis in ritual, the location of its original use value."²

But surroundings can be replicated as well. The students of the future, instead of looking at flat photographs in textbooks, could potentially see—and even interact with—accurate-to-the-last-detail replications of a work of art and its environment. Achieving what Star Tours and IMAX managed only to partially achieve, the users of new virtual reality systems, instead of simply feeling as if they were "almost there", could achieve a total sensory experience through, perhaps, brainwave induction devices.

Ignoring the many other potential social ramifications of the existence of such a system, one thing it *would* definitely be able to do is to create the complete illusion that the user is standing in front of the Statue of David in Italy. The user's senses would be totally and utterly fooled. If the user somehow were not to *know* that he is in a virtual reality system... if the user were somehow fooled (perhaps by being knocked unconscious beforehand) into believing that he really is standing before the Statue of David, then he would undoubtedly feel just as much awe and just as much of a sense of "aura" as someone who really is standing in front of the real life statue. A person's perception of reality is governed by what his senses experience, and if his senses tell him that he is in front of the Statue of David, then that will become his reality. The Statue of David does not emit any actual physical "aura". The awe that its viewers feel is completely due to their belief that they stand before the very piece of rock that the great Michelangelo chiseled so many years ago. So even if they maintain that belief through deception, they would still feel the same awe.

² Benjamin, Walter, "The Work of Art in the Age of Mechanical Reproduction", *Illuminations*, New York, 1969, pg. 224

Only the *knowledge* that this is a VR replication allows the user to feel that this is not the real thing, and that would be enough dispel the sense of aura. If a user's previous experiences tell him that this is not the real statue, then even with a complete replica of the environment in which the Statue of David stands, even with a total sensory experience, the user would still understand that this is not the real statue. The entire experience would still feel little different from reading a textbook. Certainly, the experience may still inspire thought or even admiration of the creator of the work, but photographs can already inspire such thoughts.

Now, we understand that the sense of aura we feel when standing before a statue is due to our belief that we are standing there before the actual original statue. The authenticity of the statue before us is key, but so is the *belief* that we are standing in front of the statue.

Whether or not we are standing before the statue depends, of course, on where we are in the first place. The media has affected that as well. The question of where we are may seem simple at first glance, but a deeper investigation shows it to be far more complex and fundamentally affected by the media.

She had a Master's degree in Art History now, and had finally been given the opportunity to excavate the Florentine ruins. She put on her headset and jacked in to her assigned ArcheoBot. As she turned her head from side to side to get used to her "new body", she marveled at the many attachments and tools on her metallic arms. She marveled still more at her newfound abilities of infrared and ultrasonic vision. She looked around at her colleagues, who now likewise took the form of three-foot-tall robots. She finally looked up and took in the panorama, the vast radioactive wasteland that was Florence. "To think: this was at one time the most beautiful city in the world," she sighed. Michelangelo's Statue of David was still buried beneath several feet of dirt, waiting to be unearthed. She took a glance at her satellite maps and headed in the direction of the statue...

Modern deep sea divers routinely use Remotely Operated Vehicles (ROVs) to observe locations that are too deep, too dangerous, or otherwise unreachable by human beings. They watch where the ROV is headed through a video feed from a camera mounted on the vehicle, and they control the vehicle through a set of joysticks. Is an ROV simply an extension of its operator? Why not? Both vision and motion are mediated, but there are many cases where we take that mediation for granted as part of ourselves.

When spectacles were first invented, they were blasted for being the work of the Devil. How could we fool with such a holy thing as our God-given ability of sight? But today, we understand that our eyes contain lenses themselves, and eyeglasses simply account for imperfections in our natural lenses. Most wearers of glasses and contact lenses rarely think about the instruments that are constantly filtering and adjusting the light coming into their eyes. We take for granted our glasses and contacts as extensions of our senses—as extensions of ourselves. Only when we make more obvious adjustments such as tinting the glasses do we begin to notice that we are receiving mediated information.

But then, if we can accept sight through ordinary glasses as our own, why not sight through sunglasses? Sight through a microscope is but an exaggerated version of eyeglasses. What then of sight through an electron microscope, which uses monitors? Sight through a periscope? Sight through a monitor in a submarine connected to a camera on the hull—nothing more than an electronic periscope? What if the tube of the optical periscope were simply longer? What if it were *very* long? What if the camera in the electron microscope or electronic periscope were further away? What if it were a mile away? Half a world away? What is the difference between seeing something on location with your “naked eye” as opposed to seeing a live broadcast of the same event?

Today, medical research has already had partial success in the development of owner-controllable prosthetic limbs. Through the use of neuron-stimulating electronics, amputees are beginning to gain limited sensation and control of their prosthetic limbs. If these techniques were perfected, there would be little doubt that owners of prosthetic limbs would consider them parts of themselves.

Gloves and other clothing are also routinely considered extensions of man. We can still feel things through the mediation of gloves as well as move things through them. When we push something while wearing a glove, we are in actuality pushing on the glove, which in turn pushes the object. But we nonetheless often think of the clothing we are wearing as a part of ourselves. Again, as in the case of eyesight, there is only a matter of degree between grabbing an object with a glove and grabbing it with a robotic arm controlled by a joystick.

So why can we think of eyeglasses as placing us in a certain place but not a live broadcast? Why can we think of prosthetic limbs as parts of ourselves but not an unattached robotic arm? Why can we not think of ROV's as extensions of ourselves? The answer is simple: We only perceive things as parts of ourselves if they do something that is at least similar to a function we already

have. A prosthetic limb feels like a possible body part whereas a separate vehicle does not. But that can be changed.

When we look at a monitor, we are not receiving a total sensory experience. However, if we *were* able to fill our entire field of vision with the ROV's display, as well as directly control the arms of the ROV through brain impulses, and if we were able to use some sort of brainwave induction device to not only accomplish these tasks but also to filter input to all of our other senses such that they come from the environment of a humanoid vehicle, it is very likely that we would be able to identify ourselves with that machine at last. If we were able to obtain a full sensory experience at the site of the robot and filter out all sensations that leak the fact that we are in actuality sitting in a chair with a device strapped to our heads, the media would conquer our instincts, and we would be able to succeed in displacing our "ego" to the robot. We become the robot.

If we could then maneuver the robot up to the real life Statue of David and look at it, we would likely feel the same awe and sense of aura that we would feel if we were there in person, because for all practical purposes, with all of our senses there, we *are* there. One question remains: Where is "there"?

How close must we come to the Statue of David before we feel this awe? At what point can we say we are standing "next to" it? When we are within a one-meter radius? A two-meter radius? Within the courtyard in which it is placed? These all seem rather arbitrary. *Where does the Statue of David end?* Perhaps we are standing next to it when we can see it? Well, we could conceivably see the statue from Alpha Centauri if we had a strong enough telescope! In the end, just as with our sense of who we are, there is no solid, particular, answer to the question. Our proximity to the Statue of David is determined by our experiences and prejudices. Our sense of where we are, like our sense of who we are, is fluid and constantly influenced by the media. If a statue looms before us, it may be because it is really there, or it may be an illusion.

Our perceptions are influenced by our senses, and our senses are in turn influenced by the media. The media thus have the ability to alter our view of the world at the most fundamental level. Throughout history, we have continuously sought new and better ways to extend and alter our senses. Through use of the media, we may eventually be able to obtain a full sensory experience in another body, at which point we will be able to identify our ego with that physical entity. Emotions such as the awe felt while standing in front a renowned statue are based on the fundamental perceptions of who and where

we are. By affecting those perceptions, the media can have a profound impact upon our emotions.

As she walked over to the Statue of David, she thought about how long it must have taken Michelangelo to carve this block of stone with only the primitive tools available to him way back when. “Years!” she muttered. “That’s insane...” She had, in her spare time, recently created a life-size sculpture of the entire city of Florence as it stood in the Fifteenth Century; with today’s technology, it took her all of three weeks. Upon arriving at the site of the statue, she took a good look at it through the dirt with her vision in ultrasonic mode. A wave of anxiety swept her. “Here it is!” she cried out loud. “Michelangelo’s very own hands touched what I’m standing over right this moment!” Enthusiastically, she switched her right arm into a shovel, and she began to dig...