Augmented Reality

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Augmented Reality: This is an emerging technology in which what is in front of us is “augmented” (i.e. supplemented) with additional information via devices such as smart phones.

An example of augmented reality that is often used by its boosters is that of a tourist pointing her smart phone at one of the pyramids in Giza and the smart phone being able to determine, based on her location at the time, what she wants to know and providing her with historical background on Ancient Egypt with maps, videos, Wikipedia entries, etc. Augmented reality can also be used for such mundane uses as strolling about a neighborhood and reading reviews of eateries in the area one is in via text overlaid on the map one’s smart phone has generated.

Augmented reality employs such technologies as haptics, computer-generated imagery and geolocation so that we will be able to gain an artificially-generated “feel” of an object and learn almost instantaneously more about it.

Why should those in the health sciences care about augmented reality? Because of the promise it holds for medical education, continuing medical education and staff training.

For example, imagine how much more information could be conveyed in an anatomy class if students could call up data on the body parts they are examining during a dissection exercise. Wouldn’t it be helpful if they could view visual simulations of the physiological process they are investigating and create their own computer-aided scenarios of whatever intrigues or bewilders them? Augmented reality can engage students intellectually and endow them with the ability to practice clinical tasks repeatedly in a manner safe for them and at no risk to actual patients or volunteer subjects and, via haptics, in a quite concrete, tactile fashion.

And think of the possibilities for major reductions in the need for animal testing that is currently still a mainstay of medical education and research.

Already, augmented reality is being developed for training/simulation purposes in such fields as obstetrics, radiology, dentistry and surgery.

Additionally, augmented reality holds great promise for the disabled in that as an immersive technology in which the distinction between the real world and the virtual/digital world is blurred augmented reality will enable those with physical, neurological and cognitive impairments (such as the blind, stroke victims, and those who have experienced traumatic brain injuries) to transcend our existing two-dimensional (screen/keyboard/mouse) interface and experience greater levels of function and independence.