

Wearable Technology: Disruptive or Diffusion of Innovation?  
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Summary by Nicole Dee-Collins

Wearable technology is on the cutting edge of today's consumer market, combining two ever-changing industries: fashion and technology. Deepika Raj, a doctoral candidate at the University of Missouri at Columbia, states that wearable technology is either a diffusion of innovation or a disruption of innovation. That is to say, wearable technology is either a natural progression of the market or it has caused a disturbance in today's market by replacing its competitors.

Raj defines wearable technology as: "Those items or accessories that are not only used for wearing and have technical functions, but also as those wearables that makes one do more with less, gives super power, has some purposes and solves problems." Through her research, she has discovered that the origins of wearable technology may have come from the increased human-to-computer interaction and the ubiquitous use of computers in today's society. The wearable technology market is expected to grow to over \$70 billion in 2024 from the \$14 billion it accrued in 2014. Even with that projection, there is a belief that wearable technology is not catching on as fast as it should with consumers. In a poll of the seminar class, only a few attendees owned a wearable technology product. Some concerns over increased wearable technology usage include privacy invasion, health and safety issues, the issue of sustainability, and if the products could be environmentally conscious. Raj has identified several features that may increase the interest from consumers in purchasing wearable technology. These features include: more sensors, greater comfort, greater computing power, more discretion in design and more accurate, reliable data.

Though companies such as Google, Ralph Lauren, Levi's and Tory Burch have announced that they will have future wearable technology products, there are still challenges for wearable technology to break into the everyday fashion market. Some of these challenges include the change in raw materials compared to the rest of the fashion industry, and the race to invent smaller parts (i.e., small sensors, solar fibers, small circuit boards).

The great debate with wearable technology is whether the technology is a diffusion of innovation or a disruption of innovation. If wearable technology is a diffusion of innovation, the trend will follow the natural life cycle of a product through its five stages (introduction, rise, peak, decline, obsolescence). Following this theory, wearable technology would now be in the rise stage of its life cycle. If wearable technology is a disruption of innovation, the trend would follow a much larger, more exaggerated form of the product life cycle curve. If this theory is true, the trend would have come in at the bottom of the market and would have shot up in popularity – displacing all competitors – without a sign of stopping. In a poll of the seminar class, most thought wearable technology was a disruption of innovation. Only time will tell what effect wearable technology will have on today's market.