The future implications of social media and data on healthcare

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The implications of social media are far-reaching, delving into education, business, political and healthcare environments. It has been widely commented on social media's influence on the 2016 U.S. election. It is now commonplace for political candidates to use social media to reach out to the electorate.

The amount of content already being produced on social media is enormous. Never in human history have such data sets been available for analysis, and they have the potential to transform how we live. Communities that network produce insightful data which can offer valuable indicators into how human populations operate in both large-scale and more intimate ways.

Researchers at MIT are exploring a power cell that can transmit the flow of data from within the body itself once it has been implanted. Whilst some of the implications of social media and data seem futuristic, it seems that it is within reach within our lifetime.

Nadeau (2017) argues that a concept like this may be used for health purposes, whereby a self-powered pill would monitor vital signs from inside for a couple of weeks, and you do not even have to think about it. It just sits there making measurements and transmitting them to your phone.

In the U.S., the Food and Drug Administration has already approved the world's first digital pill, which sends information to a smartphone app when it reaches the stomach, indicating that the wheels are already in motion.

Elon Musk's neural interface technology company, Neuralink, has begun gaining traction. The company is developing a device that would be embedded in a person's brain to record brain activity and potentially stimulate it. Musk has compared the technology to a " FitBit in your skull.

The chip Neuralink is developing is about the size of a coin and would be embedded in a person's skull. An array of tiny wires, each roughly 20 times thinner than a human hair, fan out into the patient's brain from the chip.

Investment in research and development will enable further such possibilities for technologies, including patient monitoring and disease control.

Like all significant data sets, there remains potential for such information to be misused. Imagine how a troll or hacker could use sensitive information that feeds straight from your body. Also, consider how commercial, governmental or military agents may mishandle this data.

Of course, as technology evolves, we will continue to be faced with ethical questions that are complex enough not to be separated from the social and cultural contexts. However, the technology and data may allow us to overcome longstanding issues about bias, discrimination, and revisiting previous assumptions. This is not to say that there is no human interpretation of data; likewise, it is humans who design algorithms that collect data. Smith et al. (2016) put it without deliberate care, these innovations can easily quickly hardwire discrimination, reinforce bias, and mask opportunity.

Furthermore, there are considerations for who owns the data and for what purpose they can or cannot use it. Most users of social platforms do not like their data being used for secondary purposes such as being sold to companies. Nevertheless, this happens daily with our social media giants and commercial ad campaigns. There is also thought that most information we give away undergoes data analysis and is used for reasons we may not understand. Is a person consenting to their data being used in a particular way if they do not understand the terms?

Even today, some devices can inform us about our intimate behaviours, such as sleep patterns using data gathered. Healthcare, in particular, can illustrate a very detailed personal picture of an individual. Apple once toyed with the idea that your phone could identify who was holding the phone using data on a person's gait.

Social media has almost intersected with our personal and professional lives; whilst the ultimate results of sharing data are still expanding, the broader implications on health electrify some of this discourse. Perhaps today's wearable technologies are the first phase of this increasingly strong influence on our lives. They may also pose initial ethical questions and privacy concerns already being debated.

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