

Is an Implanted Microchip in Your Near Future?

The Wired Word for the Week of February 10, 2019

In the News

There are benefits to having a near-field communication microchip implanted in your body, said a *PBS News Hour* story late last month, but there are potential drawbacks as well.

Stories about microchips being implanted in humans have been in the news periodically since 1998 when British scientist Kevin Warwick became the first person known to have received one. He demonstrated that it could be used to open doors, switch on lights and cause verbal responses from devices within a building. He had it removed after nine days -- partly to avoid medical complications, partly because it was fairly limited in power -- but in the years since, those issues have been resolved and implanted chips have become more widely used in humans.

In Sweden, the country that's leading the microchip revolution, many people now use subdermal implants so they don't have to keep track of their keys and can turn on their coffee machines and purchase railway tickets with a wave of a hand. And news stories are starting to appear in the United States with titles such as "Why You're Probably Getting a Microchip Implant Someday" (see links list below).

The implanted devices, a bit larger than a grain of rice, are typically an identifying integrated circuit device or RFID (Radio-Frequency Identification) transponder encased in silicate glass inserted into one's hand or other location. The implants usually contain a unique ID number that can be linked to information contained in an external database, information such as personal identification, medical history, medications, allergies, contact information and other data a person might wish to include. They can also hold information law enforcement might require following a person's conviction, such as that the individual is a sex offender.

The chips use the same sort of technology that's employed in contactless debit and credit cards.

As to one benefit of a microchip implant, the PBS story told of Alex Lewis, a man who had lost all four limbs following a rare case of Strep A infection. "For me, as a prosthetic user, one of the most fiddly things is keys. Keys are a nightmare for us," Lewis said.

A microchip saves Lewis a lot of time. He tells that before the chip, he could lose 15 minutes trying to get in his front door and lose 10 minutes trying to get out of his back door. The implanted chip now saves him all that time, but also makes him safer because he now has entry and exit ability as desired and needed.

Some companies are also seeing benefits. At Three Square Market, a vending-solutions company in River Falls, Wisconsin, the company announced a new program in which they would pay volunteering employees to be microchipped, and more than 50 employees took the offer. The chips enable purchase of food at the company cafeteria without the use of cash or a credit card, but they are also part of a multistage feedback network. The chip grants employees access to their computers -- but only if the chip has already unlocked the front door for them that day.

"Now," said Three Square Market's president Patrick McMullan, "I've actually done something that enhances our network security."

Chips with GPS technology also have an appeal. Parents see the advantage of knowing where their children are -- especially in the case of an abduction or the child running away. And there can be

value in having an adult with dementia implanted with a GPS device in the event the person wanders off.

But in all cases of implanted chips, problems are possible and perhaps likely. "Companies often claim that these chips are secure and encrypted," said Alessandro Acquisti, a professor of Information Technology at Carnegie Mellon University. "But," he added, "encrypted is a pretty vague term and can include anything from a secure product to something that is easy to hack," which means that a person's personal information could be exploited.

"Once they are implanted, it's very hard to predict or stop a future widening of their usage," Acquisti said.

For example, it might be possible to use a company-provided chip to track how often an employee visits the bathroom or how long a person takes for lunch.

Gus Hosein, executive director of Privacy International, a nonprofit that challenges overreaching state and corporate surveillance, says of the chips, "In today's world particularly, we have to imagine how governments and how ambitious politicians and even how ambitious corporate executives will try to imagine putting this type of technology into you so that they can exploit your data and ultimately exploit you."

Given the possibility of abuse of the microchips, some Bible readers have speculated that the implants are the mark of the beast referred to in the book of Revelation. That view is not broadly adopted by Christians, but some are convinced of it.

Despite the potential drawbacks, chip implantation may well become common and widespread. As advantageous uses for the chips become known and as chip readers show up in stores and other places we frequent, many people will likely adopt them.

As long as their use is voluntary -- and other options are available as well as ready means to counter identity theft -- there is unlikely to be widespread opposition.

The Big Questions

1. Where would you rank yourself on the Technology Adoption Lifecycle (TAL)* and how might that affect your willingness to have a microchip implanted?

*TAL is a sociological model that describes the adoption or acceptance of a new product or innovation. The model indicates that the first people to use a new product are called "innovators," followed successively by "early adopters," "the early majority," "the late majority" and finally, the "laggards" (also called "phobics" or "luddites," though in the model, none of the words are intended to be judgmental, just descriptive.)

2. *In terms of morality and faith*, what are the differences, if any, between having a technological means to manage a handicap or illness, such as a subdermal pacemaker, a cochlear implant or an embedded nerve stimulator versus using a technological tool to increase or ease capabilities, such as an implanted RFID chip?

3. Overall, would you say that technology helps you focus on the most important things in life or distracts you from them? Explain your answer, give examples, and discuss the trade-offs involved.

4. Since most technologies intended for good purposes can be usurped to exploit users or be misused by users to do wrong, what principles from your faith should guide you in choosing new technology for your use? for your family's use?

5. Have you set the parameters for your use of technology in your own life or for your children? If so, what boundaries have you implemented that have proven helpful and practical? What boundaries have proven to be insufficient and unhelpful?

Confronting the News With Scripture and Hope

Here are some Bible verses to guide your discussion:

Luke 8:17

For nothing is hidden that will not be disclosed, nor is anything secret that will not become known and come to light. (For context, read 8:16-18.)

In its biblical context, this statement was Jesus' way of saying that the gospel can't be hidden and that his followers shouldn't try to hide their faith. But taken out of context, it could be the motto of digital technology, which, it often seems, strips us of more and more of our privacy and secrets.

Questions: What degree of comfort do you have about how the technology you use makes your personal information available to others? Why?

2 Kings 6:5-7 (CEB)

One of them was cutting down a tree when his ax head fell into the water. He cried out, "Oh, no! Master, it was a borrowed ax!" The man of God said, "Where did it fall?" He showed Elisha the place. Elisha then cut a piece of wood, threw it into the river there, and the ax head floated up. "Lift it out," Elisha said. So the man then reached out and grabbed it. (For context, read 6:1-7.)

In these verses, the prophet Elisha aids one of his fellow prophets when the man loses the head of a borrowed ax, as the head flew off the handle and sank in a deep river. Using a form of "prophet technology" (aka miracle), Elisha placed a piece of wood in the river, which somehow caused the ax head to float to the surface. The ax user then reached out his hand and retrieved it.

Questions: In and of themselves, are all forms of technology "neutral" on the good-bad scale? Is a bomb as neutral as a cell phone? Does their good/bad value come only in how they are employed or the ease with which they are misused or hacked? How does our situation in a world where sin is a reality provide context to your answer? Use the concept of a cost-benefit analysis if you find it appropriate.

Isaiah 10:15

Shall the ax vaunt itself over the one who wields it, or the saw magnify itself against the one who handles it? As if a rod should raise the one who lifts it up, or as if a staff should lift the one who is not wood! (For context, read 10:12-19.)

Though it's not obvious from this verse by itself, the "ax," "saw," "rod" and "staff" are all metaphors for the arrogance of the king of Assyria (see v. 12) who had been boasting about his military conquests and his intention to conquer Judah. The verse above is God's response, essentially telling the Assyrian king that his armies will succeed only as God allows it.

But the verse by itself can be read as a statement about the proper role of the technology we create.

Question: What ethical questions, if any, does microchipping humans raise?