

Email stress test: Experiment unplugs workers for 5 days

September 7 2012, by Eryn Brown

Slave to your email? Wonder what would happen if you had to do without it? University of California-Irvine informatics professor Gloria Mark was curious - so she recently led a study that separated 13 people from their email for five days and recorded what happened when they unplugged.

Mark spoke with The Times about the joys and sorrows of ditching [email](#) and why the Army is interested in her research.

Q: What made you want to see how people fared without email?

A: That was way back in 2005. I had this crazy idea that people were addicted to email. So I started thinking, the way you can test that is if you take people away from email cold turkey. You should see symptoms of withdrawal, the same way people are addicted to alcohol or drugs.

Q: It took four years to find a test site willing to give it a try. Were employers worried it would wreck business?

A: Yes. People were interested because they wanted to find ways to reduce the email overload. But on the other hand, they just said, 'Wow, we just can't afford to do this.'

In 2009, I was invited to give a talk at the Army's Natick Soldier Systems Center outside Boston, and I asked if they wanted to take part. At first they said no, but then I talked to them about the relevance for

soldiers in the field - what would happen if a soldier was taken out of commission? How would the other people in their unit reconfigure to communicate?

Also, everybody at Natick was complaining about email and [information overload](#). So they agreed.

Q: How did you do the study?

A: We had 13 [volunteers](#), who were civilian employees at Natick. First we did a baseline measure - we had them work as usual for several days. Then we cut off email for five days, continuing to take our [measurements](#).

We couldn't see a discernible trend on days 1 and 2. But at day 5, the pattern started to become clear: People became less stressed after being away from email.

Q: How did you track that response?

A: We used monitors that measured the heart rate and also the intervals between heartbeats to obtain a common measure for stress called heart rate variability.

It's counterintuitive. When heart rate variability is low - that means the heart is beating at a steady pace - people are actually under more stress. It's the fight-or-flight syndrome: You're on high alert, your body is prepared to respond. And as a result, your variability goes down a whole lot.

When you're relaxed, your heart rate variability is all over the place. A stimulus will make your heart rate jump up and then it will go back down to resting state.

Q: What else did you look at?

A: We had sensors everywhere. We had sensors in the backs of people's chairs, so we could see if they leaned back to relax or leaned forward to be alert. We had sensors in the doorways to see people coming in and out, and on the desktop to look at when they shuffled papers or used the telephone.

Probably the most interesting sensors other than the [heart rate](#) monitors were what are called sociometric badges. People wore these. They could detect who people were interacting with face to face and pick up the social network interaction that went on in the office.

Q: What are the long-term health effects of the heart changes you saw?

A: A number of studies have talked about the detrimental effects of stress in the workplace. Our study shows that people experience more stress when they have email.

Another interesting thing is what people did to communicate without email. Nearly all participants reported getting up out of their office and walking around a lot more. They interacted with people face to face, and they reported it as a benefit. They enjoyed it. That sounds like it's healthier too.

Q: What else did you find?

A: People reported that they were more productive. They said they were able to focus on tasks longer. That was borne out by the data.

On average, people with email switched windows about 37 times per hour. Without email, that was cut in half to 18 times per hour.

With email, they spent an average of 394 seconds on any particular window. That went up to 568 seconds without email. This may not seem a lot, but in the world of multitasking it's a huge difference.

Q: Do we know whether people are similarly hooked on the Web, or Facebook or Twitter?

A: We don't. We would have to test that.

Q: Did any of the subjects change their work habits after taking the email vacation?

People said they felt liberated, and the euphoria lasted for a few days. They really tried very hard to make a change. But then everybody reverted back to their old ways.

Q: What would it take for people to change their email habits?

A: Quitting really has to be a collective effort. It can't just be an individual that unplugs.

I think the organization has to play a role. For example, if a company sanctions email vacations, then everybody knows that no one is going to be trying to reach them on that day.

We've got these social expectations that are wrapped up in email. If an email comes, you're expected to respond to it fast. We feel compelled to reply.

Q: Did you see different patterns in younger versus older workers?

A: Our sample was too small to divide up further. Anecdotally, the person who found it toughest to give up email was the youngest person.

She used email so much - she had a really hard time giving up the constant connectivity. I found that interesting.

Q: Do you like email yourself?

A: I am really frustrated by the amount of email I get. But I can't pull the plug on it. I'm like everyone else.

More information: *This interview was edited for length and clarity.*

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