

Password Breach Could Have Ripple Effects Well Beyond Yahoo

Experts worry cybercriminals may use leaked data, including security questions, to unlock accounts on other websites

By **RAPHAEL SATTER**
Associated Press

LONDON — As investors and investigators weigh the damage of Yahoo's massive breach to the internet icon, information security experts worry that the record-breaking haul of password data could be used to open locks up and down the web.

While it's unknown to what extent the stolen data has been or will be circulating — or how easy it would be to use if it were — giant breaches can send ripples of insecurity across the internet.

"Data breaches on the scale of Yahoo are the security equivalent of ecological disasters," said

the "vast majority" of its passwords were stored in an encrypted form believed to be difficult to unscramble. On the other hand, Yahoo said the theft occurred in late 2014, meaning that hackers have had as many as two years to try to decipher the data.

Ghosemajumder said he didn't see a surge in new breaches so much as a steady increase in attempts as cybercriminals replenish their stock of freshly hacked passwords.

The first hint that something was wrong at Yahoo came when Motherboard journalist Joseph Cox started receiving supposed samples of credentials hacked from

security analyst Avivah Litan said that wouldn't be a reason to relax. Spies can mine trivial-seeming data from apparently random citizens to tease out their real targets' secrets.

"That's how intelligence works," Litan said in a phone call.

Meanwhile Yahoo users who recycle the same password across the internet may still be at risk. While people can always change the passwords

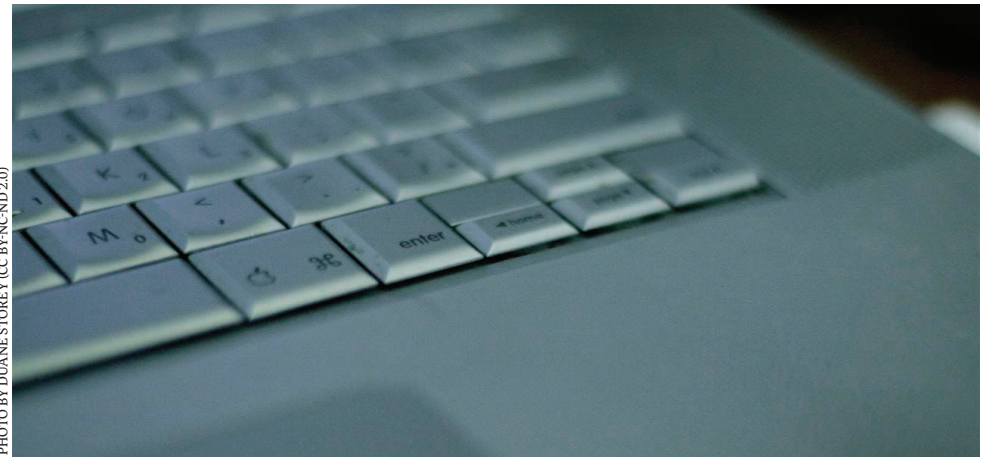


PHOTO BY DUANE STOREY (CC BY-NC-ND 2.0)

Security experts are worried that criminals will use credentials leaked during the Yahoo security breach — including security information — to steal personal information from other websites.

across all the sites they use, Yahoo's announcement that some security questions were compromised too means that the

risks associated with the breach are likely to linger.

A password can be changed, after all, but

how do you reset your mother's maiden name?

Raphael Satter can be reached at: <http://raphael-satter.com>

“Data breaches on the scale of Yahoo are the security equivalent of ecological disasters

Matt Blaze, a security researcher who directs the Distributed Systems Lab at the University of Pennsylvania, in a message posted to Twitter .

A big worry is a cybercriminal technique known as "credential stuffing," which works by throwing leaked username and password combinations at a series of websites in an effort to break in, a bit like a thief finding a ring of keys in an apartment lobby and trying them, one after the other, in every door in the building. Software makes the trial-and-error process practically instantaneous.

Credential stuffing typically succeeds between 0.1 percent and 2 percent of the time, according to Shuman Ghosemajumder, the chief technology officer of Mountain View, California-based Shape Security. That means cybercriminals wielding 500 million passwords could conceivably hijack tens of thousands of other accounts.

"It becomes a numbers game for them," Ghosemajumder said in a telephone interview.

So will the big Yahoo breach mean an explosion of smaller breaches elsewhere, like the aftershocks that follow a big quake?

That seems unlikely given that Yahoo says

the company in early July. Several weeks later, a cybercriminal using the handle "Peace" came forward with 5,000 samples — and the startling claim to be selling 200 million more.

On Aug. 1 Cox published a story on the sale, but the journalist said he never established with any certainty where Peace's credentials came from. He noted that Yahoo said most of its passwords were secured with one encryption protocol, while Peace's sample used a second. Either Peace drew his sample from a minority of Yahoo data or he was dealing with a different set of data altogether.

"With the information available at the moment, it's more likely to be the latter," Cox said in an email Tuesday.

The Associated Press has been unable to locate Peace. The darknet market where the seller has been active in the past has been inaccessible for days, purportedly due to cyberattacks.

At the moment it's not known who holds the passwords or whether a state-sponsored actor, which Yahoo has blamed for the breach, would ever have an interest in passing its data to people like Peace.

Even if the hack was a straightforward espionage operation, Gartner

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