

On Dec 14, 2009, an anonymous young computer hacker from Eastern Europe was probing around the web for poorly-configured SQL databases and hit the jackpot with 32 million passwords from RockYou, an online gaming company. Password databases have been stolen before but never on this scale. Within days I spoke to the hacker and received a copy of the data, soon before the incident rose to the attention of the international press. In the past year I've dug into the data for my PhD research and realised how much passwords say about the modern world.

First, the theft portends the rise of data-hoarding companies like RockYou, unknown to us yet knowing more about us than we can imagine. RockYou would say their products are Facebook games like "Zoo World" and "My Casino," but that's a front: their product is us. They quietly make their money shuffling our information between databases and advertising servers while we click away, building their empire of ones and zeroes.

RockYou barely issued an apology for their embarrassing negligence (they made basic mistakes which we cover in the first few lectures on computer security). They don't have to worry because they don't have a brand to protect or a product people know how to stop using. Many people fear what Google and Facebook know but I'm more concerned with the thousands of obscure companies like RockYou, RapLeaf and ChoicePoint. They know just as much but have much less to lose.

Second, the confused public reaction shows our loss of control over our security online. As the Internet continues to evolve as the most complicated human-made system in history, keeping passwords safe means understanding dozens of layers of complexity from the electrical path between the keyboard and computer to the arcane communications protocols of far-off web servers collaborating to put pixels on the screen representing a starred-out password field. Few understand all of this technology any more; most of us understand almost none of it. Yet we use it daily, entrusting our finances, our careers, and our closest relationships to the spurious secrecy it provides.

We usually ignore our loss of control in this increasingly magical world until somebody like RockYou reminds us how fragile it all is. In response to my blog posts about the RockYou debacle I received some frantic emails from strangers asking how they could make sure nobody had used their accounts. I also got a few requests to crack somebody's password in exchange for 'consulting fees.' I responded to the latter type of inquiry that I wouldn't do it and it's not possible anyways so they should give up, but only the first of those statements is accurate.

Finally, the data itself shows how human creativity and joy can shine through the most depersonalising technologies. We type about 6 passwords

per day. That's more than security research has found is advisable. Yet when I read through passwords like 'smilepointup' and

'kisstherain' I realise how many of us have turned it into a daily affirmation ritual. Why else would somebody take the time to write 'thisloveishardbutbabyitsreal!?'?

How we choose our daily secret ritual tells us a lot about ourselves. 'Ladygaga' is twice as popular as 'michaeljackson', twice as many people mention 'starbucks' as 'mcdonalds' and ten times more people use 'jesus' than use 'allah' (at least in a primarily American userbase). The darker elements of human nature are just as rawly visible. Tens of thousands of people choose to bring messages like 'myfamilyhatesme,' 'erinaslut,' or 'f***ingn***ers' into their lives multiple times per day.

Still, I've found browsing through random passwords one of the only ways to stay sane while studying how truly insecure, frustrating and scary the institution of the password has become. I often wonder what will remain of our private lives, how we'll learn and laugh and fall in love, as we cede more power to companies we don't know and technology we don't understand. People are always the weakest link in computer security, but it's precisely our human qualities which give me confidence that we'll adapt and thrive as the world wires up. In passwords, 'love' beat out 'hate' by nearly 200 times.

What Passwords Show About Ourselves



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