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COMMENTARY

In search of the missing links

Be glad NSA folks are up at night monitoring the century's rabid interconnectivity.

By Karen Stephenson

There's been much ado about who's talking to whom and who's listening in. It sounds like grade-school kids huddling together to hear the latest gossip. But our world of voyeuristic snooping and cybernetic eavesdropping is no playground. We need to understand what this is all about.

The National Security Agency, supported by our tax dollars, collects data by "listening" to us and to others and then uses that data for testing hypotheses that may (and do) ward off national security threats. We're talking a lot of data. Every digital or telephonic transaction we make, every credit card swipe, leaves a trace, and that trace can be tracked and linked to who was involved in any transaction. Fifty billion transactions later, who knows, even you could be indirectly linked to Osama bin Laden. And there's the difficulty for the NSA: ignoring benign connections but finding the malignant needle in the cyber-haystack. Such numbers make our galaxy look small.

One of the techniques for connecting the right dots is social-network analysis. Here's a simple example of how it works:

I call Sally, Sally calls David, David calls John, and John calls me. I am directly linked to Sally (I called her) and directly linked to John (he called me) but indirectly linked to David through our social colleagues. David may be a key social "connector" in our little band of friends, or he may be the grand pooh-bah in a fraudulent finance scheme. Regardless, the trace information of who, when and what numbers were called is part of a record kept by phone companies.

If the phone companies share this information with the NSA, the agency can correlate connections with other demographic data such as religion, neighborhood, financial transactions and country of origin. If David makes an annual \$2 million deposit in the Grand Caymans from his home in rural Alabama, he's just made the NSA's map.

As our connections multiply, our world gets smaller. It's called, aptly enough, the small-world phenomenon. It means we're all indirectly linked to almost everyone in the world by six degrees of separation (or six connections), even Osama bin Laden.

That's why information, when traveling on the rumor mill, travels faster than FedEx and why there are no secrets, only time-lapse leaks. Remember 1986 and Patient Zero, the airline steward who knew he had AIDS and then had sex with as many partners as possible to spread it? His attitude is our epidemic. It's this kind of rabid interconnectivity that keeps people at the NSA up at night, worrying that they don't have enough technology or intelligence to catch a terrorist before the next attack.

Understandably, most people prefer to place their trust in randomness rather than wrap their minds around the gargantuan number of transactions in a country of 300 million citizens. But don't be fooled. It's a nonrandom world we live in, and we are far better off to understand how we are connected than to ignore it or its consequences.

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