

# Chapter 11

## In Plaintext: Electronic Profiling in Public Online Spaces

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### ABSTRACT

*People have long gone online to groom their online identities, to communicate some aspects of themselves in the real. The information shared is purposive and strategic. Inevitably, the information is selective and incomplete. The cyber may evoke something about the physical only to a degree, in the cyber-physical confluence. In an asymmetrical information environment, those who have the most accurate and requisite information often have the advantage. It is said that much of intelligence is conducted using Open-Source Intelligence (OSINT), which suggests a need for reading between the lines of publicly released information; indeed, much of life is conducted in online public spaces. A number of tools enable the extraction and analysis of information from public sites. When used in combination, these tools may create a fairly clear sense of the online presences of various individuals or organizations or networks online for increased transparency. This chapter describes some of the tools (Maltego Radium™ and Network Overview, Discovery, and Exploration for Excel/NodeXL™) that may be used to increase the knowability of others in the creation of various profiles. This includes some light applications of “inference attacks” based on publicly available information. Further information may be captured from the Hidden Web through tools designed to crawl that understructure, and this potential is addressed a little as well.*

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## INTRODUCTION

*A related trend of our times is that troves of dossiers on the private lives and inner beings of ordinary people, collected over digital networks, are packaged into a new private form of elite money. The actual data in these troves need not be valid. In fact, it might be better that it is not valid, for actual knowledge brings liabilities. -- Jaron Lanier in Who Owns the Future? (2013, p. 108)*

*Correlation of seemingly innocuous information can create inference chains that tell much more about individuals than they are aware of revealing. -- Gerald Friedland, Gregor Maier, Robin Sommer, and Nicholas Weaver's "Sherlock Holmes' Evil Twin: On the Impact of Global Inference for Online Privacy" (2011)*

In professional lives, opportunities to collaborate with others arise with fair regularity, including with organizations and individuals about whom one has no direct prior experiences. While most have an interest in maintaining some basic public-facing profiles and do share information strategically through the WWW and Internet. These public electronic realms are high-noise environments, with the concomitant challenges of clear sense-making and accurate signals detection. The problem is how to more accurately read online signaling to create effective electronic profiles.

The value of consuming others' self-authored contents is limited because most people offer information that shows themselves in optimal light. Even when individuals are fully candid, self-reportage is limited because of human limitations in perception and cognition; for example, people have been found to employ "an unconscious defense mechanism used to reduce anxiety by denying thoughts, feelings, or facts that are consciously intolerable" (Varki & Brower, 2013, p. 17), which suggests that any information that threatens the ego will often be disavowed or ignored. Donath (2007) differentiates between inherently reliable

signals [such as index signals (directly related to traits), and "strategic" or "handicap" signals (costly to produce to show the capability of the signaler to afford such "wastage"; theoretically sufficiently costly to outweigh potential signals of deceptively producing such a signal)] and less reliable ones [such as "conventional" signals in human communications, which have an arbitrary relationship between the signal and the actual underlying quality] (Donath, 2007, p. 234). This author makes the point that "very few signals are impossible to fake" given human ingenuity (Donath, 2007, p. 234). Conventional signals are then less reliable because they are open to deceptive manipulations (Shami, Ehrlich, Gay, & Hancock, 2009). These signals are a common feature of social grooming or "fronting." Online depictions are a form of cheap vs. costly signaling. Greenberg (2012) writes:

*Forget these conflicting parallel realities. The Internet is neither fundamentally private nor fundamentally public, anonymous or onymous. Those who behave a certain way online and use certain services will have no privacy, while those who behave another way and use other services can be very, very hard to identify—harder to identify now, in many ways, than ever in communication's history (pp. 6 - 7).*

If online spaces are "digital enclosures" that are panopticons open to surveillance and monitoring (Andrejevic, 2007), these offer space for going beyond surface understandings of others. Online, there are explicit and implicit systems that are used for understanding reputations. The challenge then is to exploit high-dimensionality data in a way that is accurate and that scales. Balanced against outsider knowing is the core concept of privacy, the suggestion that individuals and groups may choose to self-reveal what they choose to about themselves to others according to their own free will; privacy is conceptualized as the right to be left alone and to limit others' access to oneself

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