

# Profile as Promise: Honest and Deceptive Signals in Online Dating

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Online dating is now a common activity for individuals hoping to meet a long-term romantic partner or even just a one-time date.<sup>1</sup> At first blush, it appears to be the epitome of efficiency in the romantic marketplace: database-enabled searching married with the Internet's always-on availability. Online dating users create a profile and then browse through hundreds or even thousands of other profiles for that special someone, aided by sophisticated search functions that let users specify geographic location, physical attributes, religious affiliation, and even last log-on date (useful to avoid “stale” profiles).

Issues that can be thorny to

discuss in the early stages of a relationship (and difficult to compromise on in later stages), such as desire to have children, are often blithely included as profile field options, right next to descriptions of eye color and occupation. Online dating is often compared to online shopping. A participant in one of our studies aptly captured this notion when he noted that the online dating environment fostered “a sort of shopping cart mentality in terms of ‘this one yes, this one no.’ You know, ‘I’ll take her, her, her’—like out of a catalog.”<sup>2</sup>

However, as with other online transactions, *caveat emptor* (buyer beware). Talk to anyone who’s dab-

bled in online dating, and you’ll soon hear stories, for example, about the person who showed up at the coffeehouse and couldn’t recognize his date because she differed so significantly from her online photograph. Deceptive profiles are one of the biggest concerns people have regarding online dating, but this hasn’t stopped millions from at least trying it out.

In this article, we examine deceptive self-presentation in online dating profiles and introduce Profile as Promise, a conceptual framework that helps explain why users engage in small lies, but not necessarily big ones, when creating their profiles.

## Signals in Online Contexts

Like many other kinds of online profiles, dating profiles are intended to signal qualities about the profile creator. One approach to understanding deception in online dating is *signaling theory*, which considers the relationship between signals and the qualities they’re likely to represent. Signaling theory was developed initially to explore how potential employees in a job market convey—and potential employers assess—attributes that can’t be observed directly.

Michael Spence’s core example is about the job market, where as he notes, there are “attributes of potential employees that the employer cannot observe and that affect the individual’s subsequent productivity and, hence, value to the

employer on the job.”<sup>3</sup> We can draw parallels between the employment and dating markets. In our application, then, Spence’s observation would state that in a dating market, there are “attributes of potential [dates] that the [date seeker] cannot observe and that affect the individual’s subsequent [potential as a date] and, hence, value to the [date seeker in the relationship].”

This idea of signaling has been applied widely in asymmetric information contexts in which individuals attempt to signal traits, such as desirability, from evolutionary biology to psychology to economics.<sup>4</sup> Judith Donath was the first to introduce signaling theory to the context of online communication; she distinguished between *conventional* signals, which aren’t tied directly to an individual’s value and are therefore easy to fake, and *assessment* signals, which are difficult and costly to fake.<sup>5</sup> An example in an offline context might be the difference between wearing a university’s sweatshirt—available at any kiosk in town, and thus a poor signal of affiliation with the institution—and wearing a university ring given only to graduates—which is more difficult to procure and thus a more trustworthy signal of affiliation.

In the online dating world, and online contexts more generally, most signals are fairly “cheap”—a dater can easily create an online profile that claims he’s six feet tall, a dead ringer for Brad Pitt, or wealthy and intelligent. These written statements are conventional signals—easy to manufacture and therefore less trustworthy. In contrast, in the offline realm, driving a \$100,000 sports car or pointing to your name on the MIT alumni webpage would be harder to do unless you actually possessed the traits that these signals indicate—namely, wealth and a degree from a prestigious university. The energy and cost to create fake signals like rented Ferraris or

fabricated MIT alumni webpages are high; therefore, these signals are generally considered more trustworthy than words on an online dating profile. As Donath notes, “For a signal to be reliable, the costs of deceptively producing the signal must outweigh the benefits.”<sup>5</sup>

A simple reading of signaling theory would suggest that online dating users would lie a lot—as much as possible—because most cues associated with fabricating a profile are cheap. This resonates with people’s concerns about online dating: lying on a dating profile is easy, and desirable traits like wealth and beauty are more likely to attract higher-quality suitors, so wouldn’t everyone lie, all the time, about everything?

### Signaling Theory and Online Deception

Our academic research, conducted in collaboration with Catalina Toma, explores these questions empirically. We brought online daters into a research lab, where we compared their actual weight (as measured by a scale), height (as indicated by a tape measure), and age (as listed on their driver’s license) to the information on their online dating profile, and we found that approximately 8 out of 10 lied about one of these three attributes.<sup>6</sup> However, and perhaps more important, when we looked at the magnitude of these discrepancies, we found that the majority of them were quite minor. For example, the majority of daters stated their height to be within an inch of their actual height—a difference that could be disguised, for instance, by a pair of high heels.

This finding suggests that a straightforward application of signaling theory to deception in online dating is too simplistic. Although daters lied frequently, they also did so very subtly. Why was this case? Online dating participants are in

fact behaving quite rationally given their actual costs and benefits, which involves a more complex calculus that considers many factors, not just the ease with which people can lie online.

For instance, compared to face-to-face communication, online communication gives people more opportunities to engage in what communication researchers call *selective self-presentation*—the ability to share only some information about themselves (typically information that presents them in the best possible light). This kind of lie of omission isn’t easy when meeting someone face to face, where masking information about some physical characteristics, such as body type or a stutter, is quite difficult. People can withhold information about these characteristics in an online chat room where these traits aren’t detectable. Engaging in selective self-presentation can, in more extreme cases, lead to cases of outright deception, such as “gender-bending,” in online forums.

This ability to engage in lies of omission and more explicit lies, such as claiming you’re 42 when you’re 52, suggests lying would be an effective strategy for online daters because more attractive attributes in a profile would presumably result in more positive attention from a greater number of higher-quality potential suitors. However, by focusing only on the ability to lie, we fail to consider the psychological and relational costs of deception in online profiles.

### Costs of Deception

One potential cost of deception is being unmasked as a liar. Unlike in other forms of online interaction, online daters eventually want to meet their online correspondents face to face. This introduces an important relational cost for deceptive self-presentation because a lie that’s too severe will alienate dating

partners and thus be counterproductive. In most cases, if a dater is revealed to be a liar on the first date, the chances of a second date are slim.

Here, we again find parallels with Spence's work on signaling in economic games, which distinguishes between single-stage (one-shot) games, wherein players interact only once and don't need to account for subsequent moves, and multi-stage (dynamic) games, wherein each player gets at least one move in response to his or her partner's. In online dating, searching through profiles to decide who to pursue can be characterized as the first stage. If the process stops here—and in some cases, it does—then lying makes sense. But because most daters ultimately seek a face-to-face encounter, online dating is more akin to dynamic games. In subsequent stages—face-to-face meetings—lies are likely to be discovered, which would impose significant costs on the liar. The discovery of serious lies, such as false marital status or wild discrepancies between photos and actual physical appearance, is the end of the game for the liar. Thus, lying isn't an effective strategy when we consider online dating's multistage nature.

Another cost of lying comes from people's need to identify as honest. In multiple studies, Dan Ariely and his colleagues showed that most people will cheat a little, but very few will cheat a lot.<sup>7</sup> This is the case even when there's absolutely no chance of getting caught. People are constrained by a powerful desire to consider themselves honest brokers; Ariely argues that this constraint allows them to cheat a little without triggering an identity shift from "honest person" to "liar." But when a cheat gets too big, such as lying too much about looks or demographics in a profile, daters risk losing the ability to self-identify as an honest person, which is damaging to their self-concept. Thus, they avoid doing so.

### An Alternative Approach

Given the parallels between online dating and Spence's treatment of the job market, we suggest an alternative approach to understanding deception in online dating profiles. Our conceptual framework, called Profile as Promise, incorporates the psychological and relational risks of lying, distinctions among signals, and daters' rationalizations and perceptions of deception in their own and others' profiles.<sup>8</sup>

After weighing and measuring the participants in our lab study, we conducted interviews with them to better understand how discrepancies between daters' online profile and offline presentation are constructed, assessed, and justified. We discovered that our participants considered some discrepancies acceptable, including things that could be changed, such as hairstyle. Also, lies that were small in magnitude, such as underestimating weight by 5 or even 10 pounds, were generally considered acceptable, both in their own profiles and those of others. Of course, there were some idiosyncrasies, such as the six-foot-tall woman who felt very strongly about slight embellishments in reporting height that others might overlook. But in general, fudging about malleable traits or deceptions that could be considered "putting one's best foot forward" were not deal breakers. Consistent with a more dynamic, multistage understanding of signaling, our participants sometimes justified lies because they claimed that they could make the lies truthful by the time a face-to-face meeting occurred. For instance, one participant who was in the process of quitting smoking didn't consider it a lie to say she was a nonsmoker, because she could quit by the time a date with a potential suitor would occur.

### Psychological Contracts

When we considered everything these online daters told us about

acceptable discrepancies and how they constructed their online profile, we realized that they didn't see the profile as necessarily reflecting who they were at the moment they created it. Rather, the profile is<sup>8</sup>

a promise made to an imagined audience that future face-to-face interaction will take place with someone who does not differ fundamentally from the person represented by the profile.

In this sense, profiles can be considered *psychological contracts*. Researchers have applied the notion of a psychological contract to résumés,<sup>9</sup> which, like dating profiles and other signaling contexts, are thin, static self-presentations. Psychological contracts include implicitly stated promises (for instance, "I will be like the person I'm describing") as well as a temporality that is future oriented, given the nature of promises and the fact that they're necessarily incomplete. Slight embellishments to a résumé—such as claiming to be a "child development supervisor" instead of a babysitter or listing expertise in a software package that a job seeker could learn in a week but isn't actually in his or her current repertoire—are common, expected, and for the most part, acceptable. But outright lies, such as a mailroom clerk claiming to be a CEO, aren't acceptable and would be cause for dismissal if discovered. This same distinction is true in the online dating context—some small embellishments are okay if they don't cause profile creators to feel that they are breaking a promise and don't cause the potential audience to believe that the profile creators promised something they can't deliver.

### Modifying Deceptive Behavior

Research in communication, psychology, and economics offers

insights that can be exploited to minimize deception in various online contexts. One intriguing possibility is to manipulate the extent to which people feel they're being observed—and thus increase feelings of accountability—via the use of *eye spots*. Recent research has shown that when people perceive eyes in their environment, they're more likely to act in a pro-social manner. In one study that aimed to reduce bicycle theft, researchers placed large posters of human eyes around bike racks, which resulted in an astonishing two-thirds reduction in theft.<sup>10</sup> To reduce the likelihood that individuals would lie in a given context online, such as a dating profile, eye spots could be displayed on their computer screen when deception (such as lying about marital status) is an option. It might be possible, in a limited way, to modify how likely deception might occur in that instance.

Another method that focuses on increasing the psychological cost of deception is to have individuals digitally sign their name before creating their profile. Research has shown that when people add their signature before making claims about themselves, they activate the moral aspect of their identity and are thus less likely to cheat than if they sign their name after writing the claims.<sup>7</sup> The same principle should apply to dating profiles.

## Design Applications

We believe Profile as Promise provides a more nuanced treatment of signaling theory as applied to online dating. This approach incorporates lying's relational and psychological costs. It also acknowledges that because different kinds of cues are more or less difficult to fake, some signals are more trustworthy than others—and online daters know this.

Claiming to have an advanced education degree on a profile is an easily faked signal. Producing elegant, grammatically correct prose day after day isn't, because paying someone to edit every single message is costly. In this example, the cost of lying is prohibitive, which is why online daters look to spelling and grammar as reliable signals of education. As one online dater explained, "I just think if they can't spell or ... formulate sentences, I would imagine that they're not that educated."<sup>2</sup>

### **Lying about yourself in a context where there's no shared social network is pretty easy. Convincing 200 other people to lie for you is much more difficult.**

Lessons learned from other online domains can apply to contexts that also involve costs and benefits associated with deception, such as product reviews or eBay sales. These more explicitly transactional contexts clearly present incentives to deceive. For instance, an author writing a fake glowing review about his book increases his book's online ratings but risks damaging his reputation if caught.

Given that these types of incentives are in place, there are several lessons to be drawn with regard to a wide range of online contexts. First, make the costs to maintain a lie hard to sustain. This can be done in part through site design. For instance, LinkedIn lets users link to a network of contacts who can provide recommendations of, and endorsements for, their skills and expertise. Lying about yourself in a context where there's no shared social network, such as an online dating profile, is pretty easy. Convincing 200 other people to lie for you is much more difficult.

Second, users could be trained to look for different kinds of cues online. Even though they don't

have access to certain information in online contexts—such as how someone looks face to face—they do have access to other information. For instance, in spoken conversation, whether a speaker can distinguish among proper uses of "they're," "their," and "there" isn't evident. However, it is evident in writing and thus a strong signal of education and attention to detail. Other online contexts have different kinds of cues. For instance, in LinkedIn, users can examine not just the number of people to whom someone is connected but also who these connections are as well as their job titles and organizations. Self-reports that are implicitly vetted by many higher-status individuals are a higher-quality signal of status than self-reports in an online context devoid of these cues.

Third, make people feel accountable. We described how eye spots can make individuals less likely to lie because they increase feelings of accountability. There might be other ways to incorporate feelings of accountability into site design. Research in the social psychology realm has identified a whole host of stimuli that can prime people to behave more honestly,<sup>11</sup> and these are beginning to be applied online.<sup>10</sup> For instance, in one of our studies, we inserted eye spots on a Facebook page by modifying the ads presented to the user (for example, a mock ad for eyedrops). When ads with eye spots were present, our participants were less likely to engage in deception than when the eye spots weren't present.

Finally, when engaging with a new business or individual encountered online, users could do what savvy online daters do: meet for coffee. Online daters don't often meet for dinner at an expensive restaurant for the first date. If things aren't



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going well, no one wants the cost and tedium (or discomfort) associated with sitting through two hours of awkward small talk or silence. Meeting for coffee is quick and relatively low cost in terms of time commitment. In other domains, users should try to start small and learn more about the company or person before committing to something bigger.

**W**e believe online dating practices offer a fascinating window into human behavior, such as online self-presentation and impression formation, and we plan to continue exploring these issues. By better understanding how people create and interpret signals in online profiles, we might be able to better design other kinds of systems that capitalize on the psychological factors that govern behavior. Whether looking for a life partner on Match.com, buying a used tractor on eBay, or trying to hire a new salesperson on LinkedIn, the ability to distinguish between trustworthy and deceptive signals can aid in distinguishing between outright liars and those who are, in the words of our participant, “just fudging to get over the hump.” ■

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