# Online Deception: Prevalence, Motivation, and Emotion

AVNER CASPI, Ph.D. and PAUL GORSKY, Ph.D.

## ABSTRACT

**This research has three goals: first, to find out how prevalent online deception is within a sample of Israeli users, second, to explore the underlying motivations to deceive online, and third, to discover the emotions that accompany online deception. A web-based survey was distributed in 14 discussion groups, and the answers of 257 respondents were analyzed. It was found that, while most of the respondents believe that online deception is very widespread, only about one-third of them reported engaging in online deception. Frequent users deceive online more than infrequent users, young users more than old, and competent users more than non-competent. The most common motivations to deceive online were "play" on the one hand and privacy concerns on the other. Most people felt a sense of enjoyment while engaging in online deception. The results are discussed in light of a possible mechanism for changing personal moral standards.**

## INTRODUCTION

**D**ECEPTION IS DEFINED as knowingly transmitting messages to a receiver with the intent to foster a false belief or conclusion.[1] Identity deception occurs when such messages contain misleading information regarding the sender's identity.[2] How prevalent is deception in computer mediated communication? Much computer-mediated communication is based on textual messages that afford visual anonymity. Therefore, deceiving others might be easy relative to non-mediated, speech-based communication. However, it has been shown that visual anonymity enhances self-disclosure and honesty.[3] The present research aims to find out how prevalent deception in computer-mediated communication is, when and why people deceive online, and what emotions accompany online deception.

Most of the reports that explored online deception are case studies and anecdotes. One of the well-known examples of online deception was reported by Lindsy van Gelder,[4] a *Ms. Magazine* jour-

nalist. Van Gelder reported the story of Alex, an American psychiatrist in his 50s, who in the early 1980s joined a chat room under the username "Shrink Inc." Alex established a female character, Joan Greene, a woman who survived a car accident in which she was paralyzed, disfigured, and unable to speak. Later, Alex confessed that Joan was a lie, a figment of his own imagination. Turkle[5] reported stories of people who played with their identity online. One of them was Gordon, who described himself as an unpopular, overweight, non-athletic, and unattractive man in real life whose MUD avatar was "like me, but more effusive, more apt to be flowery and romantic"—in short, more self-confident and self-contained than his real character. Feldman[6] reported four case studies of people who, during online conversations, pretended to have an illness or a psychological crisis, a phenomenon he termed "Munchausen on the Internet." Quayle and Taylor[7] interviewed a pedophile who represented himself as a child in chat rooms. For more than a year, no one challenged the authenticity of the child persona. This man's online persona was quite simi-

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Chais Research Center for the Integration of Technology in Education, Open University of Israel, Raanana, Israel.

lar to his real-life persona at the age of 12. Ironically, some of the "boys" he had relationships with over the Internet also appeared to be adult men who represented themselves as children. Joinson and Dietz-Uhler[8] reported the case of Nowheremom, an online persona created by D.F. Nowheremom had an online relationship with D.F. in an asynchronous forum. One day, D.F. posted a message in which he described the death of Nowheremom in a car accident. A few months later, D.F. confessed that he had deceived the community and that the Nowheremom persona was a fiction he had created. Joinson[9] reported the story of Keycee, a teenager suffering from leukemia. After Keycee "died," her creator admitted that Keycee was imaginary and never existed.

Research on a larger scale has also been carried out. Some report that online deception is not a broad phenomenon. Curtis,[10] after observing interactions in a text-based virtual reality environment (MUD) over a period of several years, noted that pretending to be someone else was relatively uncommon. Cornwell and Lundgern[11] found the following rates of misrepresentation: 27.5% of the respondents reported that they misrepresented their physical attractiveness online, 22.5% misrepresented their age, 17.5% misrepresented their background (occupation, living arrangement, education), and 15% misrepresented their interests (hobbies, religion). Of the cyberspace participants ($n$ = 30), 50% misrepresented at least one of the dimensions that Cornwell and Lundgern tested. Higher levels of deception were reported by Whitty.[12] She found that 61.5% lied about their age, 49% lied about their occupation, 36% about their income, 32.5% about their education, and 23% lied about their gender ($n$ = 320). Whitty found that men lied more than women and that frequent chat users deceived less than infrequent users. Rotunda et al.[13] (table 3) reported that 89% never deceived other Internet users about age, gender, or job.

What motivates people to deceive online? Joinson and Dietz-Uhler[8] considered psychiatric illness, identity play, and expression of true self. Whitty and Gavin[14] found deception for safety reasons. Turkle[5] suggested that the Internet allows exploration of unknown parts of the self. Mabry[15] proposed that online conversation allows for the strategic manipulation of social status. Donnath[16] warned about malicious intent, such as annoying a specific person or a whole online community. Utz[17] asked participants to attribute motives to three deception scenarios. She found a relation between the issue of deception and the underlying motivation. For example, deception about attractiveness was mainly attributed to idealized self-presentation and identity play, whereas posting a pseudo name was attributed to privacy concerns.

What do people feel when they deceive online? Given the variety of motivations, different emotions may emerge. A sense of enjoyment may appear while deceiving for the purpose of play, whereas guilt, shame, or stress may emerge if one has malicious intent. However, malicious intent does not necessarily evoke negative feelings, like when people believe that telling the truth may cause greater distress.[18] Emotions that accompany online deception have received little research attention so far.

The present research has three goals: first, to find out how prevalent online deception is in computer-mediated communication, second, to search for underlying motivations among those respondents who reported having been involved in online deceptions, and third, to explore the emotions that accompany online deception.

## METHODS

### Participants and procedure

A message inviting people to answer a web-based questionnaire was posted in 14 discussion groups. These discussion groups were randomly selected from three different popular Israeli portals. These discussion groups varied in content, and included both groups that discuss a particular subject (e.g., meteorology, internet culture, or new age) and groups that have more general, unspecific topics (like a group for 30+, university students, or males).

A total of 257 people returned the questionnaire; 68% reported being female. The reported mean age was 30 (range: 14–70), with the following distribution: 17% under the age of 20, 44% 20–30, 27% 30–40, and the rest over 40. Seventy-nine percent reported having an academic education (students in higher education institutes or postgraduate). On the average, people reported spending 3.5 h per day online (range 0.5–18 h). Average reported online competence was 3.2 points (out of 5); 64% reported higher than 3.5 points in this measure.

### Instrument

A two-part "Deception Questionnaire" was constructed. The first part included the following questions asked on five-point Likert scales (where 1 = not prevalent/never, and 5 = highly prevalent/

always): (1) In your opinion, to what extent is online deception (someone who intentionally gives incorrect details about himself) prevalent? (2) Have you ever deceived online? (3) Have you ever sensed that someone has deceived you online? Those who admitted to having deceived online at least once were asked to mark all issues about which they gave incorrect information when deceiving someone online. The issues were age, sex, residence, marital status, height, weight, sexual preference, health status, occupation, a salient personality trait, or something else (if the last option was marked, respondents were asked to provide details). For each of the issues marked, respondents were asked to mark what motivated them most to do so. The options were (a) safety reasons, (b) identity play, (c) changing status, and (d) increased attractiveness. Next, they were asked if they felt that others suspected it was false information. In addition, they were asked to mark the emotions that they experienced while deceiving online. Emotions included tension, excitement, enjoyment, stress, oddness, and "another feeling."

The second part of the questionnaire asked for demographic details (age, gender, hours online, and occupation) and online competence. Online competence was an average score of nine items that the respondents were asked to report their competence with (where "1" means have no competence and "5" means being highly competent). The nine competence items were: searching for information over the Internet, participating in asynchronous discussion groups, participating in Chat rooms, downloading music and movies, using e-mail, using online banking, buying online, participating in online games, and using online dating services.

Since this is a first attempt to explore online deception among Israeli users, no external references or criteria were available to test the external validity of the questionnaire. Since participants acted anonymously, reliability (pretest/posttest stability) could not be tested. However, as will be discussed later, the results are similar to those reported for other populations.

## RESULTS

*How prevalent is online deception?*

Of the respondents, 73% believed that online deception is very widespread. However, only 29% reported that they sometimes, often or always deceive online. We further tested demographic differences between those who reported never or hardly ever deceiving and those who reported doing so frequently. Gender had no impact on the frequency of online deception [$\chi^2(1) = 2.71$, $p = 0.09$], but age did [$\chi^2(3) = 8.02$, $p < 0.05$]. Table 1 shows that younger users tend to deceive more in online communication. Competent users did not deceive more than non-competent users [$\chi^2(1) = 3.58$, $p = 0.07$]. Respondents were also typed according to frequency of use (hours online per day): those who spent three hours or less (66%) were coded as infrequent users while all others were coded as frequent users. Frequent users deceive more than non-frequent [$\chi^2(1) = 4.04$, $p < 0.05$].

Deceivers marked the issues about which they gave incorrect information: 27% lied about their sex, 45% lied about their age, 44% about residence, 21% about occupation, and 20% about their marital status. In all other issues, less than 10% reported deception. Table 2 presents differences between different demographic groups. We found no differences between males and females on any issues. Logistic regressions were performed (using backward Wald) to test the contribution of age, Internet competency and frequency of use to the variance in online deception. Age and competency as well as age and frequency of use were not correlated (r = 0.04, and 0.11 respectively, both n.s.). Competency and frequency of use were significantly, but weakly correlated (r = 0.15, $p < 0.05$). It was found that age and frequency of use contributed significantly to the variance of age deception whereas age and competency contributed significantly to the variance of residence deceptions. Only competency contributed significantly to the variance of marital status deception.

*Why do people deceive online?*

Those who reported deceiving online were asked to mark their primary motivation for doing so. Table 3 shows that privacy concerns and identity play were the most prevalent reasons to deceive

TABLE 1.   AGE DIFFERENCES IN ONLINE DECEPTION

|  | Frequency of online deception | |
|---|---|---|
|  | *Never or hardly ever* | *Sometimes, often, or always* |
| Up to 20 | 63.4% | 36.6% |
| 21–30 | 67.3% | 32.7% |
| 31–40 | 84.1% | 15.9% |
| Older than 40 | 79.3% | 20.7% |

TABLE 2.    AGE AND INTERNET COMPETENCY DIFFERENCES IN DIFFERENT ISSUES OF DECEPTION

| | Age differences | Internet competency differences | Frequency of use |
|---|---|---|---|
| Sex | No difference | No difference | Frequent > Infrequent, $\chi^2(1) = 17.69$, $p < 0.001$ |
| Age | Younger > Older $\chi^2(3) = 9.75$, $p < 0.05$ | Competent > Non-competent, $\chi^2(1) = 7.27$, $p < 0.01$ | Frequent > Infrequent, $\chi^2(1) = 8.36$, $p < 0.005$ |
| Residency | Younger > Older $\chi^2(3) = 10.73$, $p < 0.05$ | Competent > Non-competent, $\chi c^2(1) = 7.27$, $p < 0.01$ | Frequent > Infrequent, $\chi^2(1) = 4.46$, $p < 0.05$ |
| Marital status | No difference | Competent > Non-competent competent $\chi^2(1) = 8.18$, $p < 0.005$ | Frequent > Infrequent, $\chi^2(1) = 4.45$, $p < 0.05$ |
| Occupation | No difference | No difference | Frequent > Infrequent, $\chi^2(1) = 6.98$, $p < 0.01$ |

online. A chi-squared test revealed that this observation is significant at $p < 0.001$ for all issues except marital status deception.

To further analyze these results, those who consistently cited privacy concerns for online deception in all issues were classified as the "privacy" group, and those who consistently gave identity play for online deception were classified as the "identity" group. Of the respondents, 82% who deceived in one of the above issues, were classified into one of these groups, which were almost equal in number. The demographic differences between these two groups were then tested, but none proved significant.

Only 20% of the respondents who deceived in online communication reported their belief that the person they communicated with suspected them of not telling the truth. Thus, apart from different motivations to deceive online, people may find it easy to do so.

*What kinds of emotion do people experience while deceiving online?*

Of all respondents, 7% did not mark any of the suggested emotions (tension, excitement, enjoyment, stress, or oddness) but did choose the "other feeling" option. Another 4% marked "did not feel" for all options. Table 4 presents the distribution of feelings among the remaining respondents (who deceived online, at least hardly ever). Clearly, deceivers felt mainly a sense of enjoyment. It is noted that respondents were asked to mark "felt" or "did not feel" for each feeling presented.

## DISCUSSION

Whereas the Internet has an image of a "virtual world of deception," in reality this image may be inaccurate. The amount of online deception re-

TABLE 3.    DISTRIBUTION OF MOTIVATION TO DECEIVE ONLINE

| | Issue of deception | | | | |
|---|---|---|---|---|---|
| | Sex (%) | Age (%) | Residence (%) | Marital status (%) | Occupation (%) |
| Privacy concern | 21 | 32 | 75 | 37 | 32 |
| Identity play | 50 | 33 | 13 | 30 | 45 |
| Elevating status | 7 | 8 | 1 | 7 | 3 |
| Attractiveness | 10 | 25 | 7 | 15 | 13 |
| Other reasons | 12 | 3 | 3 | 11 | 6 |
| *Total* | *100* | *100* | *100* | *100* | *100* |

TABLE 4.   DISTRIBUTION OF FEELINGS AMONG ONLINE DECEIVERS

| | Feelings | | | | | |
| | Tense (%) | Excited (%) | Enjoyment (%) | Stress (%) | Oddness (%) | Other (%) |
|---|---|---|---|---|---|---|
| Felt | 30 | 27 | 84 | 15 | 31 | 48 |
| Didn't feel | 70 | 73 | 16 | 85 | 69 | 52 |

ported in the present research is similar to earlier reports, which used a different methodology.[11,12] People indeed held the opinions that deception was prevalent on the Internet and that it is easy to lie without being caught. Most, however, reported that they themselves did not deceive and that few if any attempts were made by others to deceive them. Interestingly, despite the relatively low level of reported personal experience of online deception, people still hold the notion that online deception is widespread. This discrepancy between personal experience and beliefs calls for explanations. Two alternative explanations, not yet tested, are first, that the small amount of online deception people personally encountered was harmful, or, second, that they adopted the mass-media portrait which assumes a high degree of online deception. Both alternatives rely on confirmation biases.[19,20] The first alternative emphasizes, however, the power of a negative emotional event in ignoring disconfirmatory evidence.

Frequent users deceive more than infrequent users. A similar result was reported by Hancock et al.,[21] who found a significant correlation between email use and email deception frequency. They suggested that increased experience with a communication technology may lead to increased deception with that technology. To explain this suggested causality, we propose that it is possible that when technology becomes transparent to users, the anxiety related to technological faults that might disclose deception is reduced and, at the same time, feelings of efficacy are increased. This, in turn, may tempt people to deceive online, apart from the option to do so which, by definition, increases with frequency of use.

Utz[17] found an interaction between types of deception and underlying motivations. The present results are somewhat in line with this finding (Table 3). However, privacy concerns and identity play were the most common motivations to deceive online. Additionally, a malicious motive was not presented to the responders as an alternative motivation in the current research, yet very few choose

the "other" motive option. The current results support Turkle's[5] notion that the Internet is a "safe playground" for experimenting with different aspects of the self.

Contrary to face-to-face deception, online deception seems to be an enjoyable activity. Negative emotions, like guilt, shame and fear generally associated with face-to-face deception,[22,23] appear to be lacking in online deception. Very few participants reported negative feelings such as stress or tension. This may be associated with the medium: It is certainly less threatening to deceive someone you don't know and, if you so desire, will never know. Crowell et al.[24] suggested that computer-mediated communication causes a form of altered ethical sensitivity wherein digital objects are not perceived as real objects and, at the moral level, people judge them differently. Crowell et al.[24] based this claim on research that found differences between tangible and online properties (files, music). In light of the current study, we ask if people also alter their moral standards online, when they deal with virtual people. If indeed they do so, they do not perceive other Internet users as they perceive other, tangible people. A future study may clarify this hypothesis.

Computer-mediated communication may be less socially constraining than traditional forms of human interaction and may lead to the so-called "online disinhibition effect."[25] This effect may have negative consequences like flaming, spamming or deceiving, as well as positive ones like honesty and self-disclosure. Thus, at the same time, the disinhibition effect may alter moral standards or leave them untouched. If people adopt different moral standards online, we would expect different levels of deception online than in real life. DePaulo et al.[18,26] found that lies appear in only about 20–30% of tangible social interactions. The present results, like those obtained from previous studies, are similar—only about 30% of the respondents reported that they deceive online, thus signifying that in spite of the online disinhibition effect people do not deceive more (or less). In other words, people do not change their level of deception, despite the

structural possibility (anonymity) and the psychological state that would enhance it. However, it is possible that despite the similar extent of deception, a qualitative difference exists. In everyday life, people lie most often about their feelings, their actions, plans, and whereabouts, and their achievements and knowledge. Most of these lies are not perceived as serious.[18] It is possible that distinctions exist between everyday and online realities; in the latter, alternative moral standards may support more serious deception.

## ACKNOWLEDGMENTS

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Address reprint requests to:
*Dr. Avner Caspi*
*Open University of Israel*
*108 Ravutski St.*
*P.O. Box 808*
*Raanana, Israel 43107*

*E-mail:* avnerca@openu.ac.il