Looks and Lies: The Role of Physical Attractiveness in Online Dating Self-Presentation and Deception

Article *in* Communication Research · May 2010

DOI: 10.1177/0093650209356437

CITATIONS
175

READS
4,993

2 authors:

Catalina Toma
University of Wisconsin–Madison
33 PUBLICATIONS **2,194** CITATIONS

SEE PROFILE

Jeffrey T Hancock
Stanford University
125 PUBLICATIONS **10,418** CITATIONS

SEE PROFILE

Communication Research
37(3) 335–351

DOI: 10.1177/0093650209356437
http://crx.sagepub.com
SAGE

Looks and Lies: The Role of Physical Attractiveness in Online Dating Self-Presentation and Deception

Catalina L. Toma[1] **and Jeffrey T. Hancock**[1]

Abstract

This study examines the role of online daters' physical attractiveness in their profile self-presentation and, in particular, their use of deception. Sixty-nine online daters identified the deceptions in their online dating profiles and had their photograph taken in the lab. Independent judges rated the online daters' physical attractiveness. Results show that the lower online daters' attractiveness, the more likely they were to enhance their profile photographs and lie about their physical descriptors (height, weight, age). The association between attractiveness and deception did not extend to profile elements unrelated to their physical appearance (e.g., income, occupation), suggesting that their deceptions were limited and strategic. Results are discussed in terms of (a) evolutionary theories about the importance of physical attractiveness in the dating realm and (b) the technological affordances that allow online daters to engage in selective self-presentation.

Keywords

self-presentation, deception, physical attractiveness, online dating, computer-mediated communication

The scope of online self-presentation has changed significantly over the years. In its early days, the Internet was seen by many as an "identity laboratory," where users could create fictitious personae in order to experiment with new selves. This was possible because of the anonymity provided by most online spaces (McKenna & Bargh, 2000; Turkle, 1995). Recently, however, the Internet has evolved several highly personalized environments, where users construct realistic self-presentations in order to accomplish important interpersonal goals: connect with real-life friends (e.g., Facebook), find love (e.g., Match.com),

[1]Cornell University, Ithaca, New York

Corresponding Author:
Catalina L. Toma, Department of Communication, Cornell University, 209 Kennedy Hall, Ithaca, NY 14853
Email: clt32@cornell.edu

and contact employers (e.g., LinkedIn). A far cry from their anonymous predecessors, these self-presentations must be carefully managed in order to advance real-life agendas.

How do online communicators construct these high-stakes self-presentations? Self-presentation is a complex communicative process that involves understanding one's own strengths and weaknesses, being receptive to the values of the target audience, and using the medium of communication to one's advantage (see Goffman, 1959; Jones & Pittman, 1982; Leary & Kowalski, 1990; Schlenker, 2002; Walther, 2007). The present paper examines how self-presentations are constructed in an online dating environment, where users have distinct self-presentational goals and where the medium of communication shapes the expression of these goals. In particular, we focus on online daters' goals to appear physically attractive, as physical attractiveness is an important criterion for mate selection. How do attractive and less attractive daters represent their physical selves in an environment based solely on photographic and textual cues? How do relational and technological factors interact to determine the shape of online dating self-presentation?

The study of online self-presentation provides an important opportunity to bridge the elusive gap between theories of interpersonal communication, which address the motivational and relational aspects of self-presentation, and theories of mediated communication, which address the impact of media features on achieving relational goals. This article describes a theoretical framework for online self-presentation that incorporates both psychological principles regarding interpersonal communication and a discussion of media affordances: We view self-presentation as a function of both self-presenters' desired impressions (i.e., what they *want* to convey) and of the medium in which self-presentation is accomplished (i.e., what they *can* convey given the affordances and constraints of the medium). We also consider fitness-related evolutionary theories that highlight the importance of physical attractiveness in mate selection.

A Theoretical Framework for Online Self-Presentation

Self-presentation is the packaging and editing of the self during social interactions to create a desired impression in the audience (Baumeister, 1982; Goffman, 1959; Leary, 1996). Leary and Kowalski (1990) proposed a two-component model of self-presentation that involves (a) motivation processes, which refer to the degree to which self-presenters are motivated to control how others see them, and (b) construction processes, which involve determining precisely the impression one wants to convey and choosing how to go about making that impression. Construction processes, which are the focus of this article, depend largely on the self-presenter's perception of the values of the target audience and are based on a set of strategies such as self-descriptions, attitude statements, social associations, and deception (for a review, see Leary, 1996). From a communication perspective, we add to the model the idea that construction processes also depend on the medium of communication. For instance, online self-presentation is static and involves describing one's appearance verbally or using photographs, whereas face-to-face self-presentation is dynamic and embodied.

In applying this theoretical framework, first consider motivation processes in online dating. How motivated are online daters to control how others see them? Given that online dating profiles are (a) meant to attract and impress potential mates and (b) scrutinized by a large audience of these potential mates (Ellison, Heino, & Gibbs, 2006), online daters' motivation to control their self-presentation should be generally high. However, daters' specific relational motivations may vary: Some are interested in short-term relationships, whereas others are interested in finding long-term relational partners. These different kinds of relational motivations should affect how daters go about constructing their self-presentations. For instance, those with long-term relational goals may be motivated to present themselves as realistically as possible, as deceptive profiles can severely undermine relationship development (Whitty, 2007), whereas those seeking short-term engagements may be more likely to embellish their self-presentation in order to attract a large number of potential mates.

Consider next the process of constructing an online self-presentation. Impression construction in a dating environment should be shaped by (a) users' desired impressions, or how exactly they wish to come across and (b) their ability to implement their desired impression given the affordances of the medium in which the self-presentation takes place. Although there are several possible desired impressions online daters wish to convey, we focus in this article on the presentation of their physical appearance, because physical attractiveness is highly valued in mate selection.

Desired impressions: The importance of physical attractiveness. The first step in image construction involves deciding on the impression to convey. This desired impression depends on self-presenters' perceptions of what the audience values. A robust body of research suggests that people looking for relationship partners value physical attractiveness in potential mates: Attractive people are considered more desirable dating partners, are more popular with the opposite sex, and are able to attract more desirable partners (Gangestad & Scheyd, 2005; Riggio, Widaman, Tucker, & Salinas, 1991; Singh, 2004). The reasons for this propensity to favor attractive people have been addressed by fitness-related evolutionary theories (e.g., good genes theory, mate selection theory, parental investment theory), which propose that morphological characteristics such as physical attractiveness were honest indicators of health, good genes, reproductive fitness, and overall mate quality in the environment in which we evolved (e.g., Barber, 1995; Buss & Schmitt, 1993; Daly & Wilson, 1995; Gangestad & Thornhill, 1997; Symons, 1979; Thornhill & Gangestad, 1993). In other words, physical appearance served as a reliable gauge of a person's value as a mate, and, as a result, people have evolved to favor physical attractiveness in the mate selection process.[1]

Although physical attractiveness is generally valued in potential mates, research suggests that it may be differentially important for men and women. Mate selection theory claims that physical attractiveness is a more important indicator of the health and fertility of women, and hence men seek and value attractiveness in potential mates more than women do. This claim has received substantial empirical support. For instance, when reading newspaper personals, men spent more time seeking information about women's physical attractiveness (Lynn & Bolig, 1985), and when describing themselves in newspaper

personals, women drew attention to their physical attractiveness and body shape (Ahuvia & Adelman, 1992; Hirschman, 1987; Jagger, 2001). We conclude that, in presenting their physical appearance, online daters desire to convey an impression of attractiveness and that this desire is particularly salient for women.

Constructing desired impressions online. How do online daters construct their desired presentation given the opportunities and constraints of the online dating environment? What gets presented in online dating profiles depends on the content of the profile (i.e., the questions that comprise the profile) and the process of filling out the profile (i.e., composing and altering the profile). Note that such technological factors render online self-presentation different from face-to-face self-presentation in form if not in function (Walther, 2007).

Content-wise, physical appearance is presented in online dating profiles through personal photographs (i.e., photographs selected and posted by users to represent their physical selves) and verbal descriptions (i.e., directly stating one's height, weight, and age). Photographs are highly malleable and subjective, allowing online daters to enhance their appearance in numerous ways, such as (a) selecting the most flattering photographs out of potentially hundreds of personal photographs, (b) selecting older photographs in which they look younger and perhaps more attractive, and (c) manipulating the photograph before, during, or after it was taken (see Hancock & Toma, 2009). Similarly, verbal self-descriptions make it easy to claim a more attractive persona without incurring the cost of proving the veracity of these claims. For instance, an online dater can describe herself as curvy rather than overweight, whereas a face-to-face dater would find it more difficult to change impressions of appearance. Together, photographs and verbal self-descriptions allow online daters a great deal of freedom for embellishment.

Process-wise, online profiles are constructed under conditions of asynchronicity and editability (Walther, 1996, 2007). Asynchronicity, or the time lag between creating the profile and posting it online, allows daters an unlimited amount of time to construct their self-presentation carefully and thoughtfully. This differs markedly from face-to-face daters, who need to construct their self-presentation synchronously, as they are interacting with their partners. In addition, online self-presenters benefit from the affordance of editability, which allows them to alter their self-presentations until they are satisfied with them (i.e., by removing undesirable elements or improving on existing self-presentational statements). This enables online daters to experiment with various kinds of personal descriptions, a luxury not typically available in face-to-face interactions. The combined technological affordances of asynchronicity and editability allow users to engage in selective self-presentation (Walther, 1996, 2007; Walther & Parks, 2002), an optimized version of face-to-face self-presentation in which characteristics of the self are more thoughtfully and carefully constructed.

Strategies for online self-presentation. The malleable nature of self-presentational elements in online dating profiles coupled with the medium's ability to support selective self-presentation make deception an easy and convenient strategy for image construction (see also Ellison et al., 2006; Hancock, 2007). Note, however, that the use of deceptive self-enhancement as a strategy for impression management typically involves small rather than rampant deceptions, particularly when there is an anticipation of future interaction with the

target of the self-presentation (Leary, 1996; Toma, Hancock, & Ellison, 2008; Walther, 1996). Because physical attractiveness is highly valued in the dating arena, we expect less attractive daters to deceptively enhance their physical appearance in order to construct a more desirable persona:

Hypothesis 1 (H1): As daters' attractiveness decreases, the presentation of their physical appearance through (a) profile photographs and (b) verbal self-descriptors (height, weight, age) will become more deceptive.

Earlier we introduced the idea that physical attractiveness may be a more important attribute of women than of men in dating situations (Buss, 1988; Langlois et al., 2000). Consequently, we expect less attractive women to engage in the most deception about their physical appearance in order to attract potential mates:

Hypothesis 2 (H2): The negative relationship between physical attractiveness and (a) photographic self-enhancement and (b) verbal self-descriptors will be stronger for women than for men.

Another strategy appropriate for online dating self-presentation is the showcasing of desired attributes. As attractive daters possess a commodity that is highly sought after in the dating realm, we expect them to use the affordances of the online dating profile to display their attractiveness. One way this can be accomplished is by posting more personal photographs:

Hypothesis 3 (H3): The more attractive online daters are, the more personal photographs they will post.

Finally, the strategy of compensation (Baumeister & Jones, 1978) lends itself well to the online medium. Compensation involves enhancing a different aspect of the self than the one that is deficient. When looking for potential mates, two characteristics are especially sought after: physical attractiveness and social status (Feingold, 1992; Sprecher, 1989; Trivers, 1985). When daters are deficient in physical attractiveness, they might opt for enhancing their social status in order to compensate. Lies about social status (e.g., income, occupation, education) might be preferable to lies about physical appearance because they are not as easily detectable. This is consistent with a strategic view of deception in self-presentation (see Toma et al., 2008), where daters are expected to choose not only self-enhancing lies, but also lies that are hard to detect. An important question, then, is whether less attractive online daters prefer to directly enhance the presentation of their physical appearance or instead prefer to enhance other aspects of themselves, such as social status:

Research Question 1 (RQ 1): Will less attractive daters enhance their social status more than attractive daters?

Finally, as noted above, daters can have different motivations for constructing self-presentations, depending on their relational goals (e.g., short-term vs. long-term dating relationships). Given that these motivational differences may interact with construction processes of self-presentation, in the present study we control for online daters' short-term versus long-term relational goals when testing the hypotheses described above.

Method

Participants and Recruitment

Participants were 80 online daters (40 men and 40 women; 55% White, 15% Black, 12.5% Asian, 10% mixed race, 5% Hispanic, and 2.5% Indian; age $M = 30.55$, $SD = 8.46$, minimum = 18, maximum = 53) who subscribed to one of four mainstream online dating services: Match.com, Yahoo Personals, American Singles, or Webdate. These services were chosen because (a) they allow users to self-present through standard profiles, rather than rely on matching systems to pair users, and (b) they appeal to general rather than niche audiences. Each profile consists of a prominently featured photograph (which is also showcased in search results), optional additional photographs, and a series of multiple-choice and open-ended questions. The main characteristics assessed by these questions are age and physical appearance (height, weight, body type), relationship status, habits and interests (smoking, drinking, activities), and beliefs (politics and religion).

Participants were recruited in the New York City metropolitan area through print and online advertisements that called for participation in a study of self-presentation in online dating profiles. The advertisements did not mention deception in order not to drive away potential participants who did engage in substantial deception. Four hundred seventy-nine online daters signed up for participation through a secure Web site. At sign up, they provided information about the online service they used, their username and email address. Usernames served to locate online dating profiles and identify participants across the demographics of gender, age, and sexual orientation. Online daters were invited to participate in the study if we could confirm that they had a profile in one of the four services listed above and if they were heterosexual. Homosexual participants were excluded from the sample in order to eliminate the potential confounding effect of sexual orientation. We also attempted to match participants' age as closely as possible to the age demographics of a national sample of online daters (Fiore, 2004). Using these criteria, 251 online daters were invited to participate in the study, and 84 of them showed up to the research appointment before the completion of the study. Of these, 4 participants were eliminated on account of being bisexual.

Procedure Overview

Participants were invited to the psychology lab at the New School University for a research appointment. Prior to their arrival, their profiles were downloaded and their profile photographs archived. At the time of the research appointment, participants were presented with

a printout of their online dating profile and asked to rate the accuracy of each profile element. Second, several photographs were taken of each participant in order to obtain a representation of their current physical appearance. Third, participants' height and weight were measured and their age was recorded from their driver's licenses. Last, participants were debriefed and paid US$30.

Measures

Objective physical attractiveness. During the research appointment, three photographs were taken of each participant: a head shot, a full-body shot, and a photograph in which participants replicated the pose of their main profile photograph. These photographs served as a representation of daters' current physical appearance. Note that, for privacy reasons, not all participants agreed to have their photograph taken, which reduced the sample size (*N*) for this measure to 69 (34 women and 35 men).

For each participant, these three photographs were arranged side by side on a slide and shown to a group of judges ($n = 49$, 31 women and 18 men; ages 18-22). The judges were undergraduate students at Cornell University and participated in this study in exchange for extra credit in their courses. The judges rated each participant's physical attractiveness on a scale from 1 (*being very unattractive*) to 10 (*being very attractive*).

Photographic self-enhancement. This measure assesses whether online daters posted profile photographs that displayed a more attractive version of themselves. First, a group of judges ($n = 36$, 26 women and 10 men; ages 18-22) rated the physical attractiveness of daters' main profile photograph. Second, another group of judges ($n = 29$, 14 women and 15 men; ages 18-22) rated the physical attractiveness of the replica of daters' profile photograph taken in the lab. Both groups of judges used a scale from 1 (*very unattractive*) to 10 (*very attractive*) to rate the physical attractiveness of the person in the photograph. Finally, the attractiveness score of the lab photograph was subtracted from the attractiveness score of the profile photograph to determine how much more (or less) attractive daters' online representation was by comparison to their everyday appearance.

Accuracy of profile elements (self-report). Participants were given a printout of their profile and were asked to go through their statements on each profile element (occupation, age, etc.) and rate its accuracy on a scale from 1 (*completely inaccurate*) to 5 (*completely accurate*). Accuracy was defined as "the extent to which the profile statement reflects the truth about you now."

Accuracy of profile elements (objective measurements). In order to avoid the potential social desirability bias of self-report measures of deception (i.e., participants not admitting the truth about their lies in order to make a favorable impression on the experimenter), the accuracy of some of the profile items was objectively verified (reported in Toma et al., 2008). Participants' height was measured using a standard measuring tape, and their weight was measured using a standard scale. All participants were asked to remove their shoes and outerwear in order to obtain accurate weight and height measurements. Participants' age was then recorded from their driver's licenses, which they were asked to bring ostensibly for identification purposes. Absolute deviations from

participants' real height, age, and weight were calculated by subtracting profile claims about these characteristics from the objective measurements. These deviations were standardized and then averaged to create a deception index. This deception index represents an objectively derived measure of participants' deception when verbally describing their height, weight, and age.

Relationship goals. Online daters reported their relationship goals by selecting their most important goal from the following menu: (a) make new friends and/or meet some interesting people, (b) date a number and/or variety of interesting people, (c) meet one special person with whom to establish a committed relationship, and (d) find a possible life or marriage partner.

Results

Descriptives: Online Daters' Physical Attractiveness

Judges rated daters' physical attractiveness based on three photographs taken during the research appointment: a headshot, a full-body shot, and a replica of the main online dating photograph. On a scale from 1 (*very unattractive*) to 10 (*very attractive*), daters' average physical attractiveness was 4.43 ($SD = 1.09$). Importantly, judges were highly consistent in their ratings: interjudge reliability was $\alpha = .98$, indicating consensus among judges.

Gender differences were observed both among the daters and the judges. Female daters ($M = 4.68$, $SD = 1.13$, minimum = 1.71, maximum = 6.39) were rated as significantly more attractive than male daters ($M = 4.19$, $SD = 1.01$, minimum = 2.32, maximum = 6.06), $t(67) = 3.47$, $p < .001$. Furthermore, male judges ($M = 4.20$, $SD = 1.01$) rated daters as less attractive than female judges ($M = 4.65$, $SD = 1.20$), $t(68) = -3.57$, $p < .001$. Nonetheless, male and female judges' ratings were highly correlated, $r = .92$, $p < .001$.

This pattern of results suggests that male and female judges agreed on their assessment of daters' attractiveness but that male judges had higher standards for others' attractiveness. This is consistent with theoretical predictions that men may have evolved to be more discerning judges of physical attractiveness in general. Because of the high correlation between female and male judges' scores, the following analyses do not distinguish between judge gender.

Self-Presentation of Physical Appearance

Consider first the self-presentation of physical appearance through profile photographs. Table 1 summarizes the average scores on daters' everyday physical attractiveness (as captured in the lab photograph), profile photograph attractiveness, and photographic self-enhancement. H1a predicted that physical attractiveness will negatively correlate with photographic self-enhancement, as less attractive daters try to improve the presentation of their appearance. H2a predicted that this correlation would be stronger for women, with unattractive women engaging in photographic self-enhancement more than unattractive men.

Table 1. Means and Standard Deviations for the Attractiveness of Profile Photographs, the Attractiveness of Lab Photographs, and Photographic Self-Enhancement

	Profile Photo Physical Attractiveness (P)	Lab Photo Physical Attractiveness (L)	Photographic Self-Enhancement (P-L)
	M (*SD*)	*M* (*SD*)	*M* (*SD*)
Men	3.96 (1.19)	3.80 (1.03)	–0.12 (1.33)
Women	5.01 (1.21)	4.76 (1.26)	0.29 (1.50)
Overall	4.53 (1.32)	4.27 (1.24)	0.08 (1.42)

Note: The photographic self-enhancement score may differ from the subtraction of P and L means due to averaging error and listwise deletion of missing cases.

These hypotheses were tested with a general linear model that included photographic self-enhancement as the dependent variable, and physical attractiveness, relationship goals, and gender entered as predictors. In the first step, the main effects were included in the model. The model fit the data well, $F(3, 45) = 9.72$, $p < .001$, and accounted for 35.3% of the variance in photographic self-enhancement. Consistent with H1a, the coefficient for physical attractiveness was significant ($\beta = –.60$, $SE = .13$, $p < .001$), suggesting that lower attractiveness was associated with more photographic self-enhancement. The coefficient for gender was also significant ($\beta = .88$, $SE = .33$, $p = .01$), suggesting that women enhanced their photographs more than men. Finally, the coefficient for relationship goals was significant ($\beta = –.29$, $SE = .14$, $p = .04$), suggesting that longer term relational goals were associated with less self-enhancement.

In the second step, the interaction term between physical attractiveness and gender was introduced in the model. The model remained a good fit, $F(4, 44) = 7.19$, $p < .001$, but the coefficient for the interaction term was not significant ($\beta = –.10$, $SE = .28$, *ns*) failing to support H2a. The finding that less attractive daters more frequently engaged in photographic self-enhancement did not differ across men and women.

Consider next the impact of attractiveness on verbal descriptors of one's physical appearance (i.e., explicit statements about height, weight, age). Recall that a deception index was calculated to reflect how much each online dater had lied about his or her height, weight, and age. H1b predicted that physical attractiveness will negatively correlate with the deception index, such that less attractive daters will have more deceptive self-descriptors. H2b predicted that this correlation would be stronger for women, with unattractive women having higher deceptive indexes than unattractive men.

These hypotheses were tested with a model that had the deception index as the dependent variable and physical attractiveness, gender, and relationship goals as predictors. In the first step, the main effects were introduced in the model, but they did not result in a significant fit, $F(3, 64) = 1.78$, $p = .16$, and only accounted for 3% of the variance in the deception index. However, as predicted, the coefficient for physical attractiveness was significant ($\beta = –.18$, $SE = .06$, $p = .03$, one-tailed), supporting H1b and indicating that lower attractiveness was associated with more self-enhancement in physical descriptors.

The coefficient for gender was not significant (β = .05, *SE* = .06, *ns*) and neither was the coefficient for relationship goals (β = –.06, *SE* = .06, *ns*).

In the second step, the interaction term between physical attractiveness and gender was added. The interaction term did not achieve significance (β = .20, *SE* = .13, *ns*), failing to support H2b and suggesting that gender did not interact with the association between attractiveness and deception in the self-descriptors measured by the deception index (height, weight, age).

H3 predicted that the more attractive daters are, the more photographs they will post in their profiles in an effort to showcase their attractiveness. A model with total number of photographs as a dependent variable and physical attractiveness and relational goals as predictors tested this hypothesis. The model fit the data well, $F(2, 65) = 6.28$, $p = .003$, and accounted for 13.5% of the variance in photograph postings. The coefficient for physical attractiveness was significant (β = .18, *SE* = .08, $p = .02$), providing support for H3 and suggesting that more attractive daters posted more photographs of themselves. The coefficient for relationship goals was also significant (β = .17, *SE* = .08, $p = .04$), indicating that daters with long-term relational goals tended to post more photographs than daters with short-term goals.

Self-Presentation of Social Status

RQ1 was concerned with whether daters' physical appearance is related to the presentation of their social status indicators. Does lower physical attractiveness correlate with deception about social status? Three social status indicators are present in the online dating profile: occupation, income, and education. Daters self-reported their accuracy for each of these indicators, which was then averaged to create an overall score.

This research question was examined with a general linear model that included social status accuracy as the dependent measure and physical attractiveness and relationship goals as predictors. The model was not a significant fit with the data, $F(2, 65) = 2.38$, $p = .10$, accounting for only 4% of social status deception. The physical attractiveness coefficient was only marginally significant (β = –.10, *SE* = .06, $p = .09$). These data provide only weak support for the notion that less attractive daters compensate in other areas of the profile. Last, relational goals were not a significant predictor of social status accuracy (β = –.11, *SE* = .06, $p = .10$).

Discussion

The purpose of this study was to examine the role of physical attractiveness in online daters' self-presentation. This examination was accomplished through the theoretical lens of Leary and Kowalski's (1990) model of self-presentation, which claims that image construction depends on the values of the target of the self-presentation and involves implementing a set of strategies to achieve the desired impression. In the context of dating, the target audience values physical attractiveness, which led us to hypothesize that less attractive online daters will seek to enhance the presentation of their physical appearance, whereas more attractive daters will wish to showcase their attractiveness.

We also considered the role of the communication medium in which the self-presentation takes place, thus adding an important new dimension to Leary and Kowalski's (1990) initial model. Online self-presentation is qualitatively different from face-to-face self-presentation in that it substitutes dynamic and embodied cues with static and disembodied ones that are much more easily controlled through the affordances of asynchronicity and editability (see Walther, 2007). As such, we expected online self-presenters to resort to the strategies of deceptive self-enhancement, compensation, and showcasing of valued attributes in order to manage the self-presentation of their physical appearance.

The Importance of Physical Attractiveness

Image construction involves figuring out one's desired impression, or how one wishes to come across, and then implementing it. Based on fitness-related evolutionary theories that claim physical attractiveness is highly prized in the dating world, we expected online daters to desire to be perceived as physically attractive in order to catch the attention of mates and then to engage in strategies meant to achieve an impression of attractiveness. In particular, we hypothesized that less attractive individuals, who are at a disadvantage in the dating realm, should be motivated to engage in strategic presentations that de-emphasize or enhance their appearance, whereas attractive daters should engage in strategies meant to clearly display their appearance.

The results supported our expectations: Less attractive daters posted self-enhancing photographs that increased their attractiveness (H1a), and they also lied more than attractive daters when verbally describing their physical attractiveness (H1b). An important observation is that, when given the choice to boost their appeal by (a) directly enhancing their physical attractiveness or (b) enhancing their social status in an effort to compensate for decreased physical attractiveness (RQ1), less attractive daters tended to choose the former, although a marginal finding suggested that less attractive daters also enhanced the presentation of their social status. Although there is evidence that the daters in our sample engaged in both self-enhancement of specific shortcomings and compensation, our data suggests that self-enhancement of specific shortcomings, such as decreased physical attractiveness, was the preferred strategy in constructing a desired impression. As for attractive daters, they displayed their attractiveness by posting more photographs of themselves than their less attractive counterparts. This strategic showcasing of desirable attributes also highlights the importance of physical attractiveness in the dating arena.

It is noteworthy that online daters engaged in strategies meant to manage the presentation of their physical attractiveness regardless of their relationship goals. Indeed, the strategies of showcasing, enhancing, or compensating for physical attractiveness emerged even when controlling for relationship goals.

Several evolutionary theories (see Buss, 1988; Buss & Schmitt, 1993; Langlois et al., 2000) also postulate that physical attractiveness is a more important attribute of women than of men. Consistent with this prediction, women engaged in more photographic self-enhancement than men. In addition, our male judges were more critical evaluators of attractiveness than female judges. However, the data did not support our hypothesis that

less attractive women engage in more enhancement of their appearance than less attractive men. That is, the association between attractiveness and enhancement was not stronger for women than men, as we expected. Interpretation of this null result should be done cautiously as the small sample size limited our power to detect interaction effects.

Taken together, these data generally support evolutionary assumptions that men value physical attractiveness in women and, perhaps more interestingly, that women respond to men's preference through self-presentation choices made in the online dating context.

The Importance of the Communication Medium

When constructing a desired self-presentation, it is important to consider the context in which the self-presentational act occurs—in our case, the online environment. According to interpersonal deception theory (Buller & Burgoon, 1996), communicative behaviors vary systematically according to the contexts in which they occur. These contexts can influence deception through providing or restricting access to certain social cues, facilitating or inhibiting immediacy, or altering conversational demands. In online dating environments, self-presentations are static (i.e., the equivalent of a monologue rather than a dialogue) and rely solely on visual and linguistic cues (Walther, 2007). These affordances alter the nature of deception primarily by enabling less attractive daters to be deceptive about their physical appearance in ways that would not have been possible in face-to-face meetings. For instance, face-to-face daters have only a limited range of options for enhancing their physical attractiveness (i.e., wearing flattering clothes, makeup, and hair). Online daters, on the other hand, have many options for constructing more attractive personae, including selecting flattering photographs, retouching their photographs, and simply stating verbally that they are more attractive than they really are (see Hancock & Toma, 2009; Toma et al., 2008). Together, these affordances of the online medium allow online daters to engage in selective self-presentation (Walther, 2007), a highly deliberate and strategic type of self-presentation. Our results show that less attractive daters appear to take advantage of the medium of communication to overcome attractiveness deficits in ways not possible in face-to-face contexts.

In fact, the present study is the first to examine the self-presentational behaviors enacted by attractive and less attractive individuals in dating contexts. On the surface, the lack of research on this topic seems puzzling. One possible explanation is that face-to-face environments offer few choices for crafting a self-presentation that is substantially different from day-to-day self-presentation, making it difficult for researchers to study the self-presentational strategies adopted by attractive and less attractive individuals. The Internet, however, provides many opportunities for making self-presentational choices that deviate from everyday self-presentations and thus raises questions about users' behaviors that could not be examined in face-to-face environments (see Walther, Gay, & Hancock, 2005).

Evolutionary Tendencies in the Online World

Research on computer-mediated environments has been criticized for ignoring the evolutionary pressures that may shape online behaviors (see Kock, 2004), such as

humans' ability to cognitively adapt to new media of communication and their hardwired preference for certain medium characteristics (e.g., synchronicity, collocation). Here we find that the behaviors enacted by daters in an online setting are not unexpected but rather systematically predictable by evolutionary theories. Our data suggest that online daters' self-presentation behaviors are consistent with hardwired evolutionary goals in mate selection that manifest themselves in new but predictable ways in online environments.

One important contribution of this study, then, is the finding that the online environment, a technology that is merely a few decades old, may have an impact on how preferences that have been hardwired through millennia of evolution are enacted. Displays of physical attractiveness online (i.e., photographs) can be manipulated strategically in accordance with users' hardwired evolutionary goals of increasing their chances of finding the best possible mate. In the process, online spaces may change the nature of the "honest indicators" of health and reproductive fitness touted by evolutionary theories. Indeed, these honest indicators may not be so honest online. For example, a face-to-face presentation of youthfulness, clear and smooth skin, and long, lustrous hair may be an honest indicator of heath and reproductive fitness (see Scheib, Gangestad, & Thornhill, 1999). Online, however, this presentation may only signal the strategic efforts of daters who chose slightly older photographs of themselves (so they appear younger) or who used a digital camera whose low resolution made their skin look healthier than it actually is. Although the usefulness of the "honest" indicators is not entirely lost (i.e., the dater may indeed have been healthy and fit a few years ago, and her or his skin may have a good, albeit not perfect, texture), it can be diminished in online environments.

In summary, evolutionary tendencies and online affordances may have a reciprocal relationship, where (a) behaviors in new communicative contexts, such as online dating, are shaped by evolutionary forces in predictable ways and (b) online affordances may change the interpretation of millennia-old evolutionary indicators, such as physical attractiveness.

The Issue of "Strategy"

We have argued that self-presentation choices in online dating profiles are strategic. It is important to note, however, that our findings are based on assessments of physical attractiveness made by judges who were unacquainted with any of the online daters in the sample. In other words, judges' attractiveness ratings, rather than participants' self-report, can be used to predict self-presentational patterns in online dating profiles. In fact, a regression model shows that judges' ratings of online daters' attractiveness explain 7% of the variance in online daters' deception index, $F(1, 67) = 4.81$, $p = .03$, suggesting that judges can provide valuable information about deception patterns in online dating profiles.

But in the absence of information about participants' views of their own attractiveness, is it reasonable to conclude that self-presentation was strategic? We believe that it is. As Kellermann (1992) proposed, communication does not need to be intentional to be strategic. Rather, communication that is strategic can be highly automatic, based on patterns of behaviors that have been internalized over time, without conscious awareness. For instance,

we can act demurely toward our parents without meaning to do so, simply because we have learned, subconsciously, that a demure attitude is most likely to gain their approval. It follows that, in the present study, we do not need access to online daters' self-views and reports of intentionality to conclude that their behavior was strategic.

Practical Implications and Limitations

In addition to its theoretical importance, the process of image construction online also has noteworthy practical implications. As mentioned earlier, online self-presentations can affect users' ability to accomplish their face-to-face goals, such as finding love. In particular, the fidelity of these self-presentations is paramount, as deception is perceived by many to be socially undesirable. An important question is what effect this self-enhancement has on daters' ability to (a) generate more face-to-face encounters and (b) come across as honest in these face-to-face dates. On the one hand, it is possible that this self-enhancement has the desired effect of generating more dates because it presents a more desirable online self. On the other hand, it is possible that the self-enhancement is noticeable and offensive to potential dates, having the undesirable effect of relationship termination. Future research is needed to clarify the effects of presenting a more physically attractive persona in online dating sites.

One potential limitation of the current study was the samples of online daters and judges. Online daters' physical attractiveness was judged as somewhat below average, which may reflect the fact that (a) our sample of online daters was indeed of a below average attractiveness or (b) our sample of judges may have been unusually harsh critics of daters' attractiveness. The latter may have occurred because the judges were students and therefore younger than many of the online daters whose attractiveness they were rating. It is possible that younger people may be harsher critics of older people's attractiveness. Future studies with more diverse samples of judges and of self-presenters may circumvent this problem.

As noted earlier, a related limitation is the size of our sample of online daters, which was limited to 80 participants, out of whom only 69 agreed to have their photograph taken. This reduced sample size may have obscured differences between the behaviors of subgroups such as more or less attractive women or more or less attractive men.

Conclusion

Despite the above limitations, this research makes some important contributions to understanding self-presentation in the dating context as a function of self-presenters' physical attractiveness. We show that physical attractiveness is related to how daters decide to present themselves. Unattractive daters, and particularly women, can compensate for their lack of attractiveness by enhancing their photographs and descriptors of physical appearance. This provides support for evolutionary theories that claim physical attractiveness is of vital importance in the dating arena, particularly for women. Moreover, the study reveals that technological affordances of online spaces allow users to act on their self-presentational goals, which has implications for how hardwired evolutionary tendencies play out in a context that presents novel opportunities and challenges. Our findings underscore users'

ability to engage in thoughtful and strategic communication and to achieve their self-presentational goals in online environments.

Acknowledgments

The authors are grateful to Dennis Regan for his comments on earlier drafts of this article and to Michael Schober for offering his lab at New School University for data collection. The authors are also indebted to Nicole Colwell, Kaitlin Dufton, Jeff Nevins, Amanda Pearsall, and Ashley Vernon and for their help with data collection. This paper was presented at the International Communication Association (ICA) conference in May 2009, where it received a Top Paper award.

Declaration of Conflicting Interests

The authors declared no potential conflicts of interest with respect to the authorship and/or publication of this article.

Funding

The authors disclosed receipt of the following financial support for the research and/or authorship of this article: This research was supported by NSF Grant No. HSD-0624267.

Note

1. The sine qua non premise of fitness-related evolutionary theories is that people have universal standards of attractiveness based on clues to health and fitness. Consistent with this claim, there is high agreement within and across cultures about who is considered physically attractive (see Langlois et al., 2000).

References

Ahuvia, A. C., & Adelman, M. B. (1992). Formal intermediaries in the marriage market: A typology and review. *Journal of Marriage and Family*, *54*, 452-463.

Barber, N. (1995). The evolutionary psychology of physical attractiveness: Sexual selection and human morphology. *Ethology and Sociobiology*, *16*, 395-424.

Baumeister, R. F. (1982). A self-presentational view of social phenomena. *Psychological Bulletin*, *91*, 3-26.

Baumeister, R. F., & Jones, E. E. (1978). When self-presentation is constrained by the target's knowledge: Consistency and compensation. *Journal of Personality and Social Psychology*, *36*, 608-618.

Buller, D. B., & Burgoon, J. K. (1996). Interpersonal deception theory. *Communication Theory*, *6*, 203-243.

Buss, D. M. (1988). The evolution of human intrasexual competition: Tactics of mate attraction. *Journal of Personality and Social Psychology*, *54*, 616-628.

Buss, D. M., & Schmitt, D. P. (1993). Social strategies theory: An evolutionary perspective on human mating. *Psychological Review*, *100*, 204-232.

Daly, M. M., & Wilson, M. (1995). Discriminative parental solicitude and the relevance of evolutionary models to the analysis of motivational systems. In M. S. Gassaniga (Ed.), *The cognitive neurosciences* (pp. 1269-1286). Cambridge, MA: MIT Press.

Ellison, N. B., Heino, R. D., & Gibbs, J. L. (January, 2006). Self-presentation processes in the online dating environment. *Journal of Computer-Mediated Communication*, *11*(2). Retrieved January 22, 2010, from http://jcmc.indiana.edu/vol11/issue2/ellison.html

Feingold, A. (1992). Gender differences in mate selection preferences: A test of the parental investment model. *Psychological Bulletin*, *112*, 125-139.

Fiore, A. T. (2004). *Romantic regressions: An analysis of behavior in online dating systems*. Unpublished master's thesis, Massachusetts Institute of Technology, Cambridge.

Gangestad, S. W., & Scheyd, G. J. (2005). The evolution of human physical attractiveness. *Annual Review of Anthropology*, *34*, 523-548.

Gangestad, S. W., & Thornhill, R. (1997). Human sexual selection and developmental stability. In A. Simpson & D. T. Kenrick (Eds.), *Evolutionary social psychology* (pp. 169-195). Mahwah, NJ: Erlbaum.

Goffman, E. (1959). *The presentation of self in everyday life*. New York: Anchor.

Hancock, J. (2007). Digital deception: When, where, and how people lie online. In K. McKenna, T. Postmes, U. Reips, & A. Joinson (Eds.), *Oxford handbook of Internet psychology* (pp. 287-301). Oxford, UK: Oxford University Press.

Hancock, J. T., & Toma, C. L. (2009). Putting your best face forward: The accuracy of online dating photographs. *Journal of Communication*, *59*, 367-386.

Hirschman, E. C. (1987). People as products: Analysis of a complex marketing exchange. *Journal of Marketing*, *51*, 98-108.

Jagger, E. (2001). Marketing Molly and Melville: Dating in a postmodern, consumer society. *Sociology*, *35*, 39-57.

Jones, E. E., & Pittman, T. S. (1982). Toward a general theory of strategic self-presentation. In J. Suls (Ed.), *Psychological perspectives on the self* (pp. 231-262). Hillsdale, NJ: Erlbaum.

Kellermann, K. (1992). Communication: Inherently strategic and primarily automatic. *Communication Monographs*, *59*, 288-300.

Kock, N. (2004). The psychobiological model: Towards a new theory of computer-mediated communication based on Darwinian evolution. *Organization Science*, *15*, 327-348.

Langlois, J. H., Kalakanis, L., Rubenstein, A. J., Larson, A., Hallam, M., & Smoot, M. (2000). Maxims or myths of beauty? A meta-analytic and theoretical review. *Psychological Bulletin*, *126*, 390-423.

Leary, M. R. (1996). *Self-presentation: Impression management and interpersonal behavior*. Boulder, CO: Westview Press.

Leary, M. R., & Kowalski, R. M. (1990). Impression management: A literature review and two-component model. *Psychological Bulletin*, *107*, 34-47.

Lynn, M., & Bolig, R. (1985). Personal advertisements: Sources of data about relationships. *Journal of Social and Personal Relationships*, *2*, 377-383.

McKenna, K. Y. A., & Bargh, J. (2000). Plan 9 from cyberspace: The implications of the Internet for personality and social psychology. *Personality and Social Psychology Review*, *4*, 57-75.

Riggio, R. E., Widaman, K. F., Tucker, J. S., & Salinas, C. (1991). Beauty is more than skin deep: Components of attractiveness. *Basic and Applied Social Psychology*, *12*, 423-469.

Scheib, J. E., Gangestad, S. W., & Thornhill, R. (1999). Facial attractiveness, symmetry and cues of good genes. *Proceedings of the Royal Society, London B*., *266*, 1913-1917.

Schlenker, B. R. (2002). Self-presentation. In M. R. Leary & J. P. Tangney (Eds.), *Handbook of self and identity* (pp. 492-518). New York: Guilford.

Singh, D. (2004). Mating strategies of young women: Role of physical attractiveness. *Journal of Sex Research*, *41*, 43-54.

Sprecher, S. (1989). The importance to males and females of physical attractiveness, earning potential, and expressiveness in initial attraction. *Sex Roles*, *21*, 591-607.

Symons, D. (1979). *The evolution of human sexuality*. New York: Oxford University Press.

Thornhill, R., & Gangestad, S. W. (1993). Human facial beauty: Averageness, symmetry and parasite resistance. *Human Nature*, *4*, 237-269.

Toma, C. L., Hancock, J. T., & Ellison, N. B. (2008). Separating fact from fiction: An examination of deceptive self-presentation in online dating profiles. *Personality and Social Psychology Bulletin*, *34*, 1023-1036.

Trivers, R. (1985). *Social evolution*. Menlo Park, CA: Benjamin/Cummings.

Turkle, S. (1995). *Life on the screen: Identity in the age of the Internet*. New York: Simon & Schuster.

Walther, J. B. (1996). Computer-mediated communication: Impersonal, interpersonal, and hyperpersonal interaction. *Communication Research*, *23*, 3-44.

Walther, J. B. (2007). Selective self-presentation in computer-mediated communication: Hyperpersonal dimensions of technology, language, and cognition. *Computers in Human Behavior*, *23*, 2538-2557.

Walther, J. B., & Parks, M. R. (2002). Cues filtered out, cues filtered in: Computer-mediated communication and relationships. In M. L. Knapp & J. A. Daly (Eds.), *Handbook of interpersonal communication* (3rd ed., pp. 529-563). Thousand Oaks, CA: Sage.

Walther, J. B., Gay, G., & Hancock, J. T. (2005). How do communication and technology researchers study the Internet? *Journal of Communication*, *55*, 632-657.

Whitty, M. (2007). Love letters: The development of romantic relationships throughout the ages. In K. McKenna, T. Postmes, U. Reips, & A. Joinson (Eds.), *Oxford handbook of Internet psychology* (pp. 287-301). Oxford, UK: Oxford University Press.

Bios

Catalina L. Toma is a PhD candidate in the Department of Communication at Cornell University. Her research examines the effects of new communication technologies on interpersonal processes, such as impression management, impression formation, deception, and trust. Catalina will join the Department of Communication Arts at the University of Wisconsin–Madison as an assistant professor in the fall of 2010.

Jeffrey T. Hancock (PhD, Dalhousie University, Canada) is an associate professor in the Department of Communication at Cornell University. His research examines social interactions mediated by information and communication technology, with an emphasis on how people produce and understand language in these contexts.