

A Study on Women Behavior with Men

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Abstract

Due to its particular conditions, the Internet increases opportunities for lies and deception compared to offline interactions. In online dating, misrepresentation of the self is an issue of particular relevance. Previous studies have shown that searching for a mate online is accompanied by a high risk of being deceived. This paper focuses on the rarely-considered perspective of the receivers of deception. Our study will first investigate deception patterns of men and women in online dating profiles. In a second step, modes of detecting deception (e-mail, telephone, face-to-face, etc.) are analyzed. Using online survey data of 3,535 users of a German dating site, results show (1) gender-specific deception patterns: Women are more likely to misrepresent their physical attractiveness; men are more likely to misrepresent information on marital status, intended relationship, and height. (2) These gender-specific deception patterns are associated with specific detection modes. Women are more likely to detect specific male deceptions during e-mail communication in an early stage of dating, whereas men are more likely to detect specific female deceptions at the first face-to-face meeting. These results highlight the link between different kinds of deception, characteristics of the receiver and its detection via different communication technologies. Implications of the results for the mating process are discussed.

Keywords: Deception, Communication Technologies, E-Dating, Correspondence Analysis

Introduction

Lies and deception are as integral an element of the social as cooperation and trust. They occur in everyday life in a variety of social situations, ranging from economic transfers to romantic interactions, and to varying degrees, from negligible cheating to serious fraud. With the spread

of web-based communication practices, issues of deception and fraud have become even more relevant, and hence a particular object of research interest (cf. Whitty and Joinson 2009; Pratt et al. 2010). Romantic interactions online are no exception from this development, as they are also increasingly discussed with regard to romance scams and identity fraud (cf. Rege 2009; e.g. Toma and Hancock 2010; Toma, Hancock and Ellison 2008; Hancock, Toma, and Ellison 2007; Ellison, Heino and Gibbs 2006; Gibbs, Ellison and Heino 2006; Zillmann, Schmitz, and Blossfeld 2011). Whereas the extent of deception and its logic have found major consideration in the online dating literature, research on the *detection* of deceptive information by deception receivers has been sparse.

Based on recent work on the relation between communication medium and deception detection (Hancock, Woodworth, and Goorha 2010), we assess to what extent communication technologies affect gender-specific practices of deception detection. To this end, we use online survey data of 3,535 male and female users of a major German dating site and answer the following research questions: (1) Are there gender-specific patterns of deception in users' online dating profiles and

(2) are those patterns associated with gender-specific detection modes? By detection mode we mean the communication methods used to reveal a deception, namely e-mail, telephone, face-to-face, and other methods.

In this paper, we first discuss deception and its detection in online dating. Second, we describe the data and measurements used. Subsequently, we will present descriptive results on men's and women's deceptive profile presentation using an indirect questioning technique, and multivariate results on deception *patterns* and their *association* with different modes of detection using multiple correspondence analysis. Results are discussed in the light of previous findings on deception detection and with regard to the implications for gender-specific challenges when searching for a mate online.

Data and Method

Data and Sample Characteristics

In order to analyze the patterns of men's and women's profile deception and its connection to

different detection modes, we use data that was collected during an online survey on a major German online dating site. Skopek (2012) shows that the particular dating site is not a niche service, but rather comprises a comprehensive representation of users with very different characteristics. The data was collected on the platform from June 2009 to April 2010. All registered and active¹ users of the dating site were invited to take part in the survey via an email message. A total of 3,535 online daters took part in the survey, which corresponds to a response rate of 10%.

Our sample contains 1,975 men (60%) and 1,315 women (40%)². The average age is 40. The majority of the users (72%) are either single or divorced. 57% of the men are single, 21% are divorced. The majority of the women are single (44%), but a large proportion of women are divorced (34%). 70% of the online daters were not in a relationship at the time of the survey. However, there is a certain proportion who report being in a (married) relationship at the time (14%).

Measurement – Deceptive Self-Presentation and Detection Modes

In order to answer our first research question on gender-specific patterns of deceptive self-presentation in online dating, we employed an indirect questioning technique by asking online daters about their *experience* of deceptive profile presentation by other users. Since deception, especially one's own misrepresentation, is a sensitive topic and highly vulnerable to social desirability responses, we employed an indirect questioning technique instead of asking respondents directly about their own misrepresentation (see Zillmann and Schmitz 2012). The indirect questions on deceptive behavior were asked as follows: (1) "Have you ever been in contact with somebody on online dating sites who lied in his/her online profile?" Respondents could choose between the following answering categories: "yes, once", "yes, several times", and "no". Additionally, they could indicate that they had not yet been in contact with other users. If the respondents indicated that they already had been in contact with other users who had lied in their online profile (indicating "yes" either with one person or several persons), they were asked about which characteristics had been misrepresented by their counterpart(s): (2) "Which attributes exactly did the person (or persons) represent untruthfully?" Here we listed the different

profile characteristics that the respondents could potentially have been lied to about. Respondents could answer either with “yes” or “no”.

Descriptive Results

Our first question concerns patterns of deceptive self-presentation in the user profiles on online dating sites. Figure 1 shows whether users of the dating site we analyzed had ever experienced deception.

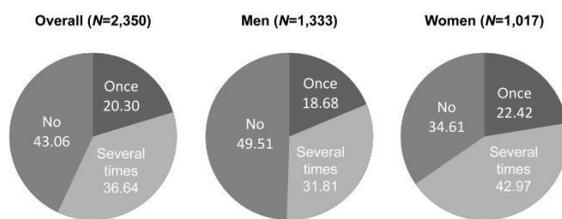


Figure 1. Deceptive Self-Presentation in Online Dating Using Indirect Questioning – Deception Experienced in Online Dating Profiles (percentages).³

About 20% of men and women stated that they had experienced deception only once. About 37% of the users (32% of men, 43% of women) had experienced lying several times. However, it is also true that more than 40% of the users had never detected any lying by their counterparts at the time of being surveyed.

Table 1: Deceptive Self-Presentation in Online Dating – Experienced Misrepresentation of Profile Characteristics (percentages)⁴

Experienced misrepresentation of other user’s regarding ...	Overall	Men	Women	N ₁	N ₂		Phi
Height	17.9	12.3	25.2	413	2,312	***	0.166
Age	28.6	25.7	32.3	663	2,322	***	0.073
Weight	36.3	35.4	37.5	840	2,316		–
Desired Relationship	34.4	26.4	45.0	798	2,319	***	0.194
Marital Status	25.3	17.4	35.6	586	2,317	***	0.207
Children	13.9	14.2	13.5	321	2,312		–
Education	19.9	17.3	23.4	460	2,313	***	0.076
Profile Picture	32.3	30.0	35.2	749	2,322	**	0.055
Gender	5.2	6.3	3.8	120	2,312	**	0.054
Other Characteristics	22.5	20.1	25.7	521	2,318	***	0.067

Table 1 presents the experiences of men and women with deceptive profile characteristics. Results show that women lied most frequently about their weight (35%), profile picture (30%), and age (26%), which are characteristics concerning women’s physical attractiveness. Men, in contrast, lied most often about the kind of relationship they were after (i.e., whether they were looking for somebody for a chat or e-mail friendship, a sexual affair, or a long-term relationship, 45%), their marital status (36%), and their weight (38%). Using data from indirect questioning also reveals that men lied more often than women with regard to all listed profile characteristics except for the number of children and their stated gender.

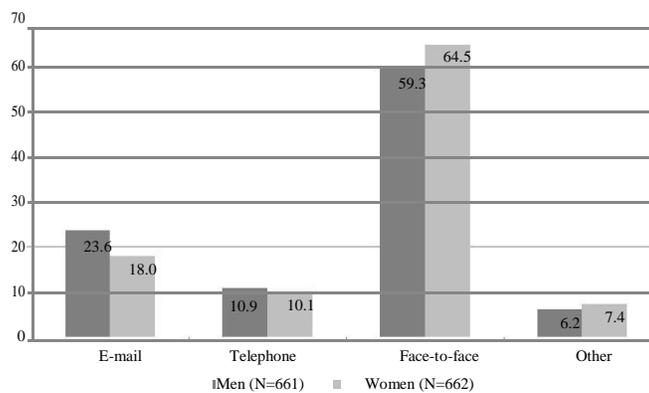


Figure 2. Detection Mode of Deceptive Profile Presentations by Gender (percentages)⁵

Finally, Figure 2 reports the communication mode that was used for the detection of other user’s misrepresentation. Both the majority of women (65%) and men (59%) detect deceptive profile presentations in face-to-face meetings. Slightly more women (65%) than men (59%) state that they detected deceptions in a face-to-face context. Slight gender differences also occur with regard to the detection of lies via e-mail communication. More men (24%) than women (18%) stated that they usually detected lies of their counterparts during e-mail communication. Telephone and other detection modes seem to be less important in deception detection on online dating sites for both sexes.

Multiple Correspondence Analysis

Multiple correspondence analysis is a technique suitable for our specific application, as we do not postulate a dependent variable. Instead, we want to explore the multiple relations between deceptions in different (profile) characteristics, their detection via different communication

technologies, and gender. Similar to principal component analysis (PCA) with metric variables, multiple correspondence analysis (MCA) transfers categorical data and its associations into a latent spatial structure (Benzécri et al. 1973;

Blasius 1994, 2001). In doing so it reduces the dimensionality of the chi square distances between the parameter values. These dimensions can be visualized as an n-dimensional space which, in turn, can be interpreted as a Euclidean surface. Similar features (variables values), i.e. those that describe similar actors, are found close together. Features that are dissimilar to each other, i.e. that describe dissimilar actors, are more distant from each other. This fact enables the interpretation of proximity and distance between categories within a graphically visualized space. In contrast to traditional multivariate techniques (such as regression models), this kind of statistics has no a priori assumptions about the data structure. The input data of the MCA may be non-negative values from contingency tables, composite tables, Burt matrices or indicator matrices. Whilst, for example, the PCA is based on a correlation matrix, the MCA decomposes the matrix of the standardized and weighted chi-square distances. It does not assume a correlative association between variables, nor an ordinality of the particular values.

Gender-Specific Deception Patterns in Online Dating

Dimension 1 explains 83% of the total solution, dimension 2 explains 4% of the geometric space as illustrated in figure 3. Both the structure of the “yes” answers (having experienced a lie with regard to the listed characteristic) and the structure of the “no” answers show a clear and defined pattern. Men are more likely to experience deception in the characteristics children, profile picture, and weight, a pattern that refers to the female need for presenting themselves as physically attractive and without potential costs (e.g. in the form of child care). These characteristics point to specific scarce female resources that are particular objects of competition.

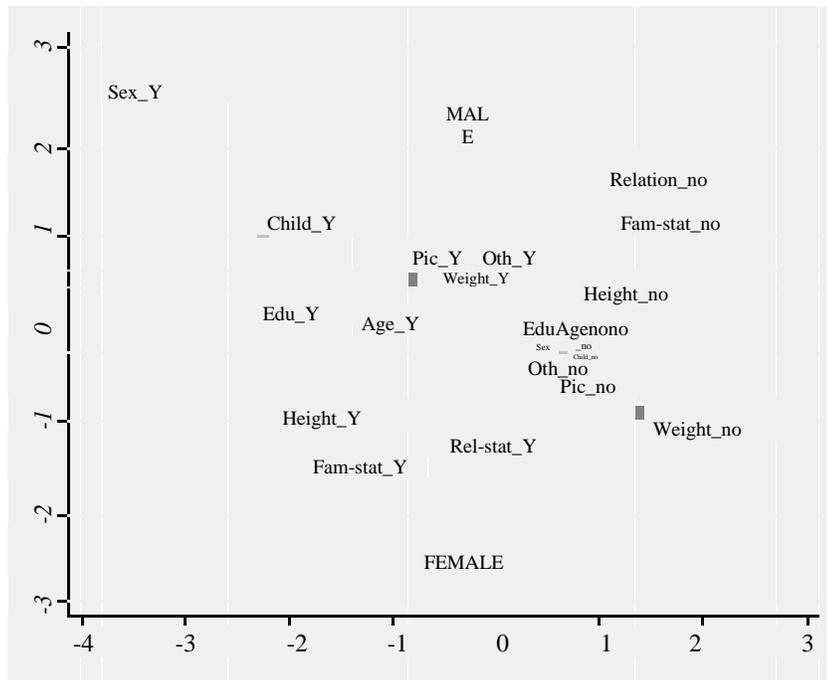


Figure 3. Patterns of Men’s and Women’s Profile Deception Using Multiple Correspondence

Women are more likely to experience misrepresentations of men’s height, their desired relationship and their marital status. As previous studies were able to show, men’s height is a major characteristic in determining their mating success (cf. e.g. Skopek 2012; Pawloswki and Koziel 2002; Biernat, Manis and Nelson 1991; Shepperd and Strathman 1989; Lynn and Shurgot 1984; Gillis and Avis 1980). Given the widespread assumption that men are more often interested in a short-time (possibly sexual) relationship, the pattern can furthermore be explained as the result of systematic male concealment of both their true marital status as well as their future expectations. The “no” structure reveals a complementary pattern. Men are less likely to experience deception with regard to height, desired relationship and marital status, and women are less likely to experience deception with regard to profile pictures and weight.

The deception patterns described here confirm the findings in the literature concerning the gender differences in partner preferences which affect the mating success of the opposite gender. However, two characteristics seem to be notable because of their seeming gender-independence: education and age. An ad-hoc expectation might have suggested that women should be the subject of a male strategy of status-deception in which men claim to have a higher educational

status than they actually do. The same ad-hoc expectation might also have suggested that women will try to enhance their “attention chances” (cf. Schmitz 2009) by pretending to be younger. However, both genders experience deception regarding to these characteristics. The explanation for the gender-unspecific relevance of age might be found in its general relevance: age is the characteristic with the strongest impact for pairing and differentiation (cf. Skopek et al. 2011). Hence, both genders might feel compelled to “optimize” their appearance with regard to their age. Other studies were able to show that women in online dating have the highest ingoing-contact-rate around the age of 23 (cf. Skopek et al 2011). Accordingly, the male experience of female age deception should mean that women claim to be younger than they actually are. The male age deception might be more complex, and needs further investigation, as the complementary age preferences of women do not have a common optimum.

Just like age, educational status appears in the MCA solution as gender-independent but can also be interpreted to have a gender-specific meaning and hence a gender-specific relevance on the mating market. Whereas male educational deception could be explained by the desire to signalize better resources on the market – an assumption that still needs further assessment – female educational deception needs particular investigation. Women’s educational status could be associated with both resources as well as costs. It might be the case that women claim to have a higher educational status than they really do, but given the high number of highly educated female online daters and males’ preferences for women with the same or a lower educational level an additional interpretation might be appropriate. High female educational status might be considered as costly within the dating market and thus, women might conceal their actual educational status or even claim to have a lower educational status than they really do (cf. Zillmann et al. 2011).

The second correspondence analysis is extended by actively using the variable „detection mode“ , with the options „personal encounter“ , „telephone“ , „e-mail“ and „other“ . This analysis can be interpreted as a control model, taking into account that the substantial patterns of model 1 may be the result of the unobserved effect of a differential detection mode: maybe men (or women) actually report specific kinds of deception simply because they detect them more often than other lies.

The first dimension of model 2 explains 76% and the second dimension 4% of the empirical variation. Note that in the graphical solution (Figure 4) „male“ and „female“ have changed position, which in itself does not have a substantial meaning. In this model men are still associated with experiencing lies about profile pictures and weight, and women are still associated with lies about family status and preferred relationship. However, three clear changes have taken place when compared to the previous model. First, experiencing lies about „child“ is now associated with women and experiencing lies about „height“ is associated with men. Furthermore „age“ has clearly moved from a gender-unspecific position to the male pole of the space. Obviously, the new variable „detection mode“ has an impact on the spatial structure. The impact of this variable can be explained by the position of its categories. The „personal encounter“ detection is now clearly associated with men due to the specific deceptions men experience and detect. „E-mail“ and „other“ , in contrast, are now more strongly associated with the female position in the space, leading to a clear dimension along the y-axis from „personal encounter“ to „telephone“ , „mail“ and „other“ . Hence, although the descriptive analysis showed that men and women only marginally differ in the general extent to which they utilize communication media for detecting lies (see figure 2), they do differ when one controls for the gender-specificity of deceptions in the multivariate analysis.

Discussion

The objective of the present study was to examine the detection of deception through different media technologies. In particular we assessed the relation of gender specific deception patterns and detection modes in the specific communication context of an online dating market.

Our first research question was whether men and women differ with regard to which traits they deceive about. Using indirect questioning, we were able to show that men are more likely to experience female deception with regard to having children, their appearance in a profile picture, and weight, whereas women are more likely to experience male deception about their height, their desired relationship and their marital status. Although these patterns do not deviate from previous research on deceptive practices, they opened up the possibility to answer our second question: are specific deceptions associated with the communication media involved in online meeting processes, such as e-mail communication, speaking on the telephone, or meeting face-

to-face? Although men and women only marginally differ in the general extent to which they utilize communication media for detecting lies (according to the bivariate analysis), they do differ when one controls for the context-dependent gender-specificity of deceptions in the subsequent analyses. The multivariate analysis showed that specific female deceptions (weight, and appearance) are more likely to be detected by men via face-to-face inspection. Specific male deceptions (preferred relationship and marital status) are more likely to be detected by women earlier in the communication process.

Our analysis revealed a clear dimensionality of communication media which enhanced our insights into the way communication technologies differ: face-to-face, email and telephone did not appear as distinct categories, but rather span a continuous dimension that helps to describe both characteristics of deceptions and characteristics of receivers (male vs. female). Building on the work of Hancock, Woodworth, Goorha (2010) and Carlson, George, Burgoon, Adkins, and White (2004), we were able to show that the communication medium is strongly associated with the subject matter of deception and gender as a highly relevant attribute in the specific context of online dating. Hence, not the communication medium itself, but rather the interplay of communication context, subject matter of deception, and the affected receiver's characteristics can be conceived of as relevant factors for the detection of a deception.

Further research has to test to what extent other relevant characteristics of the receiver of a deception (age, education, informational and cultural competencies etc.) may affect the detection of specific deceptions. From a sociological point of view this seems to be of particular relevance, as chances and risks of online dating might systematically differ between social classes. Future research has also to assess whether the "detection advance" of women is partially a consequence of advantageous female cultural competencies, or rather an effect of socially selective usage of dating sites: maybe the disproportionately high presence of highly educated women and less educated men in online dating sites creates a spurious association of gender and detection. A general future research perspective is to analyze these relations in other fields, for example online auctions or social web media.

Our results may also have implications for previous findings on the gender difference in the propensity to deceive in online dating. Several studies (e.g. Zimbler and Feldman 2011; Whittey 2002) showed that men are more likely to deceive in online dating than women. Further research

has to show whether these findings are partially a result of gender-specific detection opportunities and competencies. However, our results relativize the belief that women take particularly high risks in e-dating, as they can actually detect specific male deceptions relatively early in the online mating process by using communication media, whereas men will often have to personally meet their potential partners to be sure that they are interacting with a woman of the desired observable characteristics.

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