



## Gender differences in impression formation

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### Abstract

*This paper aims to highlight the differences between men and women regarding impression formation. It is based on secondary analysis of the data gathered in two previous experiments with similar conditions. However, the hypotheses formulated within this study have not been tested before. The current analysis was conducted on 86 participants, 47 males and 39 females. Their ages ranged between 15 and 32, as they were either high school or university students engaged in a master's program. Their task consisted of watching a 14 seconds long video of a female confederate reading a neutral text and then evaluating her using a semantic differential with four dimensions: sociability, ethics, power and activity. Based on previous studies, it was hypothesized that men and women will form different first impressions of the actor employed in the movie. More precisely, the majority of the studies undertaken in this area compare men and women's accuracy scores of facial expressions decoding, yielding mostly significant differences, with women achieving higher accuracy. A small percentage has addressed other aspects of social perception like: personality traits or socio-demographic characteristics, yielding similar results. However, the current experiment failed to reveal any differences between men's and women's evaluations. Accuracy assessments were disregarded in this study, since establishing unequivocal criteria for personality traits evaluation is yet to be achieved. The results are consistent with a small percentage of the studies conducted on gender differences in social perception and allow multiple interpretations.*

### Keywords

*Gender differences, impression formation, social perception, nonverbal behavior, semantic differential*

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## Introduction

It is a common sociological practice to resort to gender differences when trying to explain social phenomena. Whether it is religiosity, cultural consumption or political opinions and preferences, social scientists draw on innate or acquired differences between men and women's actions or cognitions, revealing dissimilar or even opposed patterns of behavior in regard to the concepts under investigation. Therefore, even if the assertion that men are from Mars and women are from Venus is rather farfetched, not admitting that gender differences exist and that they account for at least a small part of the individual behavior variance would be a mistake.

This paper's aim is to investigate such variations in the process of impression formation. Until now, many studies have addressed this issue, most of them yielding similar results, which revealed significant differences between the two sexes. However, there are a few papers which contradict these findings, consequently rendering this topic to uncertainty and speculations. Moreover, it must be mentioned that the largest part of the studies in this area addressed the issue of gender differences in impression accuracy. However, the accuracy of person perception is currently a debatable subject, research on this topic having afforded sometimes convergent and other times divergent results, none of which having been explained by existing theories. Therefore, comparing men and women's accuracy might not be the best method for pointing out gender differences in impression formation.

Firstly, the terms which will be further used throughout this paper will be defined and explained. Regarding the sex – gender controversy, I agree with the authors of the anthology *Sex Differences. Summarizing more than a Century of Scientific Research* (Ellis et. al., 2008) who point out that, in order to establish whether a characteristic appertains the sex or the gender trait, it is necessary to establish if it is an inborn or an acquired attribute. Therefore, since it is rather difficult to ascertain this last distinction, using the terms as synonyms seems like an acceptable practice. Moreover, as recent studies have shown, many if not all behavioral differences between men and women, might be caused by biological as well as social factors (*ibidem*).

Social perception accuracy could be generally defined as the correspondence between observers' assessments of a characteristic of the target person and an external criterion measuring the same concept. Self-ratings, evaluations of family or friends or judgments provided by experts are usually employed. However, some attributes, such as sex, age, ethnicity or profession can be objectively appraised.

According to Zebrowitz (1995/1999, 309-310) impression formation represents 'the process of forming descriptive and evaluative judgments about a target person', while an impression is defined by Hamilton, Katz and Leirer (1980, 1050-1051) as 'a perceiver's cognitive representation of another person'.

### **Gender differences in empathic accuracy**

As mentioned before, most studies regarding gender differences in social perception addressed the subject from the viewpoint of male and female empathic accuracy, the majority of them focusing on facial expressions of emotions.

In their study Kirouac and Dore (1985) focused on the issue of emotion recognition accuracy as a function of gender and education. They employed high school, college and university students which were shown pictures of the six fundamental emotions. The statistical analysis of the results indicated a significant difference between men and women in regard to decoding facial expressions of emotions. Nevertheless, further analysis showed that gender accounted for only 2.83% of the data variance, whereas a factor based on the depicted emotion explained 62.44% of the total variance.

A study conducted by Hall and Matsumoto (2004) employed seven point scales for recording the participants' answers. The stimuli consisted of facial expressions of emotions shown for a very short period of time (10 s or 20 s). The results indicated that women were more accurate than men in indentifying the depicted emotions. Using a multiple-point scale, the authors were able to spot other differences between male and female subjects. It seems that women's answers had a wider range of variance than men's. Similar results were obtained by Katsikitis, Pilowsky and Innes (1997). The researchers' explanations drew upon the mechanisms of nonverbal communication decoding, suggesting that, whereas men use a prototypical image in order to identify emotions, women pay attention to different cues, analyzing them one by one. A second explanation puts forward the fact that female participants might have been more confident in their evaluations, thus venturing in selecting the scale's extreme values as well as the middle ones.

Thayer and Johnsen (2000) investigated perception accuracy using photographs selected from Ekman and Friesen's standardized facial expression set. Instead of asking the participants to name the depicted emotion, they inquired about the subjects' own affective state, knowing that emotions are highly contagious. The results showed that their assumptions were correct, participants being influenced by the facial expressions shown in the pictures. Moreover, men as well as women were above chance accurate in recognizing the depicted emotions. However, while female participants had no problems with distinguishing all facial expressions, males experienced difficulties with photographs depicting anger and fear.

Similarly, Montagne et. al. (2005, 136) asked if 'men really lack emotional sensitivity?'. Their study employed two measures of facial expression decoding: accuracy and sensitivity. Their stimuli consisted of neutral faces which gradually morphed towards expressing an emotion. Thus, they could record the participants' accuracy, as well as their sensitivity (how soon they were able to correctly recognize the depicted emotion). The results yielded significant differences between female and male subjects' accuracy as well as sensitivity, with women obtaining higher scores. This study offers valuable insight into the processes underlying the decoding of facial expressions, suggesting that there may be quantitative, rather than qualitative differences between men and women.

Klein and Hodges (2001) offer an interesting interpretation of gender differences in empathic accuracy. Their experiments revealed that, manipulating the subjects' motivation influenced their ability to accurately assess the target person. Women performed better than men only when they thought that the task demanded interpersonal involvement. When financial stimulation was included, the differences in accuracy disappeared.

### **Gender differences in personality traits assessments**

Few studies concerning gender differences in social perception accuracy focused on the assessment of personality traits, most of them employing the Big Five structure. Their results are somewhat divergent, but there are also studies which yielded similar conclusions.

Marcus and Lehman (2002) addressed the subject of gender differences in first impression formation. Their results showed no significant discrepancy between men and women's rating consistencies. Nonetheless, it was noted that female participants evaluated the actors as significantly more sociable and cheerful. This outcome is contradicted by a study conducted by Johnson, Nagasawa and Peters (1977) who concluded that the male and female subjects employed in their experiment yielded similar evaluations of the target persons' sociability. These divergent outcomes could be explained by the fact that the mentioned studies show minor methodological differences, using different stimuli and instruments.

Carney, Colvin and Hall (2007) conducted a similar study, employing the Big Five personality questionnaire in assessing first impression accuracy. They concluded that women were significantly more accurate than men in regard to openness, intelligence and negative affect, whereas what neuroticism, extraversion and positive affect was concerned, their evaluations didn't differ from those of male subjects. In contrast, Lippa and Dietz (2000) observed that men and women employed in a similar task – the evaluation of a target person using the Big Five structure – rendered similar assessments. The only discrepancy observed, involved the evaluation of neuroticism, where female subjects were more accurate than males. Furthermore, Ambady, Hallahan and Rosenthal (1995) examined the role of gender, among other aspects, in social perception accuracy. The results suggested that women were more accurate in the evaluation of extraversion and positive affect. Other variables bore an influence on perception fidelity, as well. It was observed that shy and inexpressive women, as well as not shy men were better at judging extraversion. Sociable and self-monitoring women were more accurate in evaluating emotional stability. Furthermore, sociable men were significantly better judges of a persons' conscientiousness than were sociable women. Concluding, although female subjects had, overall, a higher fidelity rate, participants who were more accurate, either male or female, exhibited similar personality traits.

Other studies also revealed the influence of different personality characteristics on social perception accuracy. Lippa and Dietz (2000) concluded that the intelligence and openness of the observer correlated with higher accuracy scores. Moreover, Hall and

Halberstadt (1981) investigated the impact of masculinity/femininity, androgyny (masculinity plus femininity) and sex typing (masculinity minus femininity) on the fidelity on impression formation. It was hypothesized that subjects with higher femininity scores would be better judges. However the results showed no significant differences between participants with high/low scores, although males with high masculinity scores tended to be slightly more accurate. Moreover, men with high androgyny and women with high sex-typing scores proved to be better judges of video stimuli. Furthermore, partialling out masculinity/femininity bore no result on accuracy scores of men and women, suggesting that these characteristics are not the ones behind sex differences in person perception.

In a study conducted by Vogt and Colvin (2003) subjects were asked to rate the personality of a target person shown in a 12 min video. Their evaluations were compared with evaluations from self, family and friends of the confederate, thus obtaining accuracy scores. Subjects also filled in a personality questionnaire which, among others assessed their communion, which was defined as 'the need to become one with the group of others' (Bakan *apud* Vogt and Colvin, 2003, 269). As expected, women showed higher communion scores, as well as significantly higher accuracy ratings. However, when partialling out gender, differences in accuracy scores due to communion still remained significant.

Sex differences in impression formation fidelity are sometimes influenced by stimuli employed in the study. Murphy, Hall and Colvin (2003) noticed that female participants were better judges only when the target person was presented by means of a video sequence with sound. Conversely, silent movies or transcripts did not yield significant differences among sexes. Moreover, the meta-analysis conducted by Hall (1978) based on 75 studies on the topic of nonverbal decoding skills rendered similar results. However, only papers concerning emotions and states and not personality traits assessments were included. Differences in accuracy between men and women were more likely to occur when experiments employed stimuli with video and audio information. Nonetheless, the author draws attention to the fact that studies yielding sex dissimilarities were more likely to be published than the ones which failed to establish them. Additionally, since gender cannot be experimentally manipulated, it is possible that other variables which covariate with sex underlie differences in accuracy, thus yielding a spurious correlation. The earlier mentioned study conducted Vogt and Covin (2003) identified communion as playing an important role in social perception fidelity, notwithstanding gender.

An alternative explanation for differences in social perception accuracy is offered by Hoffman (1977). His meta-analysis on studies involving children revealed that girls, as compared to boys, are more inclined towards prosocial behavior, which includes, among others, empathy and interpersonal sensitivity. Therefore, it is in their nature to put themselves in somebody else's place, thus being able to imagine what they feel or think. Nevertheless, the meta-analysis conducted by Eisenberg and Lennon (1983) revealed that gender differences in empathy occur more often in studies which employ self-ratings or ratings by others and less when physiological measurements are undertaken. Furthermore, Garner and Estep (2002) drew attention to the fact that other variables like social context and age must be taken into consideration. Moreover, in real life situations

people might often wish to hide their feelings, employing a large variety of strategies, which render new obstacles for emotional expressions decoding.

McClure's (2000) meta-analysis of studies regarding facial expression processing aimed to reveal the causes underlying females' higher accuracy rates. Hence, the author revised experiments which employed infants, children and adolescents as subjects. The two main theoretical frameworks explaining gender differences discussed in the article were: the neurobehavioral and the social constructivist model. According to the first, girls might perform better on facial expression processing tasks only if their neurological structures underlying facial recognition (the amygdala and the temporal cortex) undergo an early maturation process. By contrast, the social constructivist approach suggests that sex differences occur due to dissimilarities in emotion socialization. Gender stereotypes play an important role in shaping decoding abilities, yielding different expectations for men and women. Considering the studies undertaken on this topic, an integrated model might be appropriate for explaining most of their results. It was observed that sex differences were more likely to occur at an early age, thus sustaining the neurobehavioral approach. However, since they remain constant over time, and do not decrease with age, the assumptions of the social constructivism cannot be ruled out.

McAninch et. al. (1999) looked at children impression formation process manipulating their expectations towards the target's behavior. They were told that the actor would either be shy or outgoing. Then, the children watched a tape of the confederate (boy or girl) confirming or disconfirming their expectations. Finally they were asked to rate the actor on several dimensions and to express their liking towards him or her. The results showed that girls noticed more shy items when judging girls and overall more neutral information than boys. Impression formation was influenced by the targets' observed behavior, whereas liking ratings were based on expectancies generated by initial information. The authors' explanations drew upon differences in sex schemes which yield both observer and target impression formation effects. Therefore, processes underlying social perception are to be influenced by own-sex schemes, which consist of behavior prescriptions for the observers, as well as by superordinate schemes, which contain information about what activities and characteristics are gender specific and thus to be expected from the target person (Martin and Dinella, 2002).

In conclusion, the revised literature on gender differences in impression formation suggests that women, more often than men, turn out to be better judges, yielding more accurate assessments of targets' internal states or personality traits. However, their results were not always convergent, permitting alternative, if not contradicting explanations. Moreover, the nature versus nurture controversy is still far from being settled, thus rendering more possibilities for accounting for gender differences in social perception.

The current study intends to reveal discrepancies in the first impression men and women form of a confederate videotaped while reading a neutral text. It is hypothesized that male and female subject will form different impressions of the target person, underestimating or overestimating their sociability, morality, power and activity.

## Method

### Participants

Participants were 86 students, 47 males and 39 females, with ages ranging from 15 to 32, forming two groups: high school students, with ages between 15 and 19, and university students, with ages between 21 and 32. The 49 adolescents were recruited from the Theodor Pietraru high school in Brănești and attended the experiment during school time. The 37 graduate students were enrolled in a master's program within the Faculty of Sociology and Social Work of the Bucharest University. They took part in the experiment during the first ten minutes of a course they were attending (Table 1).

Table 1 Sample structure

	Male	Female
High school	43	6
University	4	33

### Instruments

The experiment involved the use of electronic devices for audio-video recording and playback. The participants' evaluations of the target person were recorded using a semantic differential, which was adapted and pretested for measuring impression formation.

The 13 seconds long video employed in this study, showed a young female reading a neutral text. Similar studies (Warner and Sugarman, 1986) have successfully used this technique, selecting materials on scientific or artistic topics, in order to not reveal anything about the actor's personality through their content. For this purpose, two paragraphs stemming from an article from the 8<sup>th</sup> issue of the Romanian magazine *Descoperă* (2008) were randomly selected and read out loud by the confederate while being filmed (Appendix 1). In the end, only 14 seconds, containing one sentence from the middle of the passage, were chosen to be shown to the participants.

Since this study employs data from two previous experiments, few details regarding instruments and procedure will be slightly different. However, it is supposed that these small discrepancies will not interfere with the impression formation measurements. The subjects watched the short movie either on a TV set connected to a DVD-player or on a Smartboard connected to a laptop. Furthermore, a small number of participants viewed the video sequence projected on a wall, which implied the use of a projector, connected to a laptop.

In choosing a video instead of pictures or audio recordings as stimuli, I sought to increase the ecological validity of the experiment, knowing it will also bring about a loss in variables control. Nevertheless, in accordance with the ecological perspective on social perception (McArthur and Baron, 1981) video sequences constitute better stimuli for impression formation tasks, while static images or sounds are considered artificial, lacking the necessary genuineness.

A semantic differential was employed in the measurement of the dependent variable. It was adapted and pretested for impression formation assessment, thus acquiring a few special features. It is based on Osgood's (1969) semantic differential, which consists of three dimensions: evaluation, power and activity. The author credits the instruments with the ability to capture the affective meaning of the evaluated concepts, which is supposed to stem from the reptilian brain, the oldest part of our brains, common to both men and animals. Although this explanation sounds appealing it was never scientifically confirmed.

The development of the semantic differential started with consulting studies which employed similar instruments, which could be used or adapted for this experiment. However, most of the research done on this subject employed personality questionnaires, which focused only on certain aspects of impression formation, while neglecting others ((Penton-Voak, Pound, Littke and Perrett, 2006; Johnson, Nagasawa and Peters, 1977; Conner, Kathleen and Nagasawa, 1975). Therefore, I turned to studies on different topics, using a semantic differential (Osgood 1969; Hartley, 1968; Hay 1970, Osgood, 1971; Bush, 1973; Fagot, Leinbach, Hort and Strayer, 1997) and selected those adjectives which could be employed in an impression formation task and grouped them according to the dimension they belonged to, obtaining 33 items for evaluation, 15 for power and 12 for activity. In the end, I created a semantic differential by randomizing the order and polarity of the adjectives.

The validity and fidelity of the instrument was tested prior to the experiment on 141 students of the Faculty of Sociology and Social Work. They were shown a short movie, similar to the one employed in this study and then were asked to evaluate the person they had just seen in the video. The statistical analysis of the results yielded a four factors structure, formed of 23 out of the 60 initial items (Table 2). The dimensions were labeled: sociability, morality, power and activity. The validity of this outcome stems from the high internal consistency of the four scales (above 0.775), as well as from the ecological approach to person perception (McArthur and Baron, 1983). This theoretical framework suggests that the characteristics of a target person perceived by an observer yield certain affordances meaning that they are relevant for their interaction. The four dimensions seem to respect this criterion, since they reveal essential information about the observed person. Moreover, the newly emerged scales, sociability and morality, couldn't have been encountered in Osgood's initial structure, since it was designed for non-living objects and concepts.



Table 2 The structure of the semantic differential

<b>Sociability</b>	<b>Ethics</b>	<b>Power</b>	<b>Activity</b>
cold – warm	fair – unfair	obedient – independent	passive – active
friendly – unfriendly	sincere – insincere	cowardly – courageous	apathetic – energetic
pleasant – unpleasant	honest – dishonest	weak – powerful	static - dynamic
close – distant	correct – incorrect	bold – shy	slow – fast
optimistic – pessimistic		determined – undetermined	slow – quick
funny – serious			
interesting – not interesting			
likeable – not likeable			
happy - unhappy			

Unlike the semantic differentials' initial form, which employed a seven point scale assessment, the instrument used in this study consists of nine point scale evaluations. The following arguments are supporting this choice: Whereas, until now, the semantic differential was employed in the measurement of objects, abstract concepts or people, in this study, the stimulus consists of a real person, presented to the participants by means of a short movie. Since this task has an elevated level of difficulty, it was thought that a nine point scale would be more adequate, offering a wider range of choices. Moreover, since this experiment has an exploratory goal, it was considered better for the subjects to have more freedom in forming an impression. In addition to that, when choosing a nine point scale, I considered the nature of the dependent variable. The first impression is both subjective and semi-conscious, which makes it difficult to evaluate. Therefore, it wouldn't have been helpful to force the observers into selecting certain answer, which didn't entirely correspond with their opinion.

### **Design**

This study aimed to reveal the effect of gender, the independent variable, on the first impression, the dependent variable. However, since it is a secondary analysis, other variables had to be taken into consideration. Therefore, the effect of age and education were also taken into account when conducting the statistical analysis. Moreover, it must be mentioned that data collection took place in two sessions yielding a few differences between the two groups, which will be described in the next section. Nonetheless, it is expected that this minor discrepancies will not significantly influence the outcome of the experiment.

In order to forestall the subjects' suppositions about the purpose of the study, a false report technique was employed. Thus, participants were either told they were attending an experiment on nonverbal communication or an experiment which aimed to reveal the influence of information presentation on impression formation. Moreover, in order to prevent a list effect in the semantic differential, two parallel versions of the instrument were used in recording the subjects' answers.

### **Procedure**

Data collection sessions were conducted on the 18<sup>th</sup>, 20<sup>th</sup> of November and the 4<sup>th</sup> of December 2008, for the high school group and on the 20<sup>th</sup> of November and the 4<sup>th</sup> of December 2009 for the university students.

In the high school session, participants were informed by the vice-principal that they will be asked to take part in a short experiment, which will take place in the psychology lab. This location was chosen due to its technological facilities (TV set and DVD-player) and also because of its limited seats. Only six students could participate in the experiment at a time, which permitted a better control of their behavior.

In the beginning, the experimenter presented himself and mentioned the subject of the investigation. He particularly informed the subjects that their answers were not going to be evaluated in terms of right or wrong. Furthermore, since every individual is unique, their personal opinion would be very important and it was therefore not recommended that they copied their neighbors' responses. After these instructions the participants watched the video sequence for the first time and then were told how to fill in the semantic differential. Then, they were shown the movie one more time before evaluating the actor. After everybody had finished, the subjects were encouraged to ask questions and they were thanked for their participation.

In the university session, the experiment was conducted either in a large classroom with above 100 seats or in a small classroom with about 30 seats. The participants were informed by their professor that they will be attending an experiment in the first part of the course. Further, the procedure copied the one used in the high school session, including instructions, instruments and debriefing sessions.

### **Results**

#### ***Semantic differential***

Before testing the hypotheses, it is useful to take a look at the semantic differentials' fidelity and validity. Initially, it consisted of 23 adjectives grouped in four dimensions. Nevertheless, the factor analysis – using Principal axis factoring extraction and Varimax rotation – yielded a six factors solution and a KMO of 0.595. By successively eliminating the adjectives: funny – serious, slow – fast, slow – quick, interesting – not interesting, likeable – not likeable and happy – unhappy a four factor solution emerged which explains 59.87% of the data variance and yielding a KMO of 0.745 (Table 3). This structure was also validated by the individual internal consistency of the four scales: 0.648 for sociability, 0.770 for ethics, 0.822 for power and 0.810 for activity.

Table 3 The final structure of the semantic differential

<b>Sociability</b>	<b>Ethics</b>	<b>Power</b>	<b>Activity</b>
cold – warm	fair – unfair	obedient – independent	passive – active
friendly – unfriendly	sincere – insincere	cowardly – courageous	apathetic – energetic
pleasant – unpleasant	honest – dishonest	weak – powerful	static - dynamic
close – distant	correct – incorrect	bold – shy	
optimistic – pessimistic		determined – undetermined	

### Hypotheses

It was hypothesized that men and women will form different impressions of an unknown target person shown in a short movie. These impressions, measured using a semantic differential with four dimensions – sociability, ethics, power and activity – are shown in Table 4. It seems that the power scale recorded the largest discrepancy, women underestimating this characteristic by 1.28 scale points. Next, the activity dimension yielded a difference of 0.96 points, with female subjects underrating the actors' dynamism. Sociability and ethics ranked third and fourth, affording rather similar results, with men slightly underestimating these traits.

Table 4 The mean scores of the four dimensions across gender

	<b>Sociability</b>	<b>Ethics</b>	<b>Power</b>	<b>Activity</b>
Male	4.46	5.59	4.93	4.11
Female	4.61	5.80	3.65	3.15

These results suggest that male and female participants might form different impressions regarding the confederate's power and activity. However, two issues have to be taken into consideration. Firstly, in order to conclude that these results are valid outside the considered sample, the evaluations should be significantly different. Since it is known that semantic differential scores permit metric statistical computations, the appropriate procedure is the independent sample t-test. The use of inferential statistics is justified by the number of subjects in each sample (over 30). The results of the two independent samples t-tests showed that there is a significant difference between the power ( $t = -3.348$ ,  $p = 0.001$ ) and activity ( $t = -2.208$ ,  $p = 0.03$ ) scores of the two groups. Secondly, when interpreting these results the educational level of the subjects has to be taken into consideration. Therefore, a statistical analysis of the differences between high school and university students' evaluations is in order. The results of the independent sample t-tests revealed significant differences between male and female subjects for the power ( $t = 3.541$ ,  $p = 0.001$ ) and activity dimensions ( $t = 2.977$ ,  $p = 0.004$ ).

Thus, both the gender of the observer as well as his educational level exert an influence on the assessment of the power and activity of the confederate. Consequently, a statistical analysis, using both variables, has to be conducted in order to establish which bears an influence on the evaluation of the target person. Moreover, other factors, like the age of the participants need to be taken into consideration.

In addition, it could be argued that, since most of the high school students were males and most of the university students females (Table 1), the influence on impression formation of the two variables cannot be clearly told apart.

Therefore, two linear regressions were conducted, using first the power and second the activity score as dependent variables. The predictors inserted in the analysis were: age, gender and education. The results of the ANOVA test showed a significant improvement in the prediction of both power ( $F=4.042$ ,  $p=0.01$ ) and activity ( $F=2.845$ ,  $p=0.043$ ) scores. The adjusted R square equaled 0.105 for power and 0.68 for activity. However, none of the independent variables turned out to have a significant effect on the assessment of the actor. Education came close to influencing the evaluation of activity (beta= 0.611,  $p=0.056$ ), suggesting that high school students were more likely to overrate the target persons' dynamism, all other factors being held constant. This analysis clearly distinguishes between the effects of gender, age and educational level and points out that neither have an influence on impression formation.

In conclusion, the statistical analysis of the collected data was not able to sustain the study's hypotheses. Possible explanations and future research directions are going to be presented in the next section.

## **Discussion**

The current study did not reveal an effect of the gender of the observer on the impression formed of a target person shown by means of short video sequences. It was hypothesized that evolutions rendered by male and female participants will yield significant differences in the judgment of the confederate's sociability, ethics, power and activity. However, taking age and education into consideration, gender didn't turn out to be a significant factor for predicting the participants' assessments of the actor's personality.

Firstly, it must be mentioned that, since this study is based on a secondary analysis of two different experiments, several procedural discrepancies may have arisen, which could account for the lack of evidence in support of the hypotheses. Although it is true that every aspect of the environment might bear an influence on the studied phenomenon, the minor differences between the two experimental settings cannot be held accountable for the obtained results. It is hardly possible that gender differences in impression formation did exist, but were annulled by the experimental conditions. On the contrary, it is more likely that the differences between the two settings might have augmented results discrepancies.

### ***The influence of age on person perception***

It might be useful, at this point, to take a closer look at the existing literature on the influence of age on sex differences in person perception. McClure's (2000) meta-analysis, which was already mentioned in the first part of this paper, reviews studies on gender differences in facial expression processing in the attempt to validate either the neurobehavioral or the social constructivist model. Looking for evidence in support of these opposing views, McClure describes emerging sex differences throughout infancy, childhood and adolescence. The results, based on effect size analysis, revealed highest scores during infancy. Differences could be observed in children and adolescents as well, with no significant changes. Therefore, it can be assumed that age bears an influence on some aspects of person perception, rendering differences between infancy and the two other periods.

Although useful, McClure's (*ibidem*) study sheds little light on this matter, since it is limited to infants, children and adolescents. Moreover, the paper never intended to address the influence of age on person perception. By contrast, Hall's (1979) meta-analysis focused on studies using a large array of subjects of different ages, with the main purpose of highlighting the influence of gender, among other variables, on nonverbal communication. Based on effects size analysis, she concluded that age bears no influence on decoding nonverbal cues.

Taking into account that the analysis conducted in this paper employed adolescents as well as young adults, the fact that it failed to reveal the influence of age on impression formation, falls in line with both studies mentioned above.

### ***The hypotheses***

Only one of the four characteristic investigated in this study was employed in two other papers concerning gender differences. Marcus and Lehman (2002) and Johnson, Nagasawa and Peters (1977) looked at male and female assessments of sociability, obtaining divergent results. While the first study showed significant differences between men and women in regard to sociability evaluations, the second one failed to reveal such differences. Thus, the results obtained in the current study are consistent with the ones yielded by Johnson, Nagasawa and Peters (1977).

Nevertheless, the lack of dissimilarities in ethics, power and activity assessments need to be accounted for as well. The following explanation, based on the results of similar studies already reviewed in the first part of this article, accounts for the lack of discrepancies among all of the investigated dimensions. Most of them proposed different interpretations of gender differences, or their absence. Table 5 summarizes these explanations. It must be mentioned that these studies look at dissimilarities either in assessment accuracy or just in the evaluation of a target person.

Table 5. Alternative explanations for gender differences

Study	Gender differences	Explanation
Klein and Hodges (2001)	No	Motivation
Hall and Matsumoto (2004)	Yes	Different information processing
Hall and Matsumoto (2004)	Yes	Women are more confident
Montage et. al. (2005)	Yes	Women are more sensitive
Vogt and Colvin	No	Communion
McAnincg et. al. (1999)	Yes	Sex schemes

Since most of the variables underlying the identified explanations were not employed when designing the current study, only their post factum assessment can be undertaken. However, the following assumptions must be interpreted bearing in mind the possibility of a hindsight bias. Since the subjects were not given any incentives or specific information about the impression formation task, it can be assumed that their motivation was to some degree similar. Furthermore, since the false report didn't mention the true purpose of the experiment – impression formation – instead distracted the participants' attention from this task, it can be assumed that their motivation to accurately assess the target person was very low. Therefore, women, even though they might have had an advantage in correctly evaluating the confederate, didn't resort to their abilities when judging the actor shown in the video.

This interpretation of the results needs to be further empirically tested. An experiment assessing subjects' communion and sensitivity, as well as their confidence in their evolutions together with the manipulation of participants' motivation might shed light into this matter establishing once and for all the presence or absence of gender differences in impression formation.

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