

Children's nonverbal emotional expressions when receiving atypical gifts

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Abstract

This study investigated whether the co-presence of a peer influences the nonverbal emotional expressions of children who get an atypical present and if there is a difference in gender. The expressive behaviours were measured on happiness and sincerity. Participants had to analyse homemade videos which were downloaded from YouTube. Two surveys were conducted: to rate the happiness and sincerity of the child and to rate different cues about these variables. The results show that girls are perceived to react more happy when they receive an atypical gift than boys, but boys are perceived as more sincere. Children in the co-presence of a peer are perceived to be happier compared to children who are alone, but their happiness is perceived as less sincere. In addition, an interaction effect was found between these variables for sincerity. Implications and recommendations for future research are given.

Keywords: non-verbal expressions, non-verbal communication, happiness, sincerity, atypical gifts, children

Introduction

Within the field of expressive human behaviours, a broad spectrum of research opportunities are studied. Usually, a division is made between nonverbal and verbal expressions, which are mainly focussed on deceptive elements of communication. The focus of this research paper will be on the expressive behaviours displayed by children when they receive an atypical gift. Previous research on expressive behaviours disclosed by children address several contextual factors, such as the co-presence of peers, age and gender (Hubbard, 2001; Visser, Kraemer & Swerts, 2015; Saarni, 1984). However, nonverbal communication displayed by children and how they learn to use it in a social context, is not often investigated (Shadid, Kraemer & Swerts, 2008). Nonetheless, this type of communication can provide a lot of information about the social development of children and it would be wise to focus more research on this topic.

Two major gaps have been identified in the existing research with regard to children's expressive behaviours. Firstly, a gap that has been identified in the existing research is the combination of the variables gender and co-presence of peers. The current research aims to eliminate this gap. Secondly, the data in the existing research often lacks ecological validity as children are invited to participate in the experiment outside the comfort of their own home (Visser et al., 2015). However, their own home is most likely the place where they will receive presents. Current technologies and the availability of homemade videos on the internet may eliminate such a gap. To establish the ecological validity of the experiment, the data that is being analysed in this research exists out of homemade videos which are downloaded from YouTube. The main expressive behaviours the current research will focus on are happiness and sincerity. The independent variables that will be taken into account are the physical co-presence of a peer and gender. This leads to the following research question: *'How does the co-presence of a peer influence nonverbal emotional expressions from children when being given an atypical present, and is this different for boys and girls?'*

Gender differences in nonverbal communication and lying

Women would experience emotions more intensely than men do, which might be due to the fact that women are more aware of their emotions and are more willing to express their emotions openly in comparison to men (Kashdan, Mishra, Breen & Froh, 2009). The reason for this could be due to the assumption that the emotional expressions of women are more focussed on social norms and maintaining or improving their relationship with others, while men are more focused on power and status and do not want to

lose face by expressing emotions (Kashdan et al., 2009). These contextual factors can affect emotional expressions like happiness and sincerity (Visser, Kraemer & Swerts, 2015).

The study of Saarni (1984) shows that boys are more likely to show negative behavior on receiving an unwanted gift, while girls are more likely to maintain their positive expressive behavior. This is in line with Brebner (2003) who states that girls express more happiness than boys when receiving an atypical gift. In addition, women lie more than men (Marchewka et al., 2012). It is expected that when girls face their parents or peers when receiving an atypical gift, girls will probably not show that they are not happy with the gift in comparison to boys, because they adhere to social norms (Kashdan et al., 2009; Marchewka et al., 2012). This leads to the first hypotheses:

H1a: Girls will be rated as happier when receiving an atypical gift than boys.

H1b: Girls will be rated as more sincere when receiving an atypical gift than boys.

Communication and social setting

A second factor that can influence nonverbal expressions of children is the presence of a peer. Shahid, Kraemer and Swerts (2008) show that there is a strong influence of physical co-presence on the emotional expression of children. The degree to which emotions are expressed depends on the role of an accompanying person (Wagner & Smith, 1991).

When children grow older, people around them create more and more expectations for situationally appropriate emotional behavior (Kieras, Tobin, Graziano & Rothbart, 2005). Children need to deal with rules that refer to the appropriateness of expressive behavior which are called the display rules. Saarni (1984) states that these rules are being developed by children during their childhood and lead to social behavior. Shahid, Kraemer and Swerts (2008) and Wagner and Lee (1999) found that children

who are in company of others tend to be more expressive than children who are alone. Their findings suggest that physical co-presence of a child influences the emotional expressions of children. Wagner and Lee (1999) state that peers ensure that children see a larger range of the context in which they witness emotions. These findings lead to the second hypothesis.

H2a: When receiving an atypical gift, children are perceived as happier in the co-presence of a peer than when they are alone.

H2b: When receiving an atypical gift, children are perceived as more sincere in the co-presence of a peer than when they are alone.

Tyler and Feldman (2004) studied the relation between gender and the frequency of lying in different settings. They found that women were lying more frequently than men. The explanation they give for this, is that women want intimate and supportive relationships with others. As a result, women may focus more on others than men and try to align and adjust their behaviour. Women tend to be more willing to present themselves in a good way (Tyler & Feldman, 2004). In this view, deceptive behaviour is not necessarily bad behaviour, but can also be used to maintain social relationships. This leads to the third hypotheses.

H3a: The effect of co-presence of a peer on happiness ratings will be stronger for girls than for boys.

H3b: The effect of co-presence of a peer on sincerity ratings will be stronger for girls than for boys.

Expression of happiness and sincerity

The intensity of the felt emotion can be derived from facial action, (Ekman, Friesen & Ancoli, 1980). Different types of smiles are associated with happiness or unhappiness. Results indicate that only smiles produced with *zygomatic major* are cues for happiness. A real smile, produced as a sign of happiness is called the *Duchenne smile* (Ekman, Friesen & Davidson, 1990). However,

smiles can also occur in situations with surprise or discomfort. These smiles would not have gathering skin around the eyes. Saarni (1984) used several nonverbal cues that are expressed in negative and positive situations. A broad smile and smiling eye contact would be indicators of positivity. A pursed or straight-lined mouth and frowning with the brows would be expressions of unhappiness. This leads to hypothesis 4a:

H4a: Children who have a broad smile and make smiling eye contact are rated as happier, children who have a pursed/straight-lined mouth or frown with their brows are rated as less happy.

Nonverbal behaviour could reveal information about how a person feels, even when people try to hide those feelings (Ekman & Friesen, 1974). DePaulo, Malone, Lindsay, Muhlenbruck, Charlton and Cooper (2003) found that several nonverbal cues from the face and from the body would be present in deception. In a meta-analysis, they listed several nonverbal cues in deceptive behaviour from earlier research. People who lie express more arousal, fidget more, gaze downward more, are more uncertain and seek less eye contact with their interaction partners than people who tell the truth. To control their behaviour, people who lie also show less spontaneous behaviour and show more body movement (DePaulo et al., 2003; Pareira, Postma, Shahid & Swerts, 2014). This leads to hypothesis H4b:

H4b: Children who are aroused, fidget, gaze downward, show uncertainty and a lot of body movement are rated as more sincere.

Children are also able to use nonverbal cues to cover their lies (Pareira et al., 2014) and girls deceit more often and are better at covering their actual emotions than boys (Tyler & Feldman, 2004; Shahid, Kraemer & Swerts, 2008).

Stimuli collection

Selection criteria and procedure

For the stimuli, sixteen different videos were chosen to use for the experiment. Every condition contained four videos. For the first condition, it was important that the girl was the only one getting a present and that others were not shown in the video. The same criteria was used for condition three whereas the boy was alone in the video without other peers. For condition two and four, peers needed to be included in the video. However, one important note was that only one person in the video got a present (see Appendix 1 for examples).

Because the non-verbal communication of children is examined when getting an unsatisfying gift, only videos with where children were getting an unsatisfied gift were included. Videos with subtitles were excluded from the selection.

Video Editing

The videos were downloaded from YouTube via an online website and edited using Moviemaker. After downloading the video, words that were shown in the corner of the video (e.g. channel name) were covered using a black box. The videos were cut from the part where the child started to open the present until their reaction. The time span differed between the videos according to their time used to open their present and their reaction. The videos were approximately 15 seconds after they were cut. Because only the reaction of the child was important, everything else in the video was deleted to make sure only the dependent variable was examined. Also sound was eliminated from the video. The context of the video was kept in its entirety, so the background was not deleted. This was done because if only the face was shown on the video, it could give a weird view for the participant that would see the video.

Perception test

Participants

A total of 91 participants filled in the questionnaire, which were all valid. The age of the participants ranged from 17 to 58, with an average of 28.43 years ($SD = 11.72$). Of the 91 participants 36,3% were men ($N=33$) and 63,7% were women ($N = 58$). Participants were randomly assigned to one of the two versions of the questionnaire. From the participants, 61,5% ($N = 56$) were assigned to the questionnaire about overall ratings of happiness and sincerity, 38,5% of the participants ($N = 35$) were assigned to the survey about cues of happiness and sincerity.

Materials and procedure

For this study, a between-subject design was used. Using the questionnaire tool Qualtrics (www.qualtrics.com), an online questionnaire was created. An anonymous link to the questionnaire was shared via different channels (e.g. Facebook and WhatsApp). The questionnaire started with a short introduction and some demographic questions. After this, the experimental part of the questionnaire started. It contained sixteen different videos which were shown to every participant. The participant had to answer either 2 (general happiness and sincerity) or 9 (ratings of the cues) questions after every video. All the attitude questions towards happiness, expressiveness and sincerity were measured on a 7 point-scale. A semantic differential was used for the ratings of happiness and sincerity and a Likert scale was used for the rating of the cues.

Results

Experiment 1

Happiness

A repeated measures analysis revealed that there was an effect of gender on the happiness ratings, $F(1,55) = 18.80, p < .001, \eta^2 = .25$. Girls were rated as more happy ($M = 2.42, SD = .06$) (or less unhappy, because scores were all low) than boys

($M = 2.18, SD = .05$). This confirms H1a. There was also a main effect of co-presence, $F(1,55) = 64.83, p < .001, \eta^2 = .54$. When children were together with peers, they were rated as more happy ($M = 2.57, SD = .06$) than when they were alone ($M = 2.03, SD = .06$). This confirms H2a. There was no interaction effect of gender and co-presence, $F(1,55) = 1.90, p = .174$. This rejects H3a. In table 1, the means and standard deviations of the four conditions are presented.

Table 1

Means and standard deviations of perceived happiness per condition

Condition	<i>M</i>	<i>SD</i>
Boy, alone	1.87	0.55
Boy, with peer	2.49	0.50
Girl, alone	2.20	0.52
Girl, with peer	2.65	0.62

Sincerity

Another repeated measures analysis revealed that there was an effect of gender on sincerity ratings, $F(1,55) = 18.82, p < .001, \eta^2 = .26$. Boys ($M = 5.70, SD = .10$) were rated as more sincere than girls ($M = 5.37, SD = .11$). There was also a main effect of co-presence, $F(1,55) = 10.24, p = .002, \eta^2 = .16$. When children were alone ($M = 5.65, SD = .11$), they were rated as more sincere than when they were in the presence of a peer ($M = 5.42, SD = .10$). Furthermore, an interaction effect of gender and co-presence was found for sincerity ratings, $F(1,55) = 16.00, p < .001, \eta^2 = .23$. In table 2, the means and standard deviations of the four conditions are presented.

Table 2

Means and standard deviations of perceived sincerity per condition

Condition	<i>M</i>	<i>SD</i>
Boy, alone	5.70	0.89
Boy, with peer	5.73	0.68
Girl, alone	5.63	0.93
Girl, with peer	5.11	0.94

Besides the hypothesized effects, a strong negative correlation between happiness and sincerity was found $r(56) = -0,459, p < 0,001$.

Experiment 2

In the second experiment, participants rated several cues that were hypothesized to relate to overall scores on happiness and sincerity. The scores on cues were averaged per stimulus, these averages were then correlated with the overall rating of happiness in experiment 1. Table 3 shows the correlations on scores of happiness and the related cues. All four cues turned out to be significantly correlated with overall happiness. The cues broad smile and smiling eye contact were positively correlated, the more a child smiled or showed smiling eye contact, the happier a child was perceived to be. The cues pursed/straight-lined mouth and frowning were negatively correlated. The more a child showed these cues, the less happy a child was perceived to be.

Table 3

Correlations between ratings of happiness cues (exp.2) with overall happiness scores (exp.1)

	Broad smile	Smiling eye contact	Pursed/straight-lined mouth	Frowning with brows
Happiness	.89	.85	-.77	-.96

Note: significant correlations are in **bold**

Table 4 shows the correlations on scores of sincerity and the related cues. Only arousal and body movement turned out to be significantly correlated with overall sincerity. They were both negatively correlated. The more a arousal or body movement a child, the less sincere a child was perceived to be.

Table 4

Correlations between ratings of sincerity cues (exp.2) with overall sincerity scores (exp.1)

	Arousal	Fidgeting	Downward gazing	Uncertainty	Body movement
Sincerity	-.78	.11	-.36	.36	-.62

Note: significant correlations are in **bold**

Discussion

The results of this study show that girls are perceived to react more happy when they receive an atypical gift than boys. The co-presence of a peer also affects the expressed happiness; children who are in the co-presence of a peer express more happiness than children who are alone. These conclusions are in line with hypotheses H1a and H2a. There was no interaction effect found for these two variables, meaning that the effect of co-presence was the same for both boys and girls. This rejects hypothesis H3a.

With regard to the rating of sincerity, boys were perceived as more sincere than girls. This rejects hypothesis H1b, which actually stated that girls would be perceived as more sincere. Children who are in the co-presence of a peer are perceived to be less sincere than when they were alone. This rejects hypothesis H2b. The effect of the co-presence of a peer was stronger for girls than for boys, which is in line with hypothesis H3b, however, this effect was vice versa as expected in hypothesis H2b. In sum, boys are perceived to be sincere, either in co-presence of a peer or alone. For girls, the perceived sincerity is lower in co-presence of a peer than when alone.

When comparing the results per hypothesis (H1a with H1b, etc.), interesting conclusions about the relationship between happiness and sincerity can be drawn. As for H1, girls are perceived as more happy, but the boys are perceived as more sincere. This could mean

that the expressed happiness by girls is insincere, and the participants of this experiment notice this insincerity. Boys express less happiness, which is seen as more sincere. A similar conclusion can be drawn for H2. Children who are in co-presence of a peer are perceived to express more happiness, but are still seen as less sincere, compared to children who are alone. The insincere happiness is noticed by the participants of this experiment. The overall negative correlation that was found for happiness and sincerity makes sense. Since the children in the experiment receive unwanted gifts, it is likely that the happiness they express is insincere.

Not all cues that are found to be related to overall happiness and sincerity appear to play a role in this specific context. As for happiness, a broad smile, smiling eye contact, a pursed straight-lined mouth and frowning all related to the rating of a child's happiness. As for sincerity, only arousal and body movement relate to the ratings of sincerity. A possible explanation for this may be that children develop the use of these cues at a later age than the children in our stimuli.

Since this study had a large focus on ecological validity, some aspects may have affected the results. Future research could validate the findings of this study by taking these aspects into consideration. Firstly, there was no control for the type of gifts the children received. Every child received different gifts and there may have been differences in the extent to which these gifts are seen as unwanted. Secondly, individual differences between children may be large and the current sample size is relatively small for excluding individual differences. Thirdly, there was no control for the children's age. Children may develop new ways of reacting to unwanted gifts as they grow older. Because of the way the data was collected in this experiment, we could not control for age. Furthermore, the ratings for happiness may not have been very suitable for measuring reactions to an unwanted gift. Since it is likely that children are not very happy when

receiving unwanted gifts, a rating of unhappiness would be more appropriate than a rating of happiness.

Conclusion

The results of this study show that girls are perceived to react more happy when they receive an atypical gift than boys, but boys are perceived as more sincere. Compared to children who are alone, children in the co-presence of a peer are perceived to be happier but their happiness is perceived as less sincere. An interaction between these variables exists for sincerity (girls are less sincere in the co-presence of a peer, boys are not), but not for happiness.

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Appendix 1

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Video girl with peer



Video girl alone



Video boy with a peer



Video boy alone