I do! Do I?

A study on the nonverbal cues that tell if a marriage proposal is being declined or accepted

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Abstract

This study examines if nonverbal cues can tell if the answer to a marriage proposal will be 'yes' or 'no'. A questionnaire of 16 clips of marriage proposals was filled out by a sample of 45 participants. The nonverbal cues in the clips were coded by two independent researchers. It was expected that positive reactions (yes) would be recognized more easily than negative reactions (no) and that clips which showed a lot of body and facial movements would be answered more accurately than clips that did not. The results showed that participants indeed recognized positive reactions more easily than negative reactions. The amount of body and facial movements however did not seem to influence the accuracy with which the participants answered the clips.

Keywords: nonverbal communication; marriage proposals; body movements; facial movements; positive facial expressions; negative facial expressions.

Introduction

In the field of communicative sciences, there is a huge interest in people's decoding abilities of nonverbal behavior. Decoding means to interpret the meaning of nonverbal behavior (Knapp & Hall, 2006). People's decoding abilities usually get tested by using images or clips of people showing certain nonverbal cues which respondents have to interpret (see for example Leppänen & Hietanen, 2004). This kind of research often uses clips, which are recorded for the purpose of the research. While the advantage is that these clips can be controlled for certain criteria, these clips often show people in a non-natural environment. This research tests the decoding abilities of respondents when observing clips of specific communicative actions in real life. The specific communicative action central to this research is the marriage proposal.

As a result of the limited availability on nonverbal communication and marriage proposals, it is not possible to base the research question and hypotheses on previous studies on this topic. Therefore, the research question and hypotheses are based upon more general studies on nonverbal communication. The lack in research on nonverbal communication and marriage proposals makes this study an interesting contribution to the field of communicative sciences. This has led to the following research question:

Do respondents recognize nonverbal cues that show if the answer to a marriage proposal will be yes or no and upon which nonverbal cues is this recognition based?

Nonverbal channels of communication can convey all kinds of emotional messages; nonverbal communication includes facial expressions, gestures, gaze, posture, paralanguage and proximal behavior (Ambady & Mandal, 2004). According to Leppänen and Hietanen (2004) positive facial expressions are recognized faster than negative facial expressions. A definite conclusion of why positive facial expressions are recognized faster has not been established yet. In the case of reactions to marriage proposals, it can be expected that a 'yes' response results in a positive facial expressions while a 'no' response results in a negative facial expression. While Leppänen and Hietanen (2004) focus on reaction time and not on correctness, it can be expected that when short clips of marriage proposals are shown, respondents will recognize 'yes' reactions more easily than 'no' reactions. Therefore the first hypothesis is as follows:

H1: Respondents will recognize a 'yes' response to a marriage proposal more easily than a 'no' response to a marriage proposal.

Body language is an important action that can transmit an emotional state. Gunes and Piccardi (2007) state that body movements are more distinguishable than facial movements, combining these movements leads to the best recognition accuracy. Rosenthaler and DePaulo (1979) too state that the body is more likely to 'leak' cues on nonverbal communication. For example, when a person as a reaction steps back without any physical cause this can indicate that the person is either surprised or amazed. Another example of body movement is when the person is leaning forward, which suggests that the person is approaching. When a person has an open arm arrangement this can be associated with emotional warmth and empathy. An open body posture goes along with stretching and directness of movement, which indicates that the person is ready to interact. On the other hand, bowing, moving away and indirect movements can indicate rejection (De Meijer, 1989).

Therefore the second and third hypotheses are as follows:

H2: Respondents will score better for clips that include a lot of body movements than clips that do not include a lot of body movements.

H3: Respondents will score best for clips that show both a lot of body and facial movements.

Hypothesis one will be tested with a survey, hypotheses two and three will be tested by comparing an analysis of the clips used in the survey with the results of the survey.

Stimuli Collection

Selection Criteria and Procedure

The videos that have been used for this research have been collected by making use of the database of videos available on YouTube. After an analysis of what was available in the YouTube database, selection criteria have been set up. There were four selection criteria that all videos needed to uphold:

1) The men needed to ask the women if they wanted to marry them
2) There was only one marriage proposal per clip
3) Only couples with a Western appeal were selected
4) Only clips in which the reactions of the women were clearly visible were selected

Finally, the videos were selected upon whether the women accepted or declined the marriage proposal. In total sixteen videos have been collected that all meet the abovementioned four criteria, the sixteen videos have been divided into eight videos in which the women would decline the marriage proposal and eight videos in which women would accept the marriage proposal. After the selection, the videos were edited into clips.

Video Editing

The selected videos were edited into clips by making use of the video-editing program Pinnacle Studio 15. The editing-process for all clips was identical. Each video was cut on the moment the men in the video started their marriage proposal and was cut off on the moment the women started their verbal response to the marriage proposal. After the videos were cropped, the sound was removed from the clips. This has been done in order to let the respondents focus on the body and facial movement aspects of the nonverbal communication as shown in the clips.

This resulted in sixteen clips of which the duration varied between fourteen and twenty-seven seconds. A deliberate choice has been made to not crop all the clips to the same length, due to the capture of the nonverbal responses of the possible 'brides to be'.

Coding

All clips were observed and coded by two researchers. The coding scheme is based on non-verbal cues that were identified in the literature (Knapp & Hall, 2006; Ekman & Friesen, 1978). The scheme is divided into three different types of non-verbal communication categories:

1) *Facial expressions*
   eyes (cheek raiser, upper lid raiser, brow lowerer, gazing away), mouth (jaw drop, teeth exposed, lip corner depressor, lip corner puller, lip bite)
2) *Posture*
   moving away, moving towards, open body posture, close body posture, frozen body.
3) *Touching behavior*
   hands cover mouth, hands cover entire face, hands cover the chest, hands cover both sides of the face

Of each clip the non-verbal cues were counted and summed up. All clips were analyzed separately and coded in opposite sequences, in order to prevent the loss of focus during the analysis.

Perception Test

Participants

A total of 45 participants completed the online questionnaire. 91,1% (41) participants were female, 8.9% (4) were male. The average age of the group is 22.79 years old, ranging from 16 to 29, with one exception being a 50 year old female. Participants were personally approached online by the researchers. All participants had a Dutch nationality.

Materials and Procedure

The respondents filled in a questionnaire containing nineteen questions. The questionnaire was designed using Thesistools. The first three questions were asked to gather general information about the respondents, being the respondents' age, gender and level of education. For further research, this data could be used as control variables.

Subsequently, the respondents were asked to watch the sixteen clips in which a man proposed to a woman. The clips in which the marriage proposal would be declined were randomly labelled with numbers 101 up to 108. Clips in which the marriage proposal was accepted were randomly labelled with numbers 201 up to 208. Each number was noted on a little piece of paper, which were all folded and placed in a basket and shuffled. One by one, a piece of paper was drawn from the basket. Once a piece of paper was drawn, the numbers 101-108 and 201-208 were relabeled with the numbers 1-16; one being the clip drawn first from the basket, sixteen the final clip drawn from the basket.

The numbers 1-16 equaled the order in which the clips were presented to the respondents. The respondents were asked to watch a clip, and afterwards indicate whether the respondent expects the woman to accept or decline the marriage proposal. This was done for every clip by all the respondents. The clips were shown in the same order to all the respondents, which might have a negative impact on the validity of this research.

Results

The data from the online questionnaire were analyzed with SPSS. First, recoding of the variables was necessary in order to conduct further analysis. "Yes" clips were coded "y1", "y2"… "y8". "No" clips were coded "n1" to "n8". When participants answered

according to the outcome of the clip, a score of "1" was given. If the participants had a wrong expectation of the outcome, a "0" was scored. Proportion correct scores were calculated.

Table 1: Statistics

		yes	No
N	Valid	45	45
	Missing	0	0
Mean		.8861	.5365
Minimum		.63	.14
Maximum		1.00	1.00

A score of 1.00 means that the participant scored 100% correct. Table 1 shows that for "yes" clips, participants on average scored 89% of the clips correct. For the "no" clips, this was 54%.

Then, two t-tests were conducted. The first t-test showed that the percentages of the "yes" and "no" clips differed. The second t-test showed that only the "yes" clips differ from the 50% change level. Table 2 shows the percentage of participants that gave the correct answer per "yes" clip. 91.1% score for clip Y1 means that 91.1% of the participants said that the answer would be "yes", which was correct. Table 3 shows the percentage of participants which scored correct on the "no" clips.

Table 2: percentage correct scores "yes" clips

Clip	Percentage correct
Y1	91,1
Y2	86,7
Y3	93,3
Y4	100
Y5	97,8
Y6	95,6
Y7	80,0
Y8	64,4

Table 3: percentage correct scores "no" clips

Clip	Percentage correct
N1	42.2
N2	77.8
N3	44.4
N4	93.3
N5	42.2
N6	93.3
N7	28.9
N8	6.7

These results show that it was easier for the participants to recognize a 'yes' response to a marriage proposal than a 'no' response to a marriage proposal.

Next to the analysis of the quantitative data, all clips were observed and coded by two independent researchers. One of the clear results derived from this qualitative data, was that women who rejected the marriage proposal had generally a more closed body posture and showed more often a frozen body, compared to women who accepted the marriage proposal. Moreover, women who accepted the marriage proposal raised their cheeks and exposed their teeth more often, compared to women who rejected the marriage proposal. Furthermore, women who rejected the proposal more often moved away from the men who asked them, compared to women who accepted the marriage proposal. Only one woman who accepted the marriage proposal moved towards her boyfriend.

In addition, a comparative analysis was made between the quantitative data and the qualitative data derived from the observations and coding. One of the most striking results was that clips which included a lot of body movements were less easy to predict by participants than clips which included less body movements. Another result which was not expected in first instance, was that the amount of body movements or facial movements that were used in the clips did not influence the scores of the participants, neither in a negative nor in a positive way.

Discussion

The first hypothesis, that respondents will recognize a 'yes' response to a marriage proposal more easily than a 'no' response to a marriage proposal, has been confirmed. Participants scored significantly higher for 'yes' clips than for 'no' clips, they thus recognized the 'yes' response more accurately than they recognized the 'no' response. Hypotheses two and three cannot be confirmed. Against the expectations, participants did not score better for clips that included a lot of body or facial movements.

The results cannot explain why 'yes' is recognized more easily than 'no'. Similar amounts of body and facial movements were present in the 'yes' and 'no' clips, but the amount of body or facial movement did not seem to influence the answers. Possibly there was a positivity bias, with participants expecting a 'yes' response. More research is needed to explore this matter. An experiment in which participants are asked to comment on what they observe when watching the clips might provide more clarity.

Another useful addition for further research could be to ask participants to rate how confident they are of their answer on a Likert-scale. To make sure that the loss of focus does not influence the answers to the last couple of questions, the sequence of the clips should not be the same for all participants. Getting more independent researchers to code the clips will improve the objectivity of the coding.

A problem with using clips that are cut from YouTube movies is that there is a possibility that participants are familiar with these movies and thus already know the response of the woman. Another problem with the clips was that some of the proposal scenes were acted, while this study aimed to use real life, spontaneous scenes. Participants however might not have noticed this.

Conclusion

The results of a questionnaire of 16 clips that was filled out by 45 participants showed that respondents recognize positive reactions to a marriage proposal more easily than negative reactions to a marriage proposal. It seems that participants were able to read positive nonverbal cues more easily than negative nonverbal cues. But neither the amount of body movements nor the amount of facial movements seems to have influenced the accuracy of the responses. The reason as to why positive reactions are recognized more easily than negative reactions does not become clear from the research. More research is needed to examine this difference in recognition.

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