Nonverbal Gestures in Stressful Situations: A Content Analysis of Kiss Cam videos on YouTube

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Abstract

This article focuses on the nonverbal gestures that women display during the stress-related Kiss Cam game. It contains a content analysis of videos on YouTube in which two conditions were compared: the condition in which women produce nonverbal cues before accepting the kiss and cues they express before rejecting the kiss. Based on previous research, the overall hypothesis is that women who reject the invitation to kiss via Kiss Cam will display more nonverbal cues on average than women who accept the invitation to kiss via Kiss Cam. The categories of gestures concerning Affiliation, Displacement and Flight were analysed. Additional hypotheses linked Displacement and Flight to the rejection condition and Affiliation to acceptance condition. For this study 40 Kiss Cam video clips were collected. The results show that women indeed produce more nonverbal cues when rejection a kiss, in particular cues associated with Displacement and Flight. Thus, all hypotheses were confirmed.

Keywords: nonverbal; reject; accept; gesture; kiss; affiliation; displacement; flight.

Introduction

In the presence of others, humans try to regulate their expressions and nonverbal gestures. However, even people with a high degree of self-monitoring may display nonverbal gestures that indicate their frame of mind (Friedman & Miller-Herringer, 1991). In stressful situations, self-monitoring becomes more difficult, and people are more likely to display more nonverbal gestures (Mohiyeddini, Bauer & Semple, 2013; Villada, et al., 2014). Mohiyeddini et al. (2013) found that women that reported high levels of self-consciousness and stress were more likely to display displacement gestures. This same study finds that observers rate women that display more displacement gestures as more nervous. However, research related to this finding has not been conducted outside of a laboratory setting. In more natural conditions, do women spontaneously produce different nonverbal gestures when spontaneously faced with stressful situations? To answer this question, present study will analyse in public recorded Kiss cam videos on YouTube, which will lead to research question:

RQ: What are the nonverbal differences between women who accept the Kiss Cam invitation and women who reject the invitation?

The Kiss Cam

The Kiss Cam tradition was originated in the early 1980s, as a manner to fill in the breaks during baseball games. It continues to be used for the same reason, which is a light-hearted diversion at sporting events, especially popular in the United States. According to 'Your Dictionary' the Kiss Cam operator scans and selects two people in the crowd during timeouts, who will be shown on the big stadium screen, which is visible to all people in the audience. At this particular moment, the operator pressures them to kiss by making an announcement that the Kiss Cam game is on or playing a 'kiss-related' song. The couple is cheered when they kiss and laughed or booed at when they refuse (Kiss Cam, n.d.). Since rejection a kiss on Kiss Cam will cause discontent by the audience and thus more pressure and stress in return, the hypothesis first is:

H_1: Women who reject the invitation to kiss via Kiss Cam will display more nonverbal cues on average than women who accept the invitation to kiss via Kiss Cam.

Nonverbal Categories

Nonverbal cues will be investigated on the basis of three categories: affiliation, displacement and flight. All are derived from the existing Ethological Coding Scheme for Interviews (Troisi, 1999), which is an ethogram that measures nonverbal cues during an interview. In particular, the Ethological Coding Scheme for Interviews is intended for clinical interviews and has seven nonverbal categories in total. Only the three abovementioned categories were used since they corresponded with the rejection and acceptance of kisses.

Affiliation indicates friendliness and agreement, and is emitted through head movements and facial expressions that correspond with a positive vibe with the social environment. The aim is to increase connection, through smiling or touching a partner, for instance. Since affiliation is focused on creating a connection between two people, the second hypothesis is:

H_2: Women who reject the invitation to kiss via Kiss Cam will display less indicators of Affiliation than women who accept the invitation to kiss via Kiss Cam.

Figure 1: Touching partner, smiling ('Affiliation')

Displacement includes behaviour which is more focused on the body itself, namely self-grooming, touching, or scratching. It happens in situations in which social tension and anxiety plays a large role. Since social tension in the case of Kiss Cam only occurs when a woman rejects a kiss, the third hypothesis is stated:

H_3: Women who reject the invitation to kiss via Kiss Cam will display more indicators of Displacement than women who accept the invitation to kiss via Kiss Cam.

Figure 2: Grooming hair ('Displacement')

Lastly, Flight is a form of nonverbal communication in which a person disengages from any interaction. In the animal world, this results in species that running away when danger arises. Since people could not pose similar behaviour, they cut off incoming stimuli they perceive and turn into themselves completely. Examples concern looking away, looking down or closing the eyes. Since a kiss requires approach and acceptance rather than flight behaviour, the fourth hypothesis is:

H_4: Women who reject the invitation to kiss via Kiss Cam will display more indicators of Flight than women who accept the invitation to kiss via Kiss Cam.

Figure 3: Looking down and away ('Flight')

Method

Materials

For this study, 40 Kiss Cam video clips were collected out of randomly selected YouTube compilations. Twenty video clips showed women who rejected the invitation to kiss via Kiss Cam and twenty video clips showed women who accepted the invitation to kiss via Kiss Cam. All videos were collected on YouTube searching for Kiss Cam videos with different search terms (e.g., "Kiss Cam", "Kiss Cam compilation", "Kiss Cam during sports match"). Kiss Cams that were categorized as staged were not included (e.g., kisses from the team mascots and premeditated kisses). Additionally, each video included one man and one woman who were shown on the Kiss Cam, since the expectation is that women are challenged to accept or reject a kiss from men and thus are the ones in a stressful situation. Videos showing aggressive behaviour were excluded because aggressive behaviour would probably have a drastic impact on the production of nonverbal gestures.

Editing

To cut the videos and convert them to MP4, a video edition application of Adobe Premiere Pro, was used. For the acceptance condition, videos were cut to ensure a clip started when a couple noticed their faces on the Kiss Cam and ended with the kiss itself. Because the rejection condition contained no kisses, the clips were cut when another Kiss Cam couple appeared. The zoom and speed of the videos was not altered, although it was possible for coders to slow down the video if necessary. For instance, the video may be slowed to decide whether or not a woman rapidly touched her partner before the kiss.

All video fragments had different durations, as there is no set amount of time for a woman's acceptance or rejection of the kiss. Figure 4 shows two snapshots of the recordings; one snapshot of an acceptation (left) and one snapshot of a rejection (right).

Figure 4: Examples of the two conditions: Accept (left) and Reject (right)

Coding

For coding, all categories and a some of the specific features were derived from the existing Ethological Coding Scheme for Interviews (Troisi, 1999), and some of the features were used from the existing coding scheme by Matsumoto, Keltner, Shiota, O'Sullivan, and Frank (2008). Additionally, some features created by the authors were also included (e.g. touching partner, arms raised) based on repeated behaviours observed during sample collection. In total, the focus was on three categories: affiliation, displacement and flight, as can be seen in Table 1. Only obvious gestures and clearly visible features were used, meaning that videos in which objects or other people blocked the Kiss Cam subjects were excluded. Additionally, features associated with the mouth were not coded because these could be linked to verbal features.

Procedure

A coding scheme (Appendix A) was developed by all four coders and was independently carried out by all. To ensure the inter-reliability was sufficient, two coders coded the first eight features of the 40 video clips and the other two coders

Table 1: Nonverbal categories and features.

Category	Feature
Affiliation	1. Flash
	2. Raise
	3. Touching partner
	4. Head turned toward partner
	5. Clapping hands
	6. Arms raised
Displacement	7. Hands on face
	8. Hands on mouth
	9. Groom
Flight	10. Look away
	11. Shut eyes
	12. Crouch (lean forward)
	13. Lean back
	14. Chin (head down)
	15. Shake head "no"
	16. Show palm(s)
	17. Hand(s) showing "no"

coded features nine through seventeen (see Table 1). All clips were randomly assigned a number. The videos in which women accept the invitation to kiss via Kiss Cam were assigned to the numbers 1 up to and including 20. The videos where women reject the invitation to kiss via Kiss Cam were assigned to the numbers 21 through 40. After coding, the results were compared. At first, there were six instances of disagreement. However, after discussing and analysing these clips together, a 100 percent agreement was realized.

Results

The inter-reliability was sufficient for both groups. After independent coding, there was a 99 percent agreement and after the discussion there was an agreement of 100 percent.

To test whether women who reject the invitation to kiss via Kiss Cam will display more nonverbal cues on average than women who accept the invitation to kiss via Kiss Cam, an independent sample(s) *t*-test was performed. In this sample, women who reject the invitation to kiss via Kiss Cam (M = 0.31, SD = 0.12) demonstrate more nonverbal cues than women who accept the invitation to kiss via Kiss Cam (M = 0.15, SD = 0.06). The Levene's test showed that the variances of the two groups were not homogeneous, $F(1, 38) = 9.74$, p = .003. The difference between women who reject the invitation and women who accept the invitation was significant, $Mdif$ = - 0.16, $t(38) = -5.06$, p = .001, 95% CI [-0.22, -0.10]. Therefore, it can be concluded that this study supports the hypothesis that women who reject the invitation to kiss via Kiss Cam have more nonverbal cues than women who accept the invitation to kiss via Kiss Cam.

To test whether there are differences between the three categories, three additional independent sample(s) *t*-tests were performed. In the category Affiliation, women who reject the invitation to kiss via Kiss Cam (M = 0.25, SD = 0.16) display fewer nonverbal cues than women who accept the invitation to kiss via Kiss Cam (M = 0.36, SD = 0.12). The Levene's test showed that the variances of the two groups were homogeneous, $F(1, 38) = 2.71$, p = .107. The difference between women who reject the invitation and women who accept the invitation was significant for Affiliation, $Mdif$ = - 0.11, $t(38) = 2.41$, p = .020, 95% CI [0.03, 0.19]. Therefore, these results concerning the category Affiliation support the hypothesis.

In the category Displacement, women who reject the invitation to kiss via Kiss Cam (M = 0.33, SD = 0.29) displayed more nonverbal cues than women who accept the invitation to kiss via Kiss Cam (M = 0.05, SD = 0.16). The Levene's test showed that the variances of the two groups were homogeneous, $F(1, 38) = 4.18$, p = .048. The difference between women who reject the invitation and women who accept the invitation was significant for Displacement, $Mdif$ = - 0.28, $t(38) = -3.85$, p = .001, 95% CI [-0.42, -0.14]. Therefore, these results concerning the Displacement category support the hypothesis.

In the last category, Flight, women who reject the invitation to kiss via Kiss Cam (M = 0.37, SD = 0.23) displayed more nonverbal cues than women who accept the invitation to kiss via Kiss Cam (M = 0.02, SD = 0.05). The Levene's test showed that the variances of the two groups were not homogeneous, $F(1, 38) = 41.39$, $p < .001$. The difference between women who reject the invitation and women who accept the invitation was significant for Flight, $Mdif$ = - 0.35, $t(38) = -6.55$, p = .001, 95% CI [-0.45, -0.25]. Therefore, these results concerning the Displacement category, support the hypothesis.

Discussion and Conclusion

This article has reported on the nonverbal gestures in stressful situations, in particular the nonverbal gestures of women in Kiss Cam videos on YouTube. Results demonstrate that women who reject the invitation to kiss via Kiss Cam will display more nonverbal cues on average than women who accept the invitation to kiss via Kiss Cam. This answers our research question and demonstrates that there is a difference between women who accept the Kiss Cam invitation and women that reject the invitation, which now also has been tested outside the laboratory. Moreover, it supports the first hypothesis. The results also show that, on average, the women who reject the Kiss Cam display more nonverbal cues from the Displacement and Flight categories than women who accept the invitation to kiss via Kiss Cam. Additionally, women in who accept the Kiss Cam display more nonverbal cues from the Affiliation category than women that reject the Kiss Cam. These results support the second, third and fourth hypotheses.

These findings also raise intriguing limitations concerning a couple of issues. Since all clips were retrieved from North American sporting events, there are some cultural considerations that could be taken into account. For instance, during Italian sporting events, there may be noticeable

difference in the frequency and expressiveness of nonverbal cues in comparison to American sport events. Additionally, the point in the season and whether the home team is winning or losing could influence the mood of the spectators, which in turn may affect if a kiss will be rejected or accepted.

Another important consideration regards the status of a couple, since there was no affirmation that a couple was in a romantic relationship. For instance, it could be possible that a woman finds herself on the Kiss Cam with her brother, father or just a friend. Furthermore, present study only focused on women's nonverbal behaviour. Therefore, it would be interesting for future research to undertake to investigate the nonverbal cues produced by men during the Kiss Cam game. Moreover, one of the most significant restrictions has to do with the length of the clips. Clips from the rejection condition on average had a longer duration than clips from the acceptance condition, since latter condition stopped when a kiss was initiated, whereas rejection caused no evident ending point. As a result, chances increased to notice more nonverbal cues in the rejection condition.

In conclusion, this study has demonstrated that there is a difference between nonverbal cues that women produce when they reject the Kiss Cam, which evokes a stressful situation, and when they accept the Kiss Cam, which evokes a less stressful situation. Moreover, results showed that when rejecting the kiss, the frequency of nonverbal cues increased in comparison to when a kiss is accepted, especially cues associated with Displacement and Flight. These findings contribute to the field of stress-related nonverbal behaviour as the analysed content was recorded outside the laboratory in a natural setting

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Appendix A

The coding scheme developed for this study can be accessed via:
https://docs.google.com/spreadsheets/d/1ptL1oqXHBISiu4rI-dlIeCKBvtsI216z744P0PZ2qE0/edit?usp=sharing

Appendix B

The edited YouTube videos collected for this study can be accessed via:
https://drive.google.com/drive/folders/0B344QzfE65iFU21LQ1NUbThEZXM?usp=sharing