Smiling without Interaction:

The Role of Nonverbal Behavior in Noninteractive

Consumer Persuasion Settings

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Abstract

Two studies examined the effect of an agent's nonverbal behavior on consumer compliance. Previous research has indicated that the display of nonverbal behavior associated with anticipated success leads to higher compliance rates in interactive persuasion situations. The present work extends these findings by showing that the display of nonverbal behavior associated with anticipated success also leads to higher compliance rates in persuasion situations without interpersonal interaction. Moreover, the present work shows that an agent's smile on itself is not enough to influence consumer compliance. A noninteractive persuasion situation was created by showing participants a video in which a confederate asked for a donation, while displaying precisely defined nonverbal behavior. The perceived agent generosity and credibility did not appear to mediate the effect of nonverbal behavior on consumer compliance. The mediating role of the agent's most salient personal attribute in the given context is discussed.

keywords: nonverbal behavior, consumer compliance, noninteractive persuasion, duchenne smile, anticipated success

To convey our messages, we combine verbal and nonverbal behavior. While we speak, we laugh, we frown, we raise our voice, we gesture, and so on. We display this interaction of verbal and nonverbal behavior in order to emphasize our meanings and to persuade others of our opinions. Nonverbal behavior has been shown to play a significant role in persuasion situations (Fennis, in preparation). Nonverbal cues influence consumer compliance with (both commercial and non-profit) sales-requests in an interactive persuasion situation (Fennis). These findings could have great implications for any persuasion agent trying to persuade consumers, but the implications remain unclear for agents trying to persuade consumers in persuasion situations where this interpersonal interaction is lacking, like TV-commercials. The current research aims to fill this gap by investigating the role of nonverbal behavior in persuasion situations without interaction.

As nonverbal behavior plays a role in persuasion settings, it is interesting which nonverbal cues affect compliance. An important nonverbal cue in any persuasion situation is an agent's smile. A smile gives information about the agent's emotions. Duchenne smiles show positive emotions, while non-Duchenne smiles are shown when people try to mask negative emotions with a happy mask (Ekman & Friesen, 1982). Interestingly, these different smiles have been shown to produce different effects on how the person displaying these smiles is judged by targets (Mehu, Little, & Dunbar, 2007). People showing Duchenne smiles are more positively judged, than when they show non-Duchenne smiles (Frank, Ekman, & Friesen, 1993; LaFrance & Hecht, 1995). Mehu, Little, and Dunbar (2007) had participants look at pictures of faces with different types of smiles. In this face perception experiment an agent's type of smile affected how the agent was judged by targets. These judgments about an agent could work as heuristics to influence consumer compliance. Positive judgments about the agent could heuristically lead to positive judgments about the request and therefore lead to higher consumer compliance.

Fennis (in preparation) shows that the type of smile in combination with several other nonverbal cues indeed influence consumer compliance. Features of the interpersonal interaction give rise to either one of two specific patterns of nonverbal behavior. When a target is sceptical, an agent is likely to exhibit nonverbal behavior associated with anticipated failure, including non-Duchenne smiles, diverting one's gaze of the target, speaking with a low and soft voice, frequent posture shifts, hiding one's face, and self-touching. When a target gives positive feedback, an agent is likely to exhibit nonverbal behavior associated with anticipated success, including Duchenne smiles, fast and loud speech, and use of illustrators (arm gestures). This nonverbal behavior subsequently influences consumer compliance (Fennis, in preparation). Nonverbal cues associated with anticipated success elevate compliance rates, while nonverbal cues associated with anticipated failure reduce compliance rates. In this research the agent's smile was one behavior in a combination of several different nonverbal behaviors. But would an agent's smile alone be sufficient to produce these effects on consumer compliance? Since people usually attend more to facial expression than to body movement (Ekman, Friesen, & O'Sullivan, 1988), it is very well possible that it does not take a whole set of behaviors to influence a target and that the agent's smile alone will make a consumer more or less likely to comply. Furthermore, using a combination of all these different nonverbal behaviors makes it hard to tell what exactly causes the effect. Therefore, in study 1, only the agent's smile will be manipulated.

This smile, in combination with other nonverbal behavior, has already been shown to have an effect on consumer compliance in interactive persuasion situations. But what about all those TV-commercials where there is no interaction between the agent and the target? In the face perception experiment of Mehu, Little, and Dunbar (2007), participants only saw a picture of an agent. In this situation without any interaction, the agent's type of smile influenced how the agent was being judged by a target. Pictures of agents with a Duchenne

smile resulted in more positive judgments than pictures of agents with a non-Duchenne smile. These positive judgments about the agent are expected to lead to positive judgments about the request. Therefore it is hypothesized that, in a persuasion situation without interaction, an agent's type of smile will affect consumer compliance, such that a Duchenne smile will result in higher compliance rates than a non-Duchenne smile.

But why would an agent's type of smile affect compliance? Are there any mediating factors that could explain this effect? The earlier mentioned studies of Fennis (in preparation) and Mehu, Little, and Dunbar (2007) propose two different mediators. According to Fennis, perceptions of agent credibility play a mediating role in the effect of nonverbal behavior on consumer compliance. Nonverbal behavior associated with anticipated failure, like a non-Duchenne smile, makes an agent look less credible, while nonverbal behavior associated with anticipated success, like a Duchenne smile, positively influences the perceived agent credibility. This perceived agent credibility subsequently influences whether a target will comply. Nonetheless, perceptions of agent credibility were not affected by the agent's type of smile in the face perception experiment of Mehu, Little, and Dunbar (2007). They suggest that the absence of effect of the type of smile on ratings of credibility might be due to the context in which the rating is made. As mentioned before, in the study of Mehu, Little, and Dunbar (2007) there was no interpersonal interaction. Perhaps perceptions of agent credibility do not play a role in persuasion situations without interaction.

The effect of type of smile on compliance in persuasion situations without interaction could however be mediated by another consumer perception. In a situation without interaction, an agent's type of smile affects perceptions of agent generosity (Mehu, Little, & Dunbar, 2007). From an evolutionary point of view, one could reason judgments of generosity to play a significant role due to social manipulation (Mehu, Grammer, & Dunbar, 2007). Socially skilled individuals smiling purposefully to claim specific positive traits could

manipulate other individuals, making them vulnerable to exploitation. Being able to discriminate between Duchenne and non-Duchenne smiles and thereby being able to discriminate between truly generous individuals and free-riders, would be adaptive because it would help avoid interactions with free-riders before exploitation could occur (Brown & Moore, 2000). Therefore an agent's type of smile is expected to influence perceptions of generosity and these perceptions of generosity are expected to influence consumer compliance. But how would consumer compliance be influenced by perceptions of generosity? With a commercial sales request, one could expect perceptions of generosity to have an effect on how the agent's offer is viewed. A generous sales agent might be expected to offer a better deal. With a non-profit donation request, one could expect social proof to play a role, in a way that watching someone else being generous, will make you behave generously as well. Perceptions of agent generosity should therefore have an effect on how generous the target will be, affecting compliance with the donation request. In persuasion situations without interaction, consumer perceptions of agent generosity are hypothesized to mediate the effect of an agent's type of smile on compliance.

To sum up, the current research aims to investigate the role of nonverbal behavior in persuasion situations without interaction. In study 1, specifically the role of an agent's type of smile is investigated. A Duchenne smile is hypothesized to lead to higher compliance rates compared to a non-Duchenne smile. In study 2 the role of a combination of nonverbal behaviors, associated with either anticipated success or anticipated failure, is investigated. Nonverbal behavior associated with anticipated success is hypothesized to lead to higher compliance rates compared to nonverbal behavior associated with failure. Furthermore, in both studies, the mediating role of perceptions of agent credibility and generosity is investigated, expecting perceptions of generosity to mediate the effect of an agent's type of smile or type of nonverbal behavior on consumer compliance. The experiment consists of

participants watching a video message in which an agent requests a donation, while showing a Duchenne smile, a non-Duchenne smile or no smile at all in study 1, and showing nonverbal behavior associated with success or failure or neutral nonverbal behavior in study 2.

Study 1

Method

Participants and design

Eighty-three students (43 men, 40 women; M_{age} = 21 years, SD = 3) of Utrecht University participated in the study for € 6,-. Due to problems with a headphone, two participants, one man and one woman, were removed from the dataset. Therefore the dataset consists of 81 participants. Participants were randomly assigned to one of three smile conditions: Duchenne smile vs. non-Duchenne smile vs. no smile. Therefore the design consisted of a unifactorial multilevel between-subjects design.

Materials

Video message. Three video messages were recorded in which a male confederate was acting as fundraiser for a relatively unknown, but existing charity, termed "Sviatoslav". This foundation aims to help children and adolescents (financially and otherwise) in former Soviet and East European states. Fennis (in preparation) used the same charity and he also used the "Continuing Questions Procedure" (CQP; Burger, 1999; Fennis, Das, & Pruyn, 2004), which is employed in the current video messages. This persuasion strategy enlarges the effect of nonverbal behavior on consumer compliance (Fennis, in preparation). Fennis' CQP-script was used in which a general introduction was followed by three initial questions: "May I elaborate on the mission of the Sviatoslav Foundation?", "Do you worry regularly about poverty in the world?" and "What do you think about the idea that young people in Holland would help young people abroad who live in poverty?" After these initial questions, the confederate asked participants to donate money to the charity.

Type of smile. During his message the confederate displayed a Duchenne smile, a non-Duchenne smile or no smile at all. Other nonverbal behaviors related to anticipated failure or anticipated success were hardly ever shown and did not differ between conditions according to independent judges, $F < 1$, *ns*. During a pilot study, for all three video messages, the agent's nonverbal behavior was independently rated by 6 judges (blind to experimental hypotheses). Interjudge reliability was satisfactory (Cronbach's $\alpha = .83$). According to the judges, the type of smile differed significantly between conditions, $F(10, 22) = 17.81$, $p < .01$, $\eta_p^2 = .89$. As expected, in the no smile condition significantly less smiles ($M = 0.67$, $SD = 0.52$) and 'smiles of the mouth' ($M = 0.17$, $SD = 0.41$) were reported compared to the duchenne condition ($M = 2.17$, $SD = 0.75$ respectively $M = 2.00$, $SD = 1.10$), $p < .01$ respectively $p < .01$, and compared to the nonduchenne condition ($M = 2.17$, $SD = 0.75$ respectively $M = 1.67$, $SD = 1.37$), $p < .01$ respectively $p = .02$. The duchenne and nonduchenne conditions did not differ on these aspects, $p = 1.00$ respectively $p = .59$. Furthermore, in the duchenne condition significantly more 'smiles of the eyes' ($M = 1.67$, $SD = 0.52$) and sincere smiles ($M = 1.33$, $SD = 1.21$) were reported compared to the nonduchenne condition ($M = 0.00$, $SD = 0.00$ respectively $M = 0.00$, $SD = 0.00$), $p < .01$ respectively $p < .01$, and the no smile condition ($M = 0.00$, $SD = 0.00$ respectively $M = 0.33$, $SD = 0.52$), $p < .01$ respectively $p = .04$. The nonduchenne and no smile conditions did not differ on these aspects, $p = 1.00$ respectively $p = .46$. These results are summarized in Table 1.

Procedure

Upon arrival at the laboratory, participants were seated in individual cubicles containing a desktop computer, which presented all materials and instructions. The experimenter paid the participants at the beginning of the experiment with several coins of 1 and 2 euro, making sure later donations could vary between participants. The experimenter then left the room, telling participants to follow the instructions from the computer.

Table 1

Mean and standard deviation of (elements of) the smile within different conditions.

	Duchenne (D)	Nonduchenne (ND)	No smile (NS)
	M (SD)	*M (SD)*	*M (SD)*
Smiles	2.17_a (0.75)	2.17_a (0.75)	0.67_b (0.52)
Smiles of the mouth	2.00_a (1.10)	1.67_a (1.37)	0.17_b (0.41)
Smiles of the eyes	1.67_a (0.52)	0.00_b (0.00)	0.00_b (0.00)
Sincere smiles	1.33_a (1.21)	0.00_b (0.00)	0.33_b (0.52)

Within each row, means with different subscripts differ significantly ($p < .05$) from each other.

Participants were told they were first going to watch a video and then would have to fill in a questionnaire about the video. After the video message, participants were informed that the experimenter had used this video for scientific goals, but that it is was actually possible to donate money anonymously by putting a donation in an envelop and to put this envelop in a closed box. The amount of money donated to the charity served as a measure of compliance. The donations appeared to be positively skewed. Therefore a reciprocal transformation was performed on donation, as is described by Field (2005). After this transformation there were four outliers, which therefore were removed from the data, leaving 77 participants for further analyses. The instructions on the screen told participants to continue when they had made their donation.

Subsequently participants were asked to fill in a questionnaire about the video message they had just watched. Participants were asked to judge the sincerity of the agent's smile on a 5-point Likert scale. Furthermore perception of agent's credibility was assessed with the same measure Fennis adapted from Eisend (2006). This measure consists of 14 items, to be rated on a 5-point semantic differential scale. Sample items include honest-dishonest, trustworthy-untrustworthy, and sincere-insincere. By summing and averaging the scores on

these items, an index was formed for perception of agent credibility (Cronbach's $\alpha = .88$). Perception of agent's generosity was assessed by a measure adapted from Smith and Hill (2009). The items were rewritten to meet the current goals. The measurement consists of ten items like: *He is the kind of person who is willing to go the "extra mile" to help take care of his friends, relatives, and acquaintances.*

Participants could answer this question on a 6-point Likert scale ranging from 1 ("strongly disagree") to 6 ("strongly agree"). By summing and averaging the scores on these items, an index was formed for perception of agent generosity (Cronbach's $\alpha = .92$).

Results

Smile Condition on Judged Sincerity

According to a single factor analysis of variance with smile condition as factor and judged sincerity as dependent variable, the judged sincerity of the agent's smile appeared not to differ between participants in the duchenne condition, the nonduchenne condition and the no smile condition, $F < 1$, *ns*.

Smile Condition on Consumer compliance

To investigate the effect of the agent's type of smile on consumer compliance, first it was analysed whether relatively more participants in the duchenne condition donated money (without looking at the actual amount) compared to participants in the nonduchenne condition and the neutral condition. Therefore a chi-square analysis was performed which showed that there was no significant difference between conditions in whether participants donated or not, $\chi^2 (2) = 2.97$, $p = .23$.

Furthermore it was investigated whether the agent's type of smile had an effect on the average amount of money donated by participants. A single factor analysis of variance was performed with smile condition as factor and the transformed donation[1] as dependent variable. The type of smile turned out to have no effect on donation, $F(2, 74) = 1.37$, $p = .26$, $\eta_p^2 = .04$.

A similar analysis on charity attitude has shown that the type of smile also did not have an effect on participants' attitude about the charity, $F < 1$, *ns*. An agent's type of smile does not influence the donation behavior of targets and it does not even influence their attitude about the charity.

Judged Sincerity and Consumer compliance

Since the judged sincerity of the agent's smile appeared not to differ between conditions, it is interesting to analyze whether the judged sincerity of an agent's smile itself is related to consumer compliance. Therefore the Pearson correlation between judged sincerity on one hand and donation and charity attitude on the other hand were calculated. How sincere an agent's smile was judged by a target was not correlated to a target's donation, $r = .10$, $n = 77$, $p = .40$, but it was positively correlated to a target's attitude about the charity, $r = .30$, $n = 77$, $p < .01$.

Agent generosity and credibility

Furthermore the role of perceived agent generosity and credibility was investigated. Since the agent's type of smile does not influence consumer compliance, the mediating role of perceived agent generosity and credibility within this effect is no longer of interest. However, it would be interesting to investigate whether the agent's type of smile has an effect on the perceived agent generosity and credibility. First a single factor analysis of variance was performed with smile condition as factor and generosity as dependent variable. The type of smile turned out to have no effect on perceived generosity, $F(2, 74) = 1.38$, $p = .26$, $\eta_p^2 = .04$. Furthermore a single factor analysis of variance was performed with smile condition as factor and credibility as dependent variable. The type of smile turned out to have an effect on perceived credibility, $F(2, 74) = 3.27$, $p = .04$, $\eta_p^2 = .08$. The agent was perceived as less credible in the no smile condition ($M = 2.16$, $SD = 0.60$) compared to the duchenne condition ($M = 2.54$, $SD = 0.77$), $p = .04$, and compared to the nonduchenne condition ($M = 2.57$, $SD =$

0.54), $p = .03$. The duchenne and nonduchenne conditions did not differ significantly, $p = .86$. Apparently showing a smile, Duchenne or non-Duchenne, has a positive effect on perceived agent credibility, but not on perceived agent generosity.

Since the target's attitude about the charity was correlated to the judged sincerity of an agent's smile, it is interesting to investigate whether the judged sincerity is also correlated to the perceived agent generosity and credibility. When an agent's smile is judged more sincere, the agent is also perceived as more generous, $r = .32$, $n = 77$, $p < .01$, and also as more credible, $r = .42$, $n = 77$, $p < .01$. Furthermore, when an agent is judged as more generous, the target's attitude about the charity is more positive, $r = .33$, $n = 77$, $p < .01$, but the target's donation does not appear to be higher, $r = .07$, $n = 77$, $p = .55$. When an agent is judged as more credible, the target's attitude about the charity is also more positive, $r = .39$, $n = 77$, $p < .01$, but again the target's donation does not appear to be higher, $r = .08$, $n = 77$, $p = .48$. The perceived agent generosity and credibility do not seem to be enough to influence the actual donation behaviour, but they are correlated to and might influence the target's attitude about the charity.

Discussion

Study 1 has found no support for the hypothesis that an agent's type of smile would influence consumer compliance. It was assumed that a more sincere smile would lead to more consumer compliance. Although the pilot study has shown that the agent's smile in the duchenne condition was more sincere compared to the nonduchenne and the no smile conditions, these smiles were not judged differently by participants in the main experiment. In the pilot study judges were explicitly asked to look at the nonverbal behavior of the agent in the video and to count the number of times the agent smiled and to assess whether these smiles were sincere. In the main experiment participants were asked to rate the sincerity of the agent's smile only after they had seen the video. Therefore, compared to the judges, these

participants were less fixated on these smiles while watching the video. This could explain why no difference in judged sincerity was found between the smile conditions. This does not mean that no such difference can be found. The difference in sincerity between conditions may not have been large enough to be experienced differently by participants who are not focused on these differences. When the differences between the three conditions in the current study would have been larger, they could have been experienced differently by participants.

Only agent credibility was influenced by the agent's smile, while agent generosity was not. However, both perceived agent credibility and generosity were positively correlated to the judged sincerity of an agent's smile and to the target's attitude towards the charity. Furthermore, a more positive judged sincerity of the agent's smile correlated to a more positive attitude towards the charity. Based on Fennis' research (in preparation) on the effect of nonverbal behavior on consumer compliance and the mediating role of perceived agent credibility in this matter, one could expect that the correlations found in the current research hint at an effect of the judged sincerity on the attitude towards the charity and at a mediating role of perceived agent credibility and generosity.

The correlation between judged sincerity of the agent's smile and the target's attitude towards the charity is interesting because a positive attitude towards a product, charity or company is essential for its success. The judged sincerity of an agent's smile did however not correlate to the actual donating behavior. A positive image alone is less valuable when people are unwilling to actually donate money. A sincere smile therefore does not seem to be enough to influence consumer compliance.

Since the differences between the conditions in the current study were not large enough for participants to experience them differently and since a sincere smile alone does not seem to be enough to influence consumer compliance, it would be interesting to enlarge the differences between the conditions by differentiating on additional nonverbal behavior.

According to Fennis (in preparation), a sincere smile in combination with several other nonverbal behaviors is a cue of anticipated success. Perhaps the smile on its own, is not enough to show anticipated success, and therefore does not lead to consumer compliance. Therefore, in study 2, the influence of a combination of several nonverbal behaviors on consumer compliance will be investigated.

Study 2

Fennis (in preparation) has shown that a combination of several nonverbal behaviors has an effect on consumer compliance in interactive persuasion situations. Nonverbal behavior associated with anticipated success leads to more consumer compliance compared to nonverbal behavior associated with anticipated failure. In study 1, it was assessed whether one particular behavior associated with anticipated success or failure, namely the smile of the agent, would have an effect on consumer compliance in a persuasion situation without interaction between the agent and the target. The results suggest that the agent's type of smile alone is not enough to influence consumer compliance. In Fennis' research it was first investigated which nonverbal behavior is normally shown by agents when they anticipate success or failure. Agents anticipating success normally show Duchenne smiles, fast and loud speech and the use of illustrators. The combination of these behaviors lets the target know that an agent is anticipating success. Agents anticipating failure normally show non-Duchenne smiles, diverting one's gaze of the target, speaking with a low and soft voice, frequent posture shifts, hiding one's face, and self-touching. The combination of these behaviors lets the target know that an agent is anticipating failure.

In study 2 again the effect of nonverbal behavior on consumer compliance is investigated in persuasion situations without interaction. Based on the results of study 1, it will be investigated whether the combination of nonverbal behaviors associated with anticipated success, will, as hypothesized, lead to more consumer compliance compared to the

combination of nonverbal behaviors associated with anticipated failure. Again, the mediating role of perceptions of agent credibility and generosity will be investigated. Based on the correlations in study 1, it is expected that both perceptions of credibility and perceptions of generosity will mediate the effect of an agent's nonverbal behavior on consumer compliance. The experiment consists of participants watching a video message in which an agent requests a donation, while showing nonverbal behavior associated with anticipated success, anticipated failure or neutral nonverbal behavior.

Method

Participants and design

In total 80 students (27 men, 53 women; M_{age} = 22.24 years, SD = 4.65) of Utrecht University participated in the study for € 6,-. Participants were randomly assigned to one of three nonverbal behavior conditions: anticipated success vs. anticipated failure vs. neutral. Therefore the design consisted of a unifactorial multilevel between-subjects design.

Procedure

The same procedure was used as in study 1. Participants were seated in individual cubicles and were paid at the beginning of the experiment. They first watched the video, after which they could anonymously put their donation in an envelop. Again the amount of money donated to the charity served as a measure of compliance. As in study 1, the variable donation appeared to be positively skewed. Therefore a reciprocal transformation was performed on donation, as is described by Field (2005). After this transformation there were four outliers, which therefore were removed from the data, leaving 76 participants for further analyses. After their donation, participants were asked to fill in a questionnaire about the video message. As in study 1, perception of agent's credibility was assessed with a questionnaire of 14 items (Cronbach's α = .88) and perception of agent's generosity with a questionnaire of 10 items (Cronbach's α = .87). Furthermore, a question was added to measure the judged

successfulness of the agent: *How successful did the man in the video appear to you?*, which had to be answered on a 5-point Likert scale ranging from 1 ("not at all") to 5 ("very").

Materials

As in study 1, three video messages were recorded in which a male confederate was acting as fundraiser for a relatively unknown, but existing charity, termed "Sviatoslav". The same verbal script was used as in study 1, and again at the end the confederate asked the participants to donate money to the charity. During his message the confederate displayed nonverbal behavior associated with anticipated success or anticipated failure. In the neutral condition the confederate was instructed not to display any nonverbal behavior associated with anticipated success or failure. During a pilot study, for all three video messages, the agent's nonverbal behavior was independently rated by 5 judges (blind to experimental hypotheses). Interjudge reliability was highly satisfactory (Cronbach's $\alpha = .95$). An index of nonverbal behavior associated with anticipated success was formed by summing the frequency of Duchenne smiles, fast and loud speech and the use of illustrators, as rated by the judges. An index of nonverbal behavior associated with anticipated failure was formed by summing the frequency of non-Duchenne smiles, diverting one's gaze of the target, speaking with a low and soft voice, frequent posture shifts, hiding one's face, and self-touching, as rated by the judges (Fennis, in preparation).

According to the judges, the display of nonverbal behavior associated with anticipated success differed significantly between conditions, $F(2, 12) = 101.40$, $p < .01$, $\eta_p^2 = .94$. As expected, nonverbal behavior associated with anticipated success was more shown in the success condition ($M = 4.60$, $SD = 0.89$) compared to the failure condition ($M = 0.00$, $SD = 0.00$), $p < .01$, and compared to the neutral condition ($M = 0.20$, $SD = 0.45$), $p < .01$. The failure and neutral condition did not differ significantly in the display of nonverbal behavior associated with anticipated success, $p = .59$. Furthermore, according to the judges, the display

of nonverbal behavior associated with anticipated failure differed also significantly between conditions, $F(2, 12) = 41.82$, $p < .01$, $\eta_p^2 = .88$. As expected, nonverbal behavior associated with anticipated failure was significantly more shown in the failure condition ($M = 9.60$, $SD = 2.70$) compared to the success condition ($M = 0.60$, $SD = 0.55$), $p < .01$, and compared to the neutral condition ($M = 1.40$, $SD = 1.14$), $p < .01$. The success and neutral condition did not differ significantly in the display of nonverbal behavior associated with anticipated failure, $p = .48$.

Results

Nonverbal Behavior Condition on Judged Successfulness

According to a single factor analysis of variance with nonverbal behavior condition as factor and judged successfulness as dependent variable, the judged successfulness of the agent differed significantly between conditions, $F(2, 73) = 3.58$, $p = .03$, $\eta_p^2 = .09$. Participants in the success condition judged the agent as significantly more successful ($M = 2.52$, $SD = 1.12$) compared to participants in the failure condition ($M = 2.00$, $SD = 0.83$), $p = .05$, and compared to participants in the neutral condition ($M = 1.88$, $SD = 0.73$), $p = .01$. Participants in the failure and neutral condition did not differ significantly, $p = .65$.

Nonverbal Behavior Condition on Consumer compliance

To investigate the effect of the agent's nonverbal behavior on consumer compliance, first it was analysed whether relatively more participants in the success condition donated money (without looking at the actual amount) compared to participants in the failure condition and the neutral condition. Therefore a chi-square analysis was performed which showed that there was a marginally significant difference between conditions in whether participants donated or not, $\chi^2 (2) = 5.34$, $p = .07$. Separate chi-square analyses showed that relatively more participants in the success condition have donated money (9 out of 27; 33.33%), compared to participants in the failure condition (2 out of 24; 8.33%), $\chi^2 (1) = 4.69$,

$p = .03$. In the neutral condition 4 out of 25 participants (16.00%) donated money, which did not differ significantly compared to the success condition, $\chi^2 (1) = 2.08$, $p = .15$. or to the failure condition, $\chi^2 (1) = 0.67$, $p = .41$.

Furthermore it was investigated whether the agent's nonverbal behavior had an effect on the average amount of money donated by participants. A single factor analysis of variance was performed with nonverbal behavior condition as factor and the transformed donation[2] as dependent variable. The type of nonverbal behavior turned out to have a significant effect on donation, $F(2, 73) = 3.21$, $p = .05$, $\eta_p^2 = .08$. Participants in the success condition donated more money ($M_t = 0.40$, $SD_t = 0.11$) compared to participants in the failure condition ($M_t = 0.35$, $SD_t = 0.05$), $p = .02$, and compared to participants in the neutral condition ($M_t = 0.36$, $SD_t = 0.06$), $p = .05$. The failure and neutral condition did not differ significantly, $p = .69$. Table 2 shows these results and also the means and standard deviations for the original donation. A single factor analysis with nonverbal behavior condition as factor and charity attitude as dependent variable showed that the type of nonverbal behavior did not have an effect on participants' attitude about the charity, $F < 1$, *ns*. An agent's type of nonverbal behavior does influence the donation behavior of targets but it does not seem to influence their attitude about the charity.

Table 2

Mean and standard deviation of donation and transformed donation within different conditions.

	M (SD)	M_t (SD_t)
Success	0.34_a (0.54)	0.40_a (0.11)
Failure	0.08_b (0.28)	0.35_b (0.05)
Neutral	0.14_b (0.34)	0.36_b (0.06)

Within each column, means with different subscripts differ significantly ($p < .05$) from each other.

Agent generosity and credibility

Furthermore the role of perceived agent generosity and credibility was investigated. Since the agent's type of nonverbal behavior influences donation, it is interesting to investigate the mediating role of perceived agent generosity and credibility within this effect. First a single factor analysis of variance was performed with nonverbal behavior condition as factor and generosity as dependent variable. This analysis showed that the perceived generosity of the agent did not differ between conditions, $F(2, 73) = 1.23$, $p = .30$, $\eta_p^2 = .03$. A similar analysis on credibility showed that the perceived credibility of the agent did differ significantly between conditions, $F(2, 73) = 4.09$, $p = .02$, $\eta_p^2 = .10$. Participants in the success condition perceived the agent as marginal significantly more credible ($M = 3.17$, $SD = 0.80$) compared to participants in the failure condition ($M = 2.82$, $SD = 0.60$), $p = .07$, and as significantly more credible compared to participants in the neutral condition ($M = 2.64$, $SD = 0.62$), $p = .01$. The failure and neutral condition did not differ significantly, $p = .37$. Since the perceived credibility differed between conditions, it is investigated whether this perceived credibility has a mediating role in the effect of the agent's nonverbal behavior on donation. A single factor analysis of covariance was performed with nonverbal behavior condition as factor, the transformed donation as dependent variable, and credibility as covariate. There appeared to be no effect of perceived credibility on donation, $\beta = .003$, $t < 1$, *ns* and therefore the effect of the agent's nonverbal behavior on donation appeared not to be mediated by the perceived credibility.

Discussion

Study 2 has found support for the hypothesis that an agent's nonverbal behavior influences consumer compliance in a persuasion situation without interaction. It was assumed that nonverbal behavior associated with anticipated success would lead to more consumer compliance, compared to nonverbal behavior associated with anticipated failure and

compared to neutral nonverbal behavior. The results showed no effect of nonverbal behavior on the attitude towards the charity, but the results did show that nonverbal behavior associated with anticipated success not only leads to more donations, but also to on average higher donations, compared to nonverbal behavior associated with anticipated failure and compared to neutral nonverbal behavior.

The effect of nonverbal behavior on consumer compliance in a persuasion situation without interpersonal interaction was expected to be mediated by the perceived credibility and generosity of the agent. The current study, however, has found no evidence to support this hypothesis. The perceived generosity of the agent did not play a mediating role. Furthermore, although the perceived credibility of the agent was influenced by his nonverbal behavior, this credibility had no effect on consumer compliance. Fennis (in preparation) showed that in persuasion situations with interaction, the perceived credibility did mediate the effect of nonverbal behavior on consumer compliance. It is interesting that in both persuasion situations the agent's nonverbal behavior has an effect on consumer compliance, while the underlying process apparently differs between an interactive persuasion situation and a persuasion situation without interpersonal interaction. LaFrance and Hecht (1995) discussed the influence of a smile on leniency and argue that this influence might be mediated by the personal attribute that is most salient in the given context. In their study smiling had a positive effect on leniency in a situation involving possible rule violations. Credibility turned out to be the most important mediator, which makes sense in a situation where the most relevant personal attribute seems to be whether the target is perceived as credible.

One could argue that the influence of nonverbal behavior, including a smile, on consumer compliance might also work by calling on the personal attribute that is most salient in the given context. Perhaps credibility was not the most salient personal attribute in the current situation, while it may have been the most salient one in Fennis' research (in

preparation). In a face-to-face situation, in which the agent is standing on your doorstep, the credibility of the agent might be more important compared to a situation where the agent is only present on a computer screen. Future research should aim to investigate what personal attribute of an agent is the most salient one in a persuasion situation without interpersonal interaction, like TV-commercials, thereby investigating what mediates the effect of nonverbal behavior on consumer compliance in those situations. What makes a consumer more likely to comply to an agent's request when the agent is showing nonverbal behavior associated with success? One could look at the effect of an agent's nonverbal behavior on judgements about his/her attractiveness, likeability, and/or traits of the Big Five, including agreeableness, conscientiousness, openness to experience, extroversion and neuroticism. It would be interesting to find out whether one of these personal attributes plays a mediating role in the effect of nonverbal behavior on consumer compliance.

General Discussion

The two studies in the current research have shown that a combination of nonverbal behaviors associated with anticipated success positively effect consumer compliance in a persuasion situation without interpersonal interaction, while an agent's smile on itself is not enough to influence consumer compliance.

Fennis (in preparation) already showed that nonverbal behavior associated with anticipated success elevate compliance rates in interactive persuasion situations, while nonverbal behavior associated with anticipated failure reduce compliance rates. As he mentions in his paper, this could have great implications for persuasion agents. However, the implications remained unclear for agent's trying to persuade consumers in persuasion situations without interaction. The current research extends Fennis' findings to a persuasion situation without interaction, thereby clarifying the implications for noninteractive situations, like TV-commercials and the growing amount of online commercials. Given the amount of

TV-commercials and online commercials, the value of these results is indisputable. Furthermore the current research extends Fennis' findings by showing that it takes the combination of several nonverbal behaviors and that an agent's smile alone is not enough.

In study 1, in which the role of an agent's type of smile was investigated, the type of smile appeared to have no effect on consumer compliance. However the judged sincerity of the agent's smile was positively correlated to the target's attitude toward the charity. A sincere smile therefore does seem to influence a target's attitude, but not a target's behavior. A sincere smile on its own therefore does not seem to be enough to influence consumer compliance.

In study 2, in which the effect of a combination of nonverbal behaviors on consumer compliance was investigated, the results showed that nonverbal behavior associated with anticipated success not only leads to more donations, but also to on average higher donations, compared to nonverbal behavior associated with anticipated failure and compared to neutral nonverbal behavior. The perceived agent generosity and credibility did not appear to mediate this effect. However, based on the literature on this subject (Frank, Ekman, & Friesen, 1993; LaFrance & Hecht, 1995; Mehu, Little, & Dunbar, 2007) one could assume that the effect of nonverbal behavior on consumer compliance will be mediated by the target's perception of an agent's personal attribute. Nonverbal behavior associated with anticipated success would be expected to have a positive effect on the target's perceptions of the agent's personal attribute and the most salient attribute (LaFrance & Hecht, 1995) would subsequently lead to higher compliance rates. Therefore future research should consider other personal attributes to explain how an agent's display of nonverbal behavior influences consumer compliance.

The current research has shown that nonverbal behavior has an effect on consumer compliance. Therefore agents trying to persuade consumers in persuasion situations without interpersonal interaction would be well-advised to pay close attention to their nonverbal

behavior. Since there was no difference in consumer compliance between the failure condition and the neutral condition, it does not appear to be very important to pay attention to the behaviors associated with anticipated failure. However, the behaviors associated with anticipated failure could distract consumers from the behaviors associated with anticipated success and should therefore still be avoided when trying to persuade consumers. Agents should try to come across as self-confident, as if they are anticipating success, and they should do so by displaying nonverbal behavior associated with this anticipated success, including Duchenne smiles, fast and loud speech and the use of illustrators.

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Notes

1. A similar analysis with the original donation as dependent variable shows similar results with no effect of the agent's type of smile on donation, $F(2, 74) = 1.38$, $p = .26$, $\eta_p^2 = .04$.

2. A similar analysis with the original donation as dependent variable shows similar results with a marginal effect of the type of nonverbal behavior on donation, $F(2, 73) = 2.94$, $p = .06$, $\eta_p^2 = .08$.

Appendix A: Questionnaires

Credibility scale (on a 5-point Likert scale):

The words below describe different impressions you may have formed towards the agent. Indicate on following 5-point scale what impressions the agent made on you, by marking on each line the impressions that fits your opinion the most. It is about the opinion of a large group of people, the agent will not find out your personal opinion. Respond quickly and intuitively. *(Bij de volgende vragen komen steeds 2 woorden in beeld. Deze woorden beschrijven verschillende indrukken die je gevormd zou kunnen hebben over de man in de video. Geef op een 5-punts schaal aan welke indrukken de man bij jou heeft achtergelaten, door op elke lijn de indrukken aan te kruisen die het beste met jouw mening overeenkomen. Het betreft hier de mening van een grote groep mensen, de man in de video zal jouw persoonlijke mening niet te horen krijgen. Reageer snel en intuïtief.)*

The agent in the video made the following impression on me:

(De man in de video maakte de volgende indruk op mij:)

1.	honest	- dishonest	*(eerlijk*	*- oneerlijk)*
2.	trained	- untrained	*(getraind*	*- ongetraind)*
3.	attractive	- unattractive	*(aantrekkelijk*	*- onaantrekkelijk)*
4.	sincere	- insincere	(*oprecht*	*- onoprecht)*
5.	competent	- incompetent	*(competent*	*- incompetent)*
6.	appealing	- unappealing	*(interessant*	*- oninteressant)*
7.	realistic	- unrealistic	*(realistisch*	*- onrealistisch)*
8.	professional	- unprofessional	*(professioneel*	*- onprofessioneel)*
9.	nice	- awful	*(aardig*	*- verschrikkelijk)*

10.	right	- wrong	*(goed*	*- fout)*
11.	experienced	- inexperienced	*(ervaren*	*- onervaren)*
12.	expressive	- inexpressive	*(expressief*	*- uitdrukkingsloos)*
13.	trustworthy	- not trustworthy	*(betrouwbaar*	*- onbetrouwbaar)*
14.	dynamic	- static	*(dynamisch*	*- statisch)*

Interpersonal Generosity Scale (on a 6-point Likert scale):

The next questions are about the man in the video. Although it may be hard to make an assessment based on this short video, we would like to ask you to indicate whether you think these statements apply on him. Keep in mind that there are no right or wrong answers and that we are interested in your opinion. Try to listen to your first thoughts!

(De volgende stellingen gaan over de persoon in de video. Hoewel het wellicht lastig is om een inschatting van deze persoon te maken op basis van deze korte video, zouden we je toch willen vragen om aan te geven in hoeverre je vindt dat de volgende stellingen op hem van toepassing zijn. Bedenk hierbij dat er geen goede of foute antwoorden zijn en dat we geïnteresseerd zijn in je mening. Probeer op je eerste ingeving af te gaan!)

1. When one of his loved ones needs his attention, he really tries to slow down and give them the time and help they need. *(Ik schat in dat wanneer één van de dierbaren van de man in de video zijn aandacht nodig heeft, dat hij echt zal proberen af te remmen en ze de tijd en hulp te bieden die ze nodig hebben.)*
2. He is known by family and friends as someone who makes time to pay attention to others' problems. *(Ik schat in dat de man in de video bij zijn familie en vrienden bekend staat als iemand die tijd vrijmaakt om aandacht te besteden aan andermans problemen.)*

3. He is the kind of person who is willing to go the "extra mile" to help take care of his friends, relatives, and acquaintances. *(Ik schat in dat de man in de video het type persoon is dat bereid is om net dat beetje extra te doen om voor zijn vrienden, familieleden, en bekenden te zorgen.)*
4. When friends or family members experience something upsetting or discouraging he makes a special point of being kind to them. *(Ik schat in dat wanneer de vrienden of familieleden van de man in de video nare of ontmoedigende dingen meemaken, dat hij het dan belangrijk vindt om aardig voor ze te zijn.)*
5. When it comes to his personal relationships with others, he is a very generous person. *(Ik schat in dat wanneer het over de persoonlijke relaties van de man in de video met anderen gaat, dat hij een zeer genereus persoon is.)*
6. It makes him very happy to give to other people in ways that meet their needs. *(Ik schat in dat het de man in de video zeer gelukkig maakt om in de behoeften van anderen te voorzien.)*
7. It is just as important to him that other people around him are happy and thriving as it is that he is happy and thriving. *(Ik schat in dat het voor de man in de video net zo belangrijk is dat de mensen om hem heen gelukkig en welgesteld zijn, als dat hijzelf gelukkig en welgesteld is.)*
8. His decisions are often based on concern for the welfare of others. *(Ik schat in dat de beslissingen van de man in de video vaak gebaseerd zijn op de zorgen voor het welzijn van anderen.)*
9. He is usually willing to risk his own feelings being hurt in the process if he stands a chance of helping someone else in need. *(Ik schat in dat de man in de video normaal gesproken bereid is om het risico te lopen dat hij zelf gekwetst wordt, als hij de kans heeft om iemand anders te helpen die hulp nodig heeft.)*

10. He makes it a point to let his friends and family know how much he loves and appreciates them. *(Ik schat in dat de man in de video erop staat om zijn vrienden en familie te laten weten hoeveel hij van ze houdt en hoeveel hij ze waardeert.)*

Judged Sincerity (on a 5-point Likert scale):

How sincere was the smile of the man in the video? *(Hoe oprecht vond je de lach van de man in de video?)*

Judged Successfulness (on a 5-point Likert scale):

How successful did the man in the video appear to you? *(Hoe succesvol kwam de man in de video op je over?)*

Appendix B: Stageverslag

Voor de masterstudie Sociale Psychologie aan de Universiteit van Utrecht heb ik een interne onderzoeksstage gelopen. In dit stageverslag zal ik mijn werkzaamheden tijdens deze stage kort toelichten en daarbij de doelstellingen bespreken die ik bij deze stage voor ogen heb gehad. Alvorens ik hier aan begin zal ik mijn keuze voor de interne onderzoeksstage nader toelichten. Hoewel ik in eerste instantie zeer geïnteresseerd was in een externe stage, ging de voorkeur uiteindelijk uit naar de interne stage omdat ik voorafgaand aan mijn scriptieonderzoek graag een keer goed en volledig de verschillende fasen van een onderzoek wilde doorlopen. In de veronderstelling dat de begeleiding hierin bij een interne stage beter zou zijn, dan bij een externe stage, heb ik de keuze voor de interne onderzoeksstage genomen.

Tijdens deze stage heb ik, onder begeleiding van Mariëlle Stel, het eerste experiment van mijn scriptieonderzoek in elkaar gezet en uitgevoerd. Mijn voornaamste doelstelling hierbij was om het tweede experiment meer zelfstandig uit te kunnen voeren en ervaring op te doen in het praktisch opzetten van een experiment. Samen met mijn begeleidster ben ik begonnen met het zoeken naar een onderwerp. Aangezien mijn interesse vooral uitgaat naar consumentenbeïnvloeding en aangezien de expertise van mijn begeleidster onder andere op het gebied van non-verbaal gedrag ligt, kwamen we al snel uit op de invloed van non-verbaal gedrag op *consumer compliance*. Na het lezen van een aantal, deels door mijn begeleidster aangedragen, artikelen over dit onderwerp, kwam ik tot de conclusie dat de invloed van non-verbaal gedrag op *consumer compliance* al wel is onderzocht, maar nog niet in een situatie waarin er geen persoonlijke interactie is tussen de verkoper en de consument, zoals bijvoorbeeld bij Tv-reclames het geval is. Vervolgens was het natuurlijk de uitdaging om een experiment op poten te zetten, waarbij *consumer compliance* gemeten kon worden, het non-verbale gedrag gemanipuleerd kon worden, en waarbij er geen interactie plaats zou vinden tussen de verkoper en de participant. Denkend aan de Tv-reclames, ontstond al snel het idee

om de participant een video te laten zien, waarin de verkoper een verzoek doet. Om vervolgens de instemming van de participant met dit verzoek te meten, bleek lastiger te zijn. Ik wilde graag echt het gedrag meten en dus niet slechts de intentie om bijvoorbeeld iets te kopen. Om dit voor elkaar te krijgen, heb ik ervoor gekozen om in plaats van een commercieel verzoek, een verzoek voor een goed doel vast te leggen op video. Op deze manier kon de werver in de video het verzoek doen om geld te doneren, waarbij de participant de mogelijkheid had om daadwerkelijk te doneren. Zoals gezegd was een van mijn doelstellingen om ervaring op te doen in het praktisch opzetten van een experiment. Bedenken hoe je de verschillende theoretische constructen kan operationaliseren, is hierbij belangrijk en was bij mijn experiment een leuke uitdaging.

Een kennis was bereid om als werver voor een goed doel een drietal video's op te nemen, waarbij in elke video het verbale script hetzelfde was, terwijl het non-verbale gedrag per video verschillend was. Het non-verbale gedrag moest op basis van literatuur volledig vastgelegd worden. Hierbij ging het in experiment 1 in het bijzonder om de lach van de werver. Na het opnemen van de video's heb ik met behulp van het programma Authorware het experiment in elkaar gezet, waarin de participanten instructies kregen, een van de video's te zien kregen en enkele vragenlijsten moesten invullen. Aangezien ik nog nooit met Authorware gewerkt had, was het zeer leerzaam om hier voorafgaand aan mijn tweede experiment ervaring mee op te doen. Het bleek een zeer gebruiksvriendelijk programma te zijn waardoor ik er bij mijn tweede experiment volledig zelfstandig mee kon werken. Om de data te verzamelen heb ik een week in het Psychologie Lab gezeten. Het was handig om dit alvast een keer mee te maken en om ervaring op te doen in het werven van participanten.

Mijn doelstellingen voor deze stage lagen voornamelijk op het gebied van het opzetten van het experiment en het verzamelen van de data en niet zozeer op het gebied van het verwerken van de data en het rapporteren van de resultaten. Voor de resultaten verwijs ik

overigens graag naar mijn scriptie. Tijdens mijn stage heb ik goed aan deze doelstellingen kunnen werken. Ik heb een volledige onderzoekscyclus doorlopen waarbij ik met Authorware heb leren werken en waarbij ik met name ervaring heb opgedaan in het operationaliseren van psychologische constructen.