

**The effect of role sets and indirectness on the perceived face threat
and perceived persuasiveness of anti-obesity messages**

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ABSTRACT

Anti-obesity campaigning has taken a turn from merely informing about what is healthy to warning and criticizing what is not. This provides a new challenge for public health information: how can the level of face threat caused by an anti-obesity message be reduced and subsequently, how can the perceived persuasiveness be increased? The outcome of the studies described in this article show that perceived face threat and perceived persuasiveness have a strong negative relationship. It argues that the use of indirectness and role sets can reduce the perceived face threat, and that the doctor-patient role set combined with indirectness is most effective in reducing the face threat of either warning about the dangers of being obese or criticizing behavior believed to cause obesity.

1 INTRODUCTION

1.1 Anti-obesity campaigning

Obesity is an increasing problem in today's society. In the United States, up to 30% of the population is obese (Centers for Disease Control and Prevention, 2006). In the Netherlands, 1 out of every 10 adults is obese (NIGZ, 2006). Obesity is believed to be a risk factor for various illnesses such as diabetes, high blood pressure, high cholesterol, asthma and arthritis (Mokdad et al, 2003; Centers for Disease Control and Prevention, 2006).

The prevalence of obesity in the Netherlands is taken very seriously by the government and policy makers. The Dutch director-general of Health, De Goei, has stated that: "Obesity is an epidemic with the character of an assassin and the effect of a nuclear disaster. If it continues, for the first time in history a generation will outlive its children." (Luyendijk, 2005; Pieterman et al, 2005).

This concern for the risks of an obese population has led to a shift in public information campaigns. Where in the nineties the emphasis was laid on encouraging a healthy diet, in the new millennium the emphasis shifted to straightforwardly warning the general public about (the dangers of) being obese (Hekman, 2002).

This new approach to anti-obesity campaigning has led to a new kind of problem: people are now being directly addressed about their weight. In the Netherlands – and in Western culture in general – this is a taboo. From the perspective of Brown and Levinson's (1987) politeness theory, the public information campaigns about obesity therefore inevitably include face threatening acts.

1.2 Face threatening acts

Brown and Levinson's (1987) politeness theory distinguishes two types of face threats. A *negative face threat* is made when the sender of a message violates the freedom of action of the receiver (Brown & Levinson, 1987), for example by warning him about the behaviour that causes obesity. In public information campaigns these warnings are usually sustained by referring to reduced length and quality of life, psychological problems due to low self-esteem and the various diseases for which obesity is a risk factor (Voedingscentrum, n.d.).

A *positive face threat* is made when the sender of a message threatens the positive and consistent self-image of the receiver (Brown & Levinson, 1987), for example by criticizing someone's obesity-causing behaviour. In public information campaigns people are usually criticized for eating too much and too unhealthy, for exercising too little and for not having the will power to do something about it (Voedingscentrum, n.d.).

1.3 From level of face threat via reactance to perceived persuasiveness

A face threatening act in a message can easily lead to rejection of the message or even reactance. *Reactance* is a term introduced by Brehm (1966) which in short means 'doing exactly the opposite from that which was suggested'. If a health message is imposed on someone, the effect will be that the individual feels their freedom is being violated. As a reaction to this violation, the individual has a 'reactance-response' (Whitehead & Russell, 2004). If this is the case, he - or she - will certainly not be inclined to change his behaviour in the way the message suggested. Therefore, he is not persuaded by the message. Or, in short, a highly face threatening message will not be persuasive because it causes reactance. A personal inclination to reactance may influence this process by increasing reactance even further.

1.4 Indirectness

One of the possibilities to reduce the level of perceived face threat is that instead of expressing one's opinion directly - or *baldly on record* as Brown and Levinson call it - one can put the same message in indirect terms (*go off record*). Brown and Levinson (1987) argue that the off record message is less face threatening because the receiver is given the possibility to believe the message

does not concern him. The downside is that such an indirect, off record message will usually be less persuasive than a direct one (Steehouder, 2005).

1.5 Role sets

Brown and Levinson (1987) state that the level of face threat is partly determined by the social relation between the hearer (receiver) and the speaker (sender). Off course, there is no actual social relation between the sender and receiver in written messages from an anonymous authority, as is the case in anti-obesity public information campaigning.

However, a social relation can be created by introducing *personas*: a fictive author and a fictive reader who have a certain relation (Coney & Steehouder, 2000). When a persona is introduced, a role set is created. A *role set* is a fictitious role pattern in which the role of the sender is chosen in such a manner that the receiver is manipulated into taking a complementary role in which he is inclined to accept the message more easily. For instance, if the message explicitly states that the sender is a doctor, the receiver will automatically be inclined to take on the role of patient. This technique is called *tact altercasting* (Pratkanis, 2000). It is crucial that the role of the sender is credible (Pratkanis, 2000; Pratkanis & Gliner, 2004).

Jansen (2005) concluded that the *peer to peer* role set was most effective in reducing the level of face threat in safe sex messages. Pratkanis and Gliner (2004) found the *child to adult* role set to be most effective when protection from a certain danger was the message subject. Therefore, in this study these two role sets were used. A third *doctor to patient* role set was added because it is the most common role set in health related issues in everyday life.

1.6 Hypothetical model

Our theoretical framework states that both role sets and indirectness will influence the perceived face threat. The perceived face threat is believed to have a positive effect on the mediating variable reactance towards the message. Reactance towards the message is believed to increase when an individual has a higher inclination to reactance. A high level of reactance towards the message is believed to have a negative influence on the perceived persuasiveness of the message.

Two similar studies were conducted testing the relationships in this hypothetical model for both criticism (a positive face threat) and warning about danger (a negative face threat). Figure 1 gives a schematic overview of these relationships between the variables.

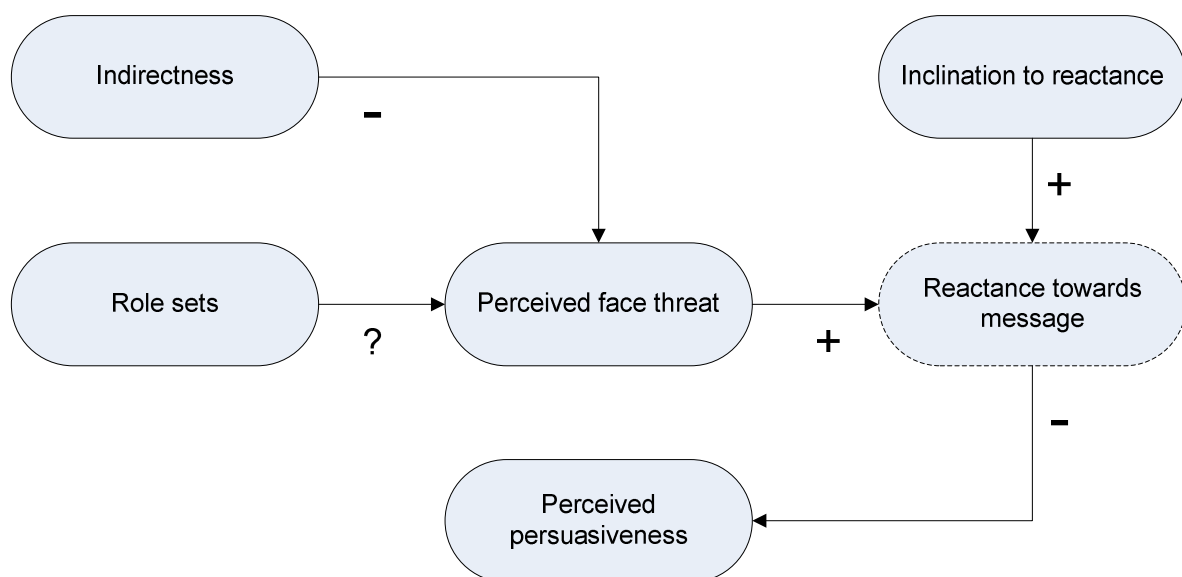


Figure 1. Hypothetical researchmodel.

2 METHOD

2.1 Design

Two independent, similar studies were conducted using an internet site on which the participants could fill out the questionnaires. Apart from the subject of the messages and the subsequent perceived face threat questionnaires, both studies were the same. The first study included six versions of a message that criticised behaviour believed to cause obesity (positive face threat), the second study included six versions of a message that warned about the dangers of obesity (negative face threat).

In both studies a 3x2 design was used. These six versions of the message were constructed by manipulation of the three role sets used in this study (doctor-patient, peer-peer, child-adult) and the two levels of directness (baldy/direct and off record/indirect). Participants filled in the questionnaires about all six versions, making it a within subjects design.

2.2 Materials

2.2.1 *Creating messages*

The personas were implemented in the message in three congruent ways, to support the successful creation of credible role sets between the sender and the receiver. Firstly, the sender of the message was explicitly identified at the top of the message. The doctor was introduced with only initials and her last name, which implies a greater social distance between sender and receiver than the peer or child, who were both introduced with their first names. A short description of the activities of the sender was added after the name, to give the receiver a better idea of the persona presented.




Secondly, a photograph of the sender was shown. Research by Nieuwboer, Maes and Swanepoel (2005) shows that visual personification – for instance by using photographs – is more powerful than using textual cues.

Thirdly, the text of the message itself was written to ‘fit’ the persona introduced. A child strikes a different tone and will use different words (simpler, less understanding of the subject) than a doctor (more jargon, semi-medical use of words) or a peer (more equal, ‘we-statements’).

Two levels of directness were used: ‘go baldly on record’ and ‘go off record’ (Brown & Levinson, 1987). ‘Baldly on record’ (directly) is characterized by a direct manner of speech, while the second ‘go off-record’ is more indirect. To accomplish this, the direct message was written first in the active form. It was then ‘translated’ into the passive form, creating an indirect message. By using the passive form, the receiver is given a chance to believe that the behaviour mentioned in the message does not concern him or that he is not responsible for it because he is not being addressed directly (Cornelis, 1997).

In Dutch, a distinction is made in the use of the form of address ‘you’ (similar to the French ‘tu’) between someone you are on a first name basis with, and the formal ‘you’ (similar to the French ‘vous’) for someone that you are not familiar with. The formal ‘you’ was used, because research shows that it is more persuasive, it does not reduce enthusiasm like the informal ‘you’ and the age of the receiver has no influence on the persuasiveness of the message (Jansen & Janssen, 2005; Van Zalk & Jansen, 2004).

Table 1. Implementing the role sets in the message by using photographs, introduction texts and congruent message tone, style and use of words.

	Role sets		
	Doctor-patient	Peer-peer	Child-adult
Photograph			
Introduction text	K. De Wilde (has her own general practitioners practice)	Debby Jager (has been overweight since puberty)	Tessa (plays soccer and likes to play outdoors)
Example message text (direct)	"You have a structurally too extensive dietary pattern"	"We often eat too much and too unhealthy"	"You have eaten too many bad things"
Example message text (indirect)	"Obesity is caused by a structurally too extensive dietary pattern"	"Being fat is caused by often eating too much and too unhealthy"	"Being fat is caused by eating too many bad things"

2.2.2 Questionnaires

A questionnaire to measure the perceived face threat caused by complaints in a romantic relationship, developed by Cupach & Carson (2002), was used as a basis for the perceived face threat questionnaire used in this study. Two items specifically concerning romantic relationships were removed. The questionnaire was translated into Dutch by three independent translators. When at least two translators agreed on the correct translation, the translation was accepted. The questionnaire was then split in two (a questionnaire for measuring positive face threat and one for negative face threat), based on Cupach and Carson's factor analysis which were congruent with the politeness theory of Brown and Levinson (1987).

In study 1, the questionnaire for positive face threat was used. It consisted of eight items that were scored using a 7-point Likert Scale. In study 2 the other part of the Cupach and Carson's based questionnaire for perceived face threat was used. This negative face threat questionnaire consisted of four items that were scored using a 7-point Likert Scale.

The perceived persuasiveness of the message was measured using a 7-point questionnaire developed by Jansen (2005). This questionnaire scores the perceived persuasiveness on five items: suitability, persuasiveness, credibility, logic and acceptance of the message. It was used in both studies.

In both studies, inclination to reactance (a personality factor) was measured using the Hong Psychological Reactance Scale (Hong & Faedda, 1996). This 11 item, 5-point questionnaire measures the extent to which an individual is inclined to show a reactant response to a message such as a criticising or threatening overweight message. The outcome was used in the statistic analysis, in order to reduce the risk of personality factors being interpreted as message factors. The questionnaires for inclination to reactance, perceived face threat and perceived persuasiveness can be found in appendix A.

Other background variables include sex, education level, age, length and weight. Length and weight were used to compute the Body Mass Index (BMI) of the participants, by dividing someone's weight (in kilograms) by their length (in meters) raised to the square. It is used by the World Health Organization (2003) as an indicator for overweight: if the BMI exceeds 25 kg/m², a person is overweight. If it exceeds 30 kg/m², a person is obese.

2.3 Participants

Invitations to participate were distributed via the Dutch semi-scientific internet site Kennislink.nl (approximately 7.500 visitors a day) and their weekly newsletter (approximately 10.000 subscribers), and by e-mail to two general mailing lists with a total of approximately 1.000 subscribers. An IP-check prevented double participations. Participants were randomly assigned to study 1 (N=132) or study 2 (N=98).

Participants who gave the same answer on all items of a questionnaire and did so under 10 seconds, were flagged and later excluded from analyses. The time limit of 10 seconds was chosen after recording the minimal time of five test-participants needed to read the message and check the boxes, and taking of 3 seconds as an error margin.

2.4 Procedure

Participants were randomly assigned to one of the two studies. After a short introduction, the questionnaire measuring a participant's inclination to reactance was presented. It was presented before the messages and questionnaires about perceived face threat and perceived persuasiveness, in order to avoid a test effect. Next, the participants were confronted with six versions of the message. The message versions were shown in random order, to avoid primacy or recency effects. On the same page as the message, the perceived face threat and perceived persuasiveness questionnaire were presented. After six message-screens, participants were asked to fill in their sex, education level, age, length and weight. In the final screen the participants were thanked for participating and told that they could safely close their browser window because the results were sent successfully.

Participants were allowed to take as much time as they needed to read the message and/or fill in the questionnaires: they could click a 'next-button' to continue to the next screen. They could only continue if they had filled out all the questions, otherwise they were redirected to the same screen with the missing answers highlighted.

3 RESULTS

3.1 Participants

In both study 1 (N = 132) and study 2 (N = 98) more women than men participated: respectively 54,5% and 56,3% of the participants were female. There was a large number of participants aged 18-25 in both studies with 46,2% in study 1 and 46,9% in study 2. Also there were many participants with either a college or a university education: 56,8% in study 1 and 51,6% in study 2. These large numbers of young, highly educated participants could be attributed to the fact that the studies were conducted using an internet questionnaire. It could also be the cause of the fact that the percentage of obese participants (20,7% in study 1 and 22,4% in study 2) was a little lower than the 25% which was expected based on earlier self-rapport measurements by NIGZ (2006).

3.2 Reliability

Reliability analysis was used to determine the internal consistence of the questionnaires for perceived face threat, perceived persuasiveness and inclination to reactance in both studies. The reliability of the perceived face threat questionnaire was $\alpha = .95$ in both the first study and the second study. The reliability of the perceived persuasiveness questionnaire was $\alpha = .96$ in the first study, and $\alpha = .95$ in the second study. The reliability of the Hong Psychological Reactance Scale, used to measure the inclination to reactance, was $\alpha = .72$ in the first study and $\alpha = .71$ in the second study.

3.3 Result of study 1 (criticism)

The overall mean perceived face threat in study 1 was 4,43 (SD = 1,46). Tables 2 and 3 suggest that there was a strong, negative correlation between perceived face threat and perceived

persuasiveness. This was confirmed by a 2-tailed Pearson correlation test, which showed the correlation to be $-0,81$ ($p < 0,001$).

Table 2 shows that both the level of directness ($F(1)=43,3$, $p < 0,001$) and the role set ($F(2)=44,3$, $p < 0,001$) had a significant effect on the perceived face threat. A significant interaction effect was also found ($F(2)=13,5$, $p < 0,001$).

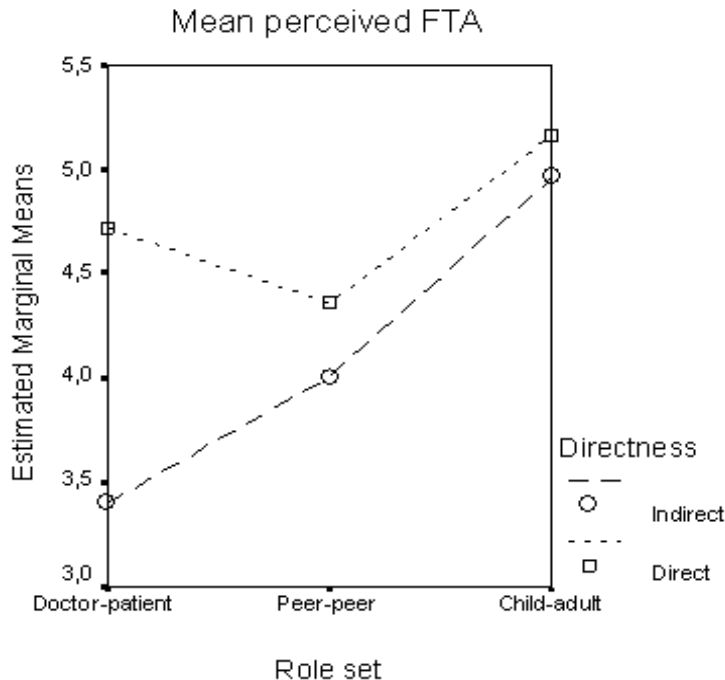


Figure 2. The interaction effect between the level of directness and the role set on the perceived face threat.

Table 2 shows as expected the perceived face threat was higher in the direct messages than in the indirect ones ($t(131)=8,4$, $p < 0,001$). The child-adult role set turned out to be more face threatening than both the doctor-patient role set ($t(131)=10,6$, $p < 0,001$) and the peer-peer role set ($t(131)=9,9$, $p < 0,001$). The doctor-patient role set combined with indirectness was less face threatening than the indirect message with the peer-peer role set ($t(131)=5,2$, $p < 0,001$) or the indirect message with child-adult role set ($t(131)=12,5$, $p < 0,001$). The peer-peer role set combined with directness was less face threatening than the direct message with the doctor-patient role set ($t(131)=2,7$, $p=0,008$) or the direct message with child-adult role set ($t(131)=6,4$, $p < 0,001$).

Table 3 shows that the perceived persuasiveness was lower in the direct messages than in the indirect ones ($t(131)=9,6$, $p < 0,001$), as was expected. The role set child-adult was less persuasive than both the role set doctor-patient ($t(131)=12,1$, $p < 0,001$) and the peer-peer role set ($t(131)=9,9$, $p < 0,001$). The indirect message with the doctor-patient role set was more persuasive than the indirect message with the peer-peer role set ($t(131)=6,5$, $p < 0,001$) or the indirect message with child-adult role set ($t(131)=12,6$, $p < 0,001$). The peer-peer role set combined with directness was more persuasive than the direct message with the doctor-patient role set ($t(131)=2,5$, $p=0,015$) or the direct message with child-adult role set ($t(131)=8,2$, $p < 0,001$).

Table 2. Mean perceived face threat per message (study 1)

Directness	Role set			Total
	Doctor-patient	Peer-peer	Child-adult	
Direct	4,7	4,3	5,1	4,7
Indirect	3,3	4,0	4,9	4,1
Total	4,0	4,2	5,0	4,4

Table 3. Perceived persuasiveness per message (study 1)

Directness	Role set			Total
	Doctor-patient	Peer-peer	Child-adult	
Direct	3,1	3,5	2,4	3,0
Indirect	4,6	3,7	2,7	3,7
Total	3,9	3,6	2,6	3,3

The inclination to reactance had no significant influence on either perceived face threat ($F(1)=2,1$, $p=0,14$) or perceived persuasiveness ($F(1)=1,5$, $p=0,22$).

3.4 Results study of 2 (warning about danger)

The overall mean perceived face threat in study 1 was 3,21 (SD = 1,42). Tables 4 and 5 suggest that there is a negative correlation between perceived face threat and perceived persuasiveness. This was confirmed by a 2-tailed Pearson correlation test, which showed the correlation to be -0,38 ($p<0,001$).

Table 4 shows that only the level of directness ($F(1)=7,8$, $p=0,005$) but not the role set ($F(2)=1,9$, $p=0,14$) had a significant effect on the perceived face threat. A significant interaction effect was not found ($F(2)=2,3$, $p=0,095$).

Table 4 shows that as expected the perceived face threat was higher in the direct messages than in the indirect ones ($t(97)=4,6$, $p<0,001$). The role set peer-peer was the more face threatening than the doctor-patient role set ($t(97)=2,4$, $p=0,016$) but not significantly more face threatening than the child-adult role set ($t(97)=1,9$, $p=0,055$). The doctor-patient role set combined with indirectness was less face threatening than the indirect message with the peer-peer role set ($t(97)=4,4$, $p<0,001$) or the indirect message with child-adult role set ($t(97)=2,4$, $p=0,021$). The child-adult role set combined with directness was not significantly less face threatening than the direct message with the doctor-patient role set ($t(131)=1,5$, $p=0,146$) or the direct message with peer-peer role set ($t(131)=1,4$, $p=0,154$).

Table 5 shows that the perceived persuasiveness was significantly lower in the direct messages than in the indirect ones in the doctor-patient role set ($t(97)=4,1$, $p<0,001$) but no significant differences in perceived persuasiveness were found in the peer-peer role set ($t(97)=1,6$, $p=0,103$) or the child-adult role set ($t(97)=0,6$, $p=0,534$). The child-adult role set was less persuasive than the patient-doctor role set ($t(97)=8,6$, $p<0,001$) and the peer-peer role set ($t(97)=3,5$, $p=0,001$). The indirect message with the doctor-patient role set was more persuasive than the indirect message with the peer-peer role set ($t(97)=6,6$, $p<0,001$) or the indirect message with child-adult role set ($t(97)=9,7$, $p<0,001$). The doctor-patient role set combined with directness was more persuasive than the direct message with the peer-peer role set ($t(131)=4,0$, $p<0,001$) or the direct message with child-adult role set ($t(131)=5,4$, $p<0,001$).

Table 4. Perceived face threat per message (study 2)

Directness	Role set			Total
	Doctor-patient	Peer-peer	Child-adult	
Direct	3,4	3,4	3,2	3,3
Indirect	2,7	3,3	3,0	3,0
Total	3,1	3,4	3,1	3,2

Table 5. Perceived persuasiveness per message (study 2)

Directness	Role set			Total
	Doctor-patient	Peer-peer	Child-adult	
Direct	4,4	3,7	3,4	3,8
Indirect	5,0	3,9	3,3	4,1
Total	4,7	3,8	3,4	4,0

The inclination to reactance had no significant influence on either perceived face threat ($F(1)=1,8$, $p=0,18$) or perceived persuasiveness ($F(1)=1,1$, $p=0,29$).

4 DISCUSSION

4.1 Discussion

Both studies showed that using indirectness instead of directness reduced the perceived face threat significantly. This supports Brown and Levinson's (1987) argument that an indirect message is less face threatening than a direct message because the receiver is given the possibility to believe the message does not concern him. That this wasn't at the expense of the perceived persuasiveness, as Steehouder (2005) feared, was shown most clearly in study 1 where the indirect messages were more persuasive than the direct ones, no matter which role set was used. In study 2 this was only the case when the doctor-patient role set was used, but in no case were the indirect messages significantly less persuasive than the direct ones. Therefore it must be concluded that an indirect, off record message is not less persuasive than a direct one.

Study 1 showed that the role sets created by introducing personas to an otherwise anonymous text had a significant influence on the perceived face threat. Apparently a fictitious role pattern between author and reader was successfully created. More specifically, the doctor-patient role set proved to be least face threatening in both studies, but only when an indirect politeness strategy was used. When however, a direct politeness strategy was used, study 1 showed the peer-peer role set to be the least face threatening. This suggests that indirectness and a well chosen role set can work together in reducing the perceived face threat. Results showed this to be the case in study 1, where a significant interaction effect was found.

The perceived persuasiveness of the messages was negatively affected by the perceived face threat. Both studies support this conclusion. The inclination to reactance had no influence on either the perceived face threat or the perceived persuasiveness. This suggests that reactance as a personality factor had no influence on how the message was perceived in terms of face threat or perceived persuasiveness. If there is a reactance-response it seems to be caused only by the message. This can be seen as an advantage when looking at it from a public information point of view: personal inclination to reactance does not have to be taken into account. From a theoretical perspective, one can wonder if the relationship between perceived face threat and perceived persuasiveness is indeed mediated by reactance, or that some other variable is at play. Further research may shed some light on this issue.

There are differences in the outcome of study 1 and study 2. In the first study the subject of the messages was criticism on behaviour believed to cause obesity. In the second study, the message warned readers about the dangers of being obese. Although both criticism and warning are examples

of face threatening acts, Brown and Levinson (1987) theorize that it is culturally dependent which face threatening act is more of an imposition. It could be that in the Dutch (or West-European) culture criticism is more of an imposition than warning someone, thus influencing the perceived face threat of the message. The results suggest that this is indeed the case: the overall mean perceived face threat in the first study is 4,43 but only 3,21 in the second study.

4.2 Practical recommendations for anti-obesity campaigning

The studies described in this paper clearly show that threatening the audience's face in an anti-obesity public health information campaign is a bad idea, because it has a significant and strong negative effect on the perceived persuasiveness. It also shows that using the doctor-patient role set in combination with an indirect and off record politeness strategy greatly reduces this face threat and subsequently increases the perceived persuasiveness of the anti-obesity message, both when it is criticizing obesity-causing behaviour or warning about the dangers of being obese. Therefore the practical recommendation of this paper for anti-obesity campaigning has to be: if it has to be said, let the doctor say it indirectly.

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REFERENCES

- Brehm, J.W. (1966). *A theory of psychological reactance*. New York: Academic Press
- Brown, P. & Levinson, S. (1987). *Politeness: some universals in language usage*. Cambridge: Cambridge University Press.
- Centers for Disease Control and Prevention (2006). *Overweight and obesity*. Retrieved on the 13th of November 2006 from <http://www.cdc.gov/nccdphp/dnpa/obesity/>
- Coney, M. & Steehouder, M. Role playing on the Web. Guidelines for designing and evaluating personas online. *Technical communication* 47, 327-340.
- Cornelis, L.H. (1997). *Passive and perspective*. Utrecht: Rodopi.
- Cupach, W.R. & Carson, C.L. (2002). Characteristics and consequences of interpersonal complaints associated with perceived face threat. *Journal of social and interpersonal relationships*, 19(4), 443-462.
- Hekman, M. (2002). In aanloop naar een nieuwe voorlichtingscampagne: Succesfactoren van 10 jaar campagne [electronic version]. *Voeding Nu*, juni 2002.
- Hoeken, H. (1998). *Het ontwerpen van overtuigende teksten: wat onderzoek leert over de opzet van effectieve reclame en voorlichting*. Bussum: Coutinho.
- Hong, S.-M. & Faedda, S. (1996). Refinement of the Hong Psychological Reactance Scale. *Educational and psychological measurement*, 56(1), 173-182.

- Jansen, F. & Janssen, D. (2005). U en je in postbus 51-folders. *Tijdschrift voor Taalbeheersing*, 27(3), 214-229.
- Jansen, L.H.M. (2005). *Role sets in safesexboodschappen: Een onderzoek naar het gebruik van role sets in geschreven boodschappen ter bevordering van secundaire chlamydiapreventie van laagopgeleide jonge vrouwen*. Universiteit Twente: Master thesis.
- Luyendijk, W. (2005, 2 juli). De tijdbom [electronic version]. *NRC Handelsblad*, pp. 12.
- Mokdad, A.H., Ford, E.S, Bowman, B.A., Dietz, W.H., Vinicor, F., Bales, V.S. & Marks, J.S. (2003). Prevalence of obesity, diabetes, and obesity-related health risk factors, 2001 [electronic version]. *Journal of the American Medical Association*, 289, 76-79.
- Nieuwboer, I., Maes, A.A. & Swanepoel, P. (2005). The persuasive power of peer guides in websites that promote HIV/AIDS voluntary counseling and testing. *IEEE International Professional Communication Conference Proceedings*.
- NIGZ (2006). *Thema: Overgewicht*. Retrieved on 13th of November 2006 from <http://focus.nigz.nl/index.cfm?act=info.verder&varrub=16>
- Pieterman, P., Hanekamp, J.C. & Baak, J.M. (2005). Overgewichtbeleid is onaanvaardbaar: overheid overschrijdt praktische en ethische grenzen medische interventie. *Medisch Contact*, 60(48), 1944-1947.
- Pratkanis, A.R. (2000). Altercasting as an influence tactic. In D.J. Terry & M.A. Hagg (Eds.), *Attitudes, behaviour and social context: the role of group norms and group membership* (pp. 201-226). Mahwah, NJ: Laurence Earlbaum Ass.
- Pratkanis, A.R. & Gliner, M.D. (2004). And when a little child shall lead them? Evidence for an altercasting theory of source credibility. *Current Psychology*, 23(4), 279-304.
- Steehouder, M.F. (2005). Using role sets to engage and persuade visitors of websites that promote safe sex. *IEEE International Professional Communication Conference Proceedings*.
- Van Zalk, F. & Jansen, F. (2004). 'Ze zeggen nog je tegen me'. Leeftijdgebonden voorkeur voor aanspreekvormen in de persuasieve webtekst. *Tijdschrift voor taalbeheersing*, 26(4), 265-277.
- Voedingscentrum (n.d.). *Risico's van overgewicht*. Retrieved on 20th of January 2006 from http://www.voedingscentrum.nl/voedingscentrum/Public/Dynamisch/gewicht+en+dieet/overgewicht/gezondheidsrisico__s/gezondheidsrisico_s.htm
- Whitehead, D. & Russell, G. (2004). How effective are health education programmes – resistance, reactance, rationality and risk? Recommendations for effective practice [electronic version]. *International Journal of Nursing Studies*, 41, 163-172.
- World Health Organization (2003). *Obesity and overweight*. Retrieved on 20th of January 2006 from http://www.who.int/dietphysicalactivity/media/en/gsf_s_obesity.pdf

APPENDIX A

Questionnaire: reactance

English original	Dutch translation
I become frustrated when I am unable to make free and independent decisions	Ik raak gefrustreerd als ik niet de mogelijkheid heb om vrije en onafhankelijke beslissingen te nemen
I become angry when my freedom of choice is restricted	Ik word boos als mijn keuzevrijheid wordt beperkt
It irritates me when someone points out things which are obvious to me	Het irriteert me als iemand me op dingen wijst die voor mij erg voor de hand liggen
Regulations trigger a sense of resistance in me	Voorschriften roepen bij mij weerstand op
I find contradicting others stimulating	Ik vind het stimulerend om anderen tegen te spreken
When something is prohibited, I usually think "that's exactly what I am going to do."	Als iets verboden is, denk ik meestal "dat is precies wat ik ga doen."
I resist the attempts of others to influence me	Ik verzet me tegen pogingen van anderen om mij te beïnvloeden
It makes me angry when another person is held up as a model for me to follow	Ik word boos wanneer ik een voorbeeld aan iemand anders moet nemen
When someone forces me to do something, I feel like doing the opposite	Als iemand me dwingt iets te doen, krijg ik de neiging het tegenovergestelde te doen
I consider advice from someone to be an intrusion	Ik beschouw advies van anderen als een inbreuk op mijn persoonlijkheid
Advice and recommendations induce me to do just the opposite	Advies en aanbevelingen zetten mij ertoe om juist het tegenovergestelde te doen

Questionnaire: perceived face threat (study 1, criticism)

English original	Dutch translation
I think this message is:	Ik vind deze boodschap:
- polite	- beleefd
- rude	- onbeschoft
- insensitive	- ongevoelig
- showed disrespect towards me	- respectloos
- justified	- terecht
- hostile	- vijandig
- showed contempt towards me	- minachtend ten op zichte van mij
- tactful	- tactvol

Questionnaire: perceived face threat (study 2, warning about danger)

English original	Dutch translation
This message:	Deze boodschap
- Constrained my choices	- Beperkt mijn keuzevrijheid om te doen en laten wat ik wil
- Took away some of my independence	- Neemt wat van mijn onafhankelijkheid weg
- Made me look bad in the eyes of others	- Stelt mij in een slecht daglicht
- Invaded my privacy	- Is een inbreuk op mijn privacy

Questionnaire: perceived persuasiveness

Dutch original	English translation
Ik vind deze boodschap:	I think this message is:
- Geschikt - Ongeschikt	- Suitable – not suitable
- Overtuigend - Niet overtuigend	- Persuasive – not persuasive
- Geloofwaardig - Niet geloofwaardig	- Credible – not credible
- Logisch - Onlogisch	- Logical – not logical
- Aanvaardbaar - Onaanvaardbaar	- Acceptable – not acceptable