

Listener reaction to referential form

Gunnvald B. Svendsen¹, Bente Evjemo¹, Jan A. K. Johnsen² & Svein Bergvik¹

¹Telenor Research & Development

{gunnvald-bendix.svendsen/bente.evjemo/svein.bergvik}
@telenor.com

²Norwegian Center for Telemedicine

jan.are.kolset.johnsen@telemed.no

Abstract

In a recent paper it has been shown that observers use referential form as an indication of how well acquainted interlocutors are. In the present study it is investigated if the referential form used by the speaker influences the listeners evaluation of the speaker. An experiment with eighty subjects was conducted. Subjects were told to imagine themselves being spoken to by a stranger and to rate how agreeable they would perceive the stranger depending upon the utterances he or she made. Sentences that referred both implicitly and explicitly to a shared experience. were employed in the experiment. The results indicates that listeners are rating speakers as more agreeable when the speaker is using an explicit rather than an implicit form of reference . Two explanations are suggested and the results are discussed in relation to relation formation in text based computer mediated communication. It is suggested that referential form could function as a cue in this context.

1 Introduction

Referring is a central aspect of communication, and studies of referential form, have generally¹ shown that interlocutors follow Grice's cooperative principle of communication: "Make your conversational contributions such as is required, at the stage at which it occurs, by the accepted purpose of the talk exchanges in which you are engaged" (Grice, 1975, p. 45). In deciding what form of reference to use in a conversation, the speaker may take the listener's perspective. For instance speakers shape their way of referring based on the assumed knowledge of the listener (Clark & Wilkes-Gibbes, 1986, Fussell & Krauss, 1992, Isaacs & Clark, 1987) and the cognitive load experienced (Horton & Keysar, 1996, Rossnagel, 2000). It is also well known that the referential expression is more effective when the topic is introduced at a later stage in a dialogue (Krauss & Fussell, 1990). The first time the topic is introduced, the referring could be rather complex:

"I'm looking for an invoice
from Doe et co, it's **pink**
and letter-sized".

When the topic is introduced anew at a later stage it's shortened:

¹ But see Bard et al 2000, Keysar, 1994, Keysar, 1997.

"Could you help me find **the invoice?**"

Referring by using a pronoun, as an implicit reference, is an example of an extreme simplification:

"I have found **it!**"

Implicit referring has two salient features, it is efficient (for the speaker) and it is easily misunderstood. Take the following example. Two persons, A and B, wait at a street corner for the light to turn green. A young boy runs into the street and is nearly overrun by a car. The boy makes it over the street, the car continues, the light turns green and A and B walk away. By coincidence A stands behind B in line to buy a newspaper later that day and A says as they see each other:

1) "If he continues to be so careless an accident is bound to happen sooner or later".

or

2) "If that boy who ran out into the street continues to be so careless an accident is bound to happen sooner or later".

In example 1) A refers implicitly to the event in his or her utterance. The utterance is efficient but could also be misunderstood, for instance B might wonder if A refers to the boy or to the driver. According to Grice's cooperative principle of communication, A must phrase the utterance so that it is quite evident for both A and B what A refers to. Thus in 1) A seems to imply something like "You know what I am thinking about, and I know that you know". The utterance in example 2) does not carry the same implication.

Recently it has been suggested that the referential form implies a relation between the interlocutors. Svendsen and Evjemo (2003) showed that observers perceive interlocutors that use implicit referring as having a closer relation than interlocutors that make explicit references. Svendsen and Evjemo explained the phenomenon by

arguing that an implicit reference implies more than just a shared experience. Following Grice's cooperative principle, the speaker must be quite sure that the listener remembers the event and that the listener understands what he or she is referring to. Thus they argued that an implicit reference to a shared experience implies a higher degree of familiarity between the interlocutors than an explicit reference. Svendsen and Evjemo further showed that implicit referring occurs more often between family members than between colleagues, while it is less frequent in phone conversations than in face-to-face conversations. They suggested that the latter partly could account for the alienation felt in phone conversations compared to face-to-face conversations.

In the above-mentioned study, subjects rated interlocutors that used implicit referring as having a closer relation than interlocutors that used explicit referring. The finding is hardly surprising since an implicit reference to some topic tends to be meaningless if the interlocutors have no shared experience, while an explicit reference to the same topic is meaningful. Thus, a person that listens in on a conversation and assumes that the interlocutors try to make sense to each other, also must assume that the interlocutors that use implicit referring are better acquainted than those who do not refer in this way - other things being equal.

While it is no surprise that a person listening in on a conversation assesses the relation between the interlocutors in this way, it is harder to predict how the person spoken to would react to being spoken to in an implicit versus explicit manner. First, it is quite possible that the listener will not react differently to utterances referring implicitly or explicitly to an earlier shared experience. However, it could also be argued that a listener would prefer being spoken to in an explicit manner. In the above example B would react positively to being spoken to in an explicit manner because this requires less mental effort on his or her part. It could also be argued that B, under certain circumstances, would prefer the implicit utterance if an implicit utterance indeed imply familiarity between speaker and listener. The present study tries to shed light on this issue

by investigating how subjects react to implicit and explicit utterances.

2 Method

An experiment was conducted to assess whether the way a speaker refers to a shared experience influences how the listener perceives the speaker.

2.1 Subjects

Eighty subjects (Ss) aged 18 to 51 were recruited from a broad population including university students and teachers, pre-school personnel, undergraduate teachers, researchers and administrative personnel. The subjects were not given any compensation for their participation.

2.2 Procedure

Ss were given a short text describing of an imagined situation where they were standing in line at the cashier in a supermarket. A stranger was standing next in line behind them. When Ss came to the cashier they couldn't find their wallet, and after some searching, stepped out of the line and

<p>Sentences in explicit form: A) Did you find the wallet when you wanted to pay yesterday? B) Did you get to pay when you were at the store yesterday C) It has happened to me a lot of times that I have been standing looking for my wallet like you did when you wanted to pay yesterday D) Did you have to leave empty handed or were you able to pay at the cashier yesterday ?</p> <p>Sentences in implicit form: A) Did you find it? B) Did you get to pay? C) It has happened to me a lot of times. D) Did you have to leave empty handed?</p>

Table 1. The four sentences (A to D) used in the experiment in explicit and implicit form

asked the stranger to pass them. The stranger passed, paid and left. After a moment they found

their wallet, paid and left. Ss were further instructed to imagine that they met the stranger at a later time and that the stranger in this meeting uttered one of four sentences.

For each sentence Ss were asked to rate how agreeable or sympathetic² they would have perceived the stranger to be if he or she had uttered that sentence. The rating was done on a 7-point Likert scale, with the anchors "very little" and "very much". Ss were given a sheet of paper with a description of the situation, the four different sentences, and the seven point rating scale beneath each of the sentences.

2.3 Design and analysis

The sentences had either an implicit or an explicit form as seen in Table 1. Subjects were randomly divided into two groups, an "explicit – implicit" group and an "implicit-explicit" group, with forty ss in each group. In the *explicit-implicit* group the subjects were presented with sentence A in explicit form, sentence B in implicit form, sentence C in explicit form and sentence D in implicit form. In the *implicit – explicit* group the order was reversed, so that sentence A had implicit form, sentence B had explicit form and so on.

Thus the independent variables were *presentation order (order)* with the levels "implicit – explicit" and "explicit – implicit", and *sentence* with four different levels corresponding to sentence A to D. *Order* is a between groups factor, while *sentence* is a repeated measure, within subjects, factor. Thus the design is a 2 way mixed model ANOVA with 2 X 4 levels. The dependent variable was the Ss score on the Likert scale.

A significant *sentence* effect would indicate that the sentences used make different impressions on the Ss, which is neither surprising nor interesting. A significant *order* effect would indicate that presentation order as such plays a part in the results. That would be a spurious effect. The interesting effect is the *order*sentence* interaction. A significant interaction would indicate that the referring used in the sentences influences

² The exact wording in Norwegian was: "Hvor sympatisk opplever du denne personen". The Norwegian concept "sympatisk" is roughly equivalent to the English concept agreeable.

how agreeable Ss think the speaker is, thus supporting that hypothesis.

3 Results

The analysis reveals that both the factor *sentence* and the *order*sentence* interaction are highly significant (see Table 2). As stated earlier, a significant sentence factor merits no interest. The significant interaction shows, however, that referential form influences the listener's evaluation

Effect	SS	df	F	p
Order	4.3	1	1,3	>0.2
Sentence	79,8	3	26,6	<0,000
Sentence X Order	43,9	3	14,6	<0.000

Table 2: Results of ANOVA

of the speaker. The interaction is easily seen in figure 1. The dotted line represents the likeability scores when the sentence A is uttered in it is explicit form, B in it is implicit, C in it is explicit and D in it is implicit. The solid line represents

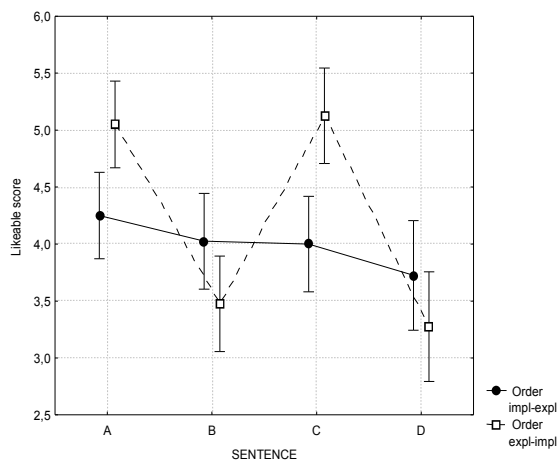


Figure 1. Ss assessment of how agreeable a speaker is perceived depending upon the sentence spoken and whether it refers explicitly or implicitly to the theme

the scores when the order is reversed, that is: implicit-explicit-implicit-explicit. In all four instances, uttering the sentences in explicit form is scored as more agreeable or sympathetic than uttering the sentences in implicit form. Thus, the

results show two things: First, the referential form of an utterance influences how the listener reacts towards the speaker. Secondly, given the circumstances of this experiment, the listener prefers an utterance that is framed in an explicit manner over one that is framed implicitly.

4 Discussion

The results show that people react to referential form and that an implicit way of framing a sentence makes a less agreeable impression than framing the sentence explicitly. The result can be explained by what may be termed the “effort-hypothesis” eluded to earlier; that a sentence in implicit form required more mental effort of the listener. Thus, a speaker that uses implicit referring makes it easy on him or herself by imposing work on the listener. It is hardly surprising that subjects find this the least likeable course of action.

The results could also be explained in another way, which may be coined the “relation-hypothesis”. In the experiment the subjects were told that a stranger spoke to them. A speaker who wishes to be understood and uses an implicit reference to a shared experience must assume that the listener remembers the instance referred to quite well, or else the speaker is in breach of the Griceian cooperative principle. Thus a speaker using an implicit reference meta-communicates to the listener that “I remember our previous engagement quite well, and I assume that you remember it too.” The listener presumably interprets this meta-communication contingent upon his or her relation to the speaker. If the relation is one that the listener wants or regards as positive, he or she would probably appreciate that the speaker remembers their earlier engagement. If the listener does not want any relation to the speaker, does not like the relation they have, or does not know the speaker, the implication that the listener remembers their shared history could be interpreted as imposing and rude. It might be argued that this is what happened in the present experiment.

The results do not indicate which of these explanations to favor, but the explanations give dif-

ferent predictions. The “effort-hypothesis” predicts that the listener would prefer the speaker to use explicit reference regardless of the relationship the listener would like to have to the speaker. The “relation-hypothesis” predicts that the listener would prefer that the speaker use implicit referring when the listener wants or regard a relation to the speaker as positive. Thus, further research should make it possible to choose between the hypotheses.

The results might shed light on relation formation and impression formation in text based computer mediated communication (CMC). Classic theories of media choice and media effects, with the so called 'cues filtered out' perspective (Culnan and Markus, 1987) predict that computer mediated communication would lead to task oriented communication and little or no relation forming because the media lacks the ability to convey non-verbal cues (Daft and Lengel, 1984, Rutter 1987, Short et al 1976, Sproull and Kiesler, 1986) However, it is well documented that relationships are formed through CMC (Kummervold et al 2002, Lea and Spears, 1995, Park and Floyd, 1996, Utz, 2000). This has led to theories that explain relation formation in spite of a largely textual communication channel (Jacobson, 1999, Lea and Spears, 1995, Walther, 1992). These theories assume that interlocutors are motivated to develop impressions of others in spite of limitations in media, and that they utilize the cues they have at their disposal both to give and gain information. The relation forming process takes longer however, since few cues are available [Walter, 1992, Walter et al 2001].

Research aimed at uncovering the cues used to convey impressions and build relations in CMC points to verbal and textual cues, like self disclosure, language intensity, participants' screen names, form of address, and the discourse in which they engage as central (Jacobson, *ibid*, Walter and Burgoon, 1992). Further, participants' linguistic style seems to play a role (Lea and Spears, 1992). Apart from the verbal messages themselves, chronemic cues, ie information about when messages have been sent, and emoticons or smilies have been shown to play a role in assessment of messages (Walther and D'Addario, 2001, Walther and Tidwell, 1995).

Granted that referential form influences how interlocutors perceive each other, as the present results indicate, referential form must be considered a new candidate as a cue users may employ in assessing each other on-line. This is especially the case since referential form can be manipulated just as well in text as in speech.

The present research will be continued with two foci. First it will be investigated which of the two hypotheses set forth earlier fit the facts best. Secondly, the use of referential form in CMC will be investigated..

References

- Bard, E G, Anderson, A H, Sotillo, C, Aylett, M, Doherty-Sneddon, G, & Newlands, A Controlling the intelligibility of referring expressions in dialogue. *Journal of Memory and Language*, 42,1(2000), 1-22.
- Clark, H H, & Wilkes-Gibbes, D. , “Referring as a collaborative process”, *Cognition*, 22 (1986),1-39.
- Culnan, M J.; & Markus, ML. Information technologies. In F. M. Jablin, et al, Eds, *Handbook of organizational communication: An interdisciplinary perspective*. (420-443). Newbury Park, CA: Sage1, 1987.
- Daft R, Lengel R H. Information richness: A new approach to managerial behavior and organizational design. In Staw B, Cummings L L, (eds) *Research in Organizational Behavior*. Greenwich, Conn. JAI Press, 191-233, 1984.
- Fussell, S R. & Krauss, R M. Coordination of knowledge in communication: Effects of speakers' assumptions about others' knowledge. *Journal of Personality and Social Psychology*, 62 (1992), 378-391.
- Grice, H P. Logic and conversation, in Cole, P. and Morgan, J. (eds), *Speech Acts*, New York, Academic Press, (1975), 41-58.
- Horton, W S & Keysar, B When do speakers take into account common ground? *Cognition*, 5, (1996),91-117
- Isaacs, E A, & Clark H H. References in conversations between experts and novices. *Journal of Experimental Psychology: General*, 116, (1987), 26-37
- Jacobson, D. Impression Formation in Cyberspace: Online Expectations and Offline Experiences in Text-based Virtual Communities, *Journal of Computer-Mediated Communication*, 5,1,(1999)

- Keysar, B. The illusory transparency of intention: Linguistic perspective taking in text. *Cognitive Psychology* 26, (1994)165-208
- Keysar, B. Unconfounding common ground. *Discourse Processes*, 24, (1997), 253-270.
- Krauss, R M & Fussell, S R. Mutual knowledge and Communicative effectiveness In J. Galegher, R. Kraut, C. Edigo (eds) *Intellectual Teamwork*. Hillsdale: LAE 111-145, 1990.
- Kummervold P E, Gammon D, Bergvik S, Johnsen J A, Hasvold T, Rosenvinge J H. Social support in a wired world: Use of mental health discussion forums in Norway. *Nordic Journal of Psychiatry*; 56 2002), 59-65
- Lea, M., & Spears, R. Paralanguage and social perception in computer-mediated communication. *Journal of Organizational Computing*. 2, (1992) 321-341.
- Lea, M., & Spears, R. Love at first byte? Building personal relationships over computer networks. In J. T. Wood & S. Duck (Eds.), *Understudied relationships: Off the beaten track*, 197-233. Newbury Park, CA: Sage 1995
- Parks, M. R.; & Floyd, K. Making friends in cyberspace. *Journal of Communication*, 46, 80-97 also *Journal of Computer Mediated Communication*,46,1(1996).
- Rosnagel, C. Cognitive load and perspective taking: applying the automatic-controlled distinction to verbal communication. *European Journal of Social Psychology*, 30 (2000) 429-445
- Rutter D R. *Communicating by Telephone*. Oxford, Pergamon Press, 1987
- Short J, Williams E, Christie B. The social psychology of telecommunication. London, Wiley, 1976
- Sproull, L., & Kiesler, S. . Reducing social context cues: Electronic mail in organizational communication. *Management Science*, 32,11 (1986)1492-1512.
- Svendsen, G.B. & Evjemo, B. Implicit referring as an indication of familiarity in face-to-face and phone conversations. *Proc. Interact* 2003, 920-923.
- Walther, J B. Interpersonal effects in computer mediated interaction: A relational perspective. *Communication Research*, 19,1(1992) 52-90.
- Walther, J. B., & D'Addario, K. P. The impacts of emoticons on message interpretation in computer-mediated communication. *Social Science Computer Review*, 19,(2001) 323-345.
- Walther, J. B., & Burgoon, J. K. Relational communication in computer-mediated interaction. *Human Communication Research*, 19,1(1992) 50-88
- Walther, J. B., Slovacek, C., & Tidwell, L. C. . Is a picture worth a thousand words? Photographic images in long term and short term virtual teams. *Communication Research*, 28, (2001)105-134.
- Walther, J. B., & Tidwell, L. C. Nonverbal cues in computer-mediated communication, and the effect of chronemics on relational communication. *Journal of Organizational Computing*, 5, (1995) , 355-378.
- Utz, S. Social information processing in MUDs: The development of friendships in virtual worlds. *Journal of Online Behavior*, 1,1(2000).