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Conversational Expectations as a Basis for Order Effects in Persuasion

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The current study demonstrates the role of conversational processes in order effects in persuasive communications. Conversational rules guide individuals' expectations about the position of the most important arguments within a persuasive message. We argue that these expectations contribute to the influence of arguments on attitude change, that is, if the important arguments are expected at a certain position, they become more influential than the other arguments of the persuasive message. In the current study, we presented participants with a persuasive message in which the order of arguments was experimentally manipulated. An order effect occurred when the conversational expectation regarding the order of arguments was applicable. However, no reliable order effect was observed when the conversational expectation was discredited. Importantly, consistent with the explanation of conversational order effects, the interactive effects of argument order and conversational expectation on the attitude was mediated by the perceived importance of the arguments.

Keywords: *order effects; conversational rules; persuasion; attitude change*

Imagine your partner has been begging you for over a week to finally buy a new electronic coffeemaker. You comply with this request in order to reestablish harmony in your house. You go to a very fancy department store in town and examine the various models on display. A quite attractive salesperson approaches you and asks if you are interested in the new models of a well-known company. You appreciate this offer and ask him to give you good reasons to buy a rather expensive coffeemaker. After flashing you a charming smile he presents his arguments. When would you, as the listener, expect him to present the most important arguments of his message? Would you expect his most important arguments at the beginning or at the

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end of his message? The present study examines how conversational rules guide recipients' expectations about the position of the most important arguments in a persuasive message and how these expectations are responsible for order effects in attitude change.

Order effects have been intensively investigated in various domains (for overviews see Anderson, 1981, 1996; Hogarth & Einhorn, 1992). Historically, order effects were of great concern with respect to two different persuasive message structures, namely one- and two-sided communications (e.g., Hovland, Janis, & Kelley, 1953). Two-sided communications consist of arguments both for (pro) and against (con) a position, but one-sided communications consist of either pro or con arguments that may vary in strength (persuasiveness). The question regarding these two message structures has been whether one set of arguments (for instance, in two-sided communications, the con arguments) should be presented before the other set of arguments (the pro arguments) or vice versa to maximize the effect of persuasion (e.g., a product being bought).

There is mixed evidence for the impact of order within these two message structures. Evidence for primacy effects was found in two-sided communications (e.g., Knower, 1936; Lund, 1925), as well as in one-sided communications (e.g., Sponberg, 1946), and recency effects were also documented for both of these message structures (e.g., Cromwell, 1950). Various cognitive and motivational moderator variables have been investigated as possible explanations for these mixed results (e.g., Crano, 1977; Haugtvedt & Wegener, 1994; Hogarth & Einhorn, 1992).

We do not deny the importance of various cognitive and motivational variables (see for example Hovland et al., 1957), or task characteristics (e.g., Hogarth & Einhorn, 1992) for explaining order effects, but we do argue that recipients' *expectations* about the argument order is a significant factor that has been widely overlooked. Igou and Bless (2003) hold that, depending on the type of persuasive communication that is presented, individuals expect the important arguments to occur either at the beginning or at the end of a message. Specifically, in a one-sided communication recipients expect to receive the most important arguments at the beginning of the message, but in a two-sided communication recipients expect to receive the most important arguments at the end of a message. These expectations are believed to result in attitudinal primacy and recency effects, respectively. In other words, order effects in persuasion are, in part, based on the receiver's expectations about the order in which the most important and less important arguments are presented.

This reasoning builds on prior research that relates rules of everyday conversations to cognitive processes in social cognition (Higgins, 1981; Schwarz, 1994, 1996). These rules are based on at least four maxims, which constitute the *cooperative principle* of conversation (maxims of quality, relation, manner, and quantity; Grice, 1975; see also Clark, 1985). In combination, these maxims imply that the most important piece of information is presented at the beginning of a message.

For instance, beyond the demand for relevant information (maxim of relation), there is an expectation that only necessary information will be presented (maxim of quantity), and that communicators avoid wordiness (maxim of manner). It is argued that these rules serve the function of an efficient information exchange (e.g., relatively quick construction of a fairly accurate representation of the target). Consistent with these conversational processes, we (Igou & Bless, 2003) hypothesized that in persuasive communications recipients expect communicators to present their most important arguments at the beginning of their messages. Consistent with this reasoning, it was reported that recipients of one-sided communications had these expectations, and primacy effects occurred consistently when recipients were confronted with this message structure.

But when do recipients expect the most important piece of information in a two-sided communication? We argue that in two-sided communications the most important arguments are expected at the end of the message (Igou & Bless, 2003). This deviation from expectations for one-sided communications is found in the *inconsistent* implications of the arguments. In other words, this inconsistency serves as a marker, and thus draws attention to the "new" arguments. From the recipient's perspective, it is assumed that this contradictory information is particularly important—otherwise the presentation of this additional information would violate conversational rules (specifically, the maxim of quantity; cf. Clark & Haviland, 1977; Haviland & Clark, 1974). Krosnick, Li, and Lehman (1990) provide a similar reasoning to explain results of well-known studies that demonstrate peoples' preference for individuating information over base rate information (e.g., Kahneman & Tversky, 1973). In most studies the base rate information was presented before individuating information. The authors argue that this presumably led recipients to believe the latter information to be more important than the first—leading to recency effects (i.e., less influence of base rate information). Consistent with these assumptions, we argue that the adherence to the maxim of quantity leads to the expectation of recipients that the arguments at the *end* of a two-sided communication are those that support the position of the communicator. As a consequence of this expectation, recipients focus on this part of the communication, which in turn results in recency effects. Importantly, whenever the conversational expectations are called into question, order effects should be reduced, thus indicating the conversational basis for these effects (for a detailed discussion of this rationale see Schwarz, 1994, 1996).

A crucial aspect of this conversational perspective on order effects is the assumption that recipients' expectations lead them to perceive the *importance of the arguments* as a function of their order (when these expectations are applicable). Although our earlier findings (Igou & Bless, 2003) are consistent with this reasoning, this crucial mediational relationship has not been demonstrated (see also Krosnick et al., 1990). The current study was primarily intended to test this mediational hypothesis. The message arguments were designed to resemble a typical two-sided communication with pro and con arguments that do not directly

contradict another (nonrefutational message structure; e.g., Allen, 1991; Allen et al., 1990). For example, a salesperson might highlight two characteristics of a product (e.g., a coffeemaker), one that is a pro argument (e.g., automatic off-switch), and a second that is a con argument (e.g., obsolete model). So far, the conversational recency effect was only demonstrated for a two-sided communication with two arguments that directly contradicted another (refutational message structure; see Igou & Bless, 2003, Study 2). One might argue that it is easier to perceive a difference in the importance of direct contradictions compared to indirect contradictions, which should reduce the salience of the content (for a discussion of refutational versus nonrefutational message structures see Allen, 1991, and Allen et al., 1990). If so, one could question the reliability of conversational recency effects across types of two-sided communications. In contrast to this reasoning, we also expect such conversational effects for nonrefutational two-sided communications.

To test our hypotheses, participants were presented with a typical two-sided communication. The order of the *nonrefutational* pro and con arguments was varied: for half of the participants the conversational rule was discredited by informing them that the order of the arguments was random. Recency effects were expected to be less pronounced when the conversational rule was discredited. Most important, it was expected that the conversational recency effect would be mediated by the *perceived importance* of the arguments.

Method

Participants and Design

One hundred and forty-two students from the University of Heidelberg were randomly assigned to the conditions of a 2 (order of arguments: pro/con vs. con/pro) $\times$ 2 (applicability of conversational expectation: yes vs. no) factorial design.

Materials and Procedure

Participants were given a questionnaire that allegedly assessed their knowledge and attitudes in relation to the general population. They were told that they would read a dialogue between two colleagues who met in a store, one of whom was looking for an electronic coffeemaker. They also learned that the dialogue would contain pro and con arguments regarding the purchase of the coffeemaker. Participants were asked to follow the dialogue from the perspective of the recipient of the message, who was also the person looking for a coffeemaker. Within this dialogue, participants were then confronted with three pro and three con arguments concerning the purchase of a specific coffeemaker. The quality of the arguments was pretested with 30 independent participants. The pro arguments were: “It has an automatic off-switch,”

"it is easy to clean," and "it has a built-in lime protection." The con arguments were: "It can only contain a maximum of 4 cups," "it is a discontinued model without available spare parts," and "it can only be used with one specific sort of paper filters."

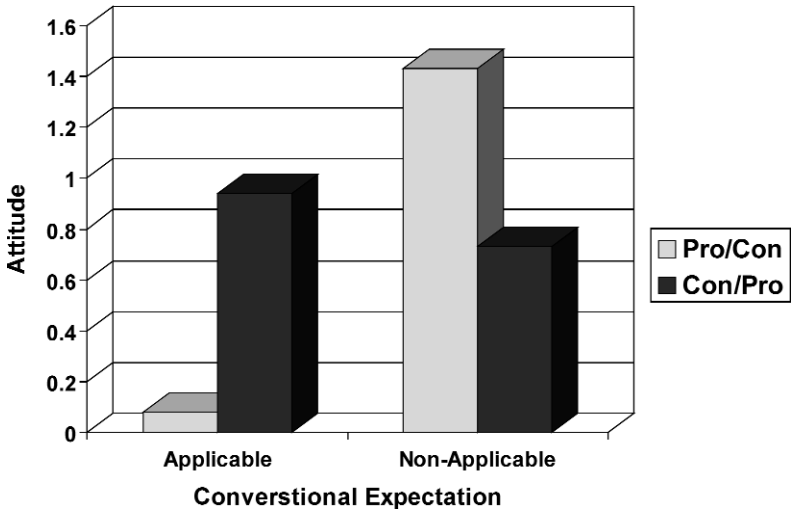
Independent variables The order of the arguments was varied experimentally: All pro arguments came either before or after the con arguments. To discredit the conversational rule of order, half of the participants were told that the information about the coffeemaker was presented in random order. To reinforce the credibility of the information concerning the randomness, these participants were informed that the arguments of the dialogue had been written on different pieces of paper. After that, blocks of arguments were presented on different pieces of paper that were fastened to the appropriate place in the dialogue.

Dependent variables Following the presentation of the dialogue, participants were asked for their evaluation of the product and their desire to acquire it. Both dependent measures consisted of eleven point scales, the first scale ranging from −5 (*bad*) to 5 (*good*), and the second scale ranging from 1 (*absolutely no desire*) to 11 (*great desire*). The arguments were presented a second time and participants were asked to indicate the importance of each argument on an 11-point scale ranging from 0 (*not at all important*) to 10 (*very important*). The order of these ratings was identical to the order of the arguments in the dialogue. At the end of the session, participants were debriefed and received a candy bar as reward for their participation.

Results

Due to the conceptual similarity of the two dependent measures, a composite measure was computed (alpha = .85; ranging from −5, *unfavorable*, to 5, *favorable*) and entered into an analysis of variance (ANOVA).[1] We did not observe a main effect for argument order on the evaluation of the product, $F < 1$. Participants' favorability judgments of the coffeemaker were insignificantly higher when the conversational expectation regarding the argument order was non-applicable ($M = 1.11$, $SD = 1.93$) than when it was applicable ($M = 0.51$, $SD = 2.29$), $F(1,138) = 2.64$, $p < .10$, $d = 0.28$. However, the hypothesized interaction between these variables was significant, $F(1,138) = 4.57$, $p < .05$, $d = 0.36$ (see Figure 1). As predicted, the recency effect was observed only when the conversational expectation was *not* discredited; that is, participants' ratings were lower when the con arguments followed the pro arguments ($M = 0.08$, $SD = 1.67$), as compared to the reverse order of presentation ($M = 0.94$, $SD = 2.11$), $t(70) = 1.93$, $p = .06$, $d = 0.45$. This recency effect was not observed, and in fact was slightly reversed, when the conversational rule was discredited, ($M = 1.43$, $SD = 2.47$ versus $M = 0.79$, $SD = 2.08$), $t(68) = 1.18$, $p > .20$, $d = 0.28$.

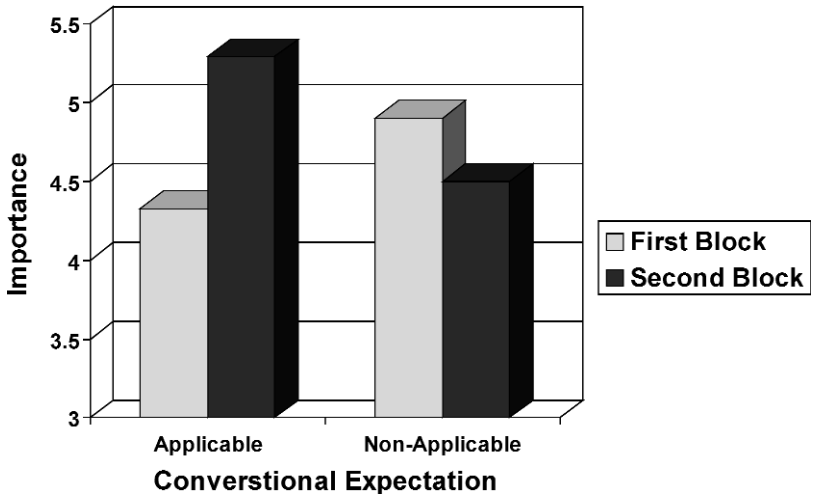
Figure 1
Attitude as a function of order of arguments (pro/con vs. con/pro) and of applicability of the conversational rule (yes vs. no). Scale: –5 (*unfavorable*) to 5 (*favorable*).



Next, we tested the impact of argument order and rule applicability on the perceived importance of the arguments. We created a composite measure for the importance of the arguments.[2] The results of an ANOVA indicate that perceived importance was a function of the interaction between order and applicability, $F(1,138) = 7.6$, $p < .01$, $d = 0.47$. As can be seen in Figure 2, when the conversation rule was not discredited, arguments that were presented last were rated as more important ($M = 5.29$, $SD = 1.53$) than arguments that were presented first ($M = 4.33$, $SD = 1.32$), $t(70) = 2.85$, $p < .01$, $d = 0.67$. However, when the conversational rule was discredited, this difference was eliminated and slightly reversed, ($M = 4.5$, $SD = 1.26$ versus $M = 4.9$, $SD = 1.72$), $t(68) = 1.11$, $p > .25$, $d = 0.27$.

An additional analysis was applied to test the assumption that the crucial effect of order and applicability of conversational expectation on participants' attitudes was meditated by perceived argument importance (cf. Baron & Kenny, 1986). The argument order (pro/con vs. con/pro, coded as 1 and 0), the applicability of the conversational expectation (yes vs. no, coded as 1 and 0), and the interaction of the two were simultaneously entered as predictor variables into the mediational analysis. Figure 3 indicates that the argument order and the applicability of the conversational expectation were not reliable predictors of the perceived importance of arguments, $\beta = -.13$, $t(138) = -1.14$, $p > .25$, $f^2 = 0.01$ and $\beta = -.19$, $t(138) = -1.63$,

Figure 2
Perceived importance as a function of position of arguments (beginning vs. end) and of applicability of the conversational rule (yes vs. no). Scale: 0 (*not important*) to 10 (*important*).



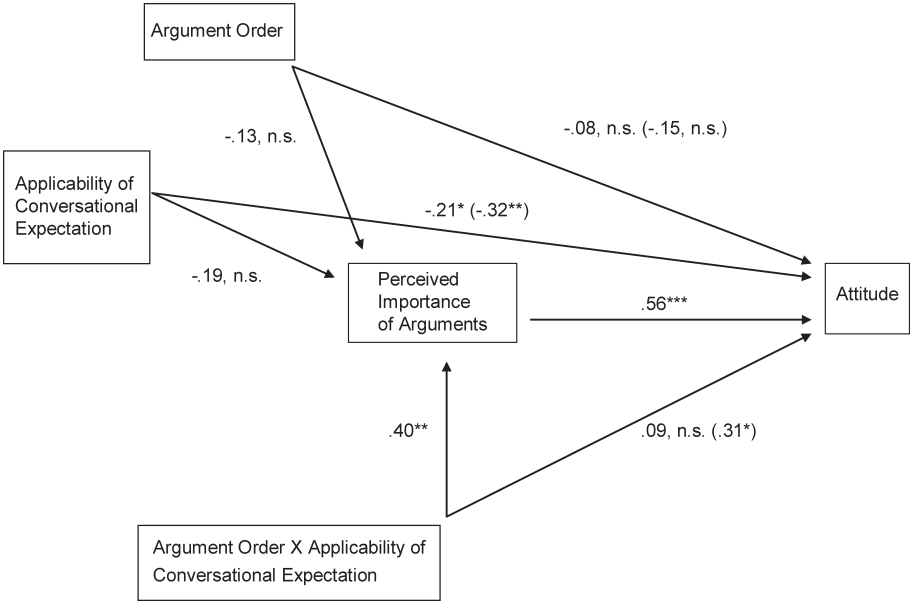
$p > .10$, $f^2 = 0.02$, respectively.[3] Importantly, the crucial interaction of these variables (argument order × applicability of conversational expectation) predicted perceived argument importance, $\beta = .40$, $t(138) = 2.76$, $p < .01$, $f^2 = 0.06$.

In a next step, we regressed participants' attitude judgments on both independent variables and their interaction. Argument order had no effect on attitude, $\beta = -.15$, $t(138) = -1.28$, $p > .20$, $f^2 = 0.01$; however, we observed an effect of the applicability of the conversational expectation on participants' attitudes, $\beta = -.32$, $t(138) = 2.70$, $p < .01$, $f^2 = 0.05$. Importantly, this effect was qualified by the interaction of the argument order and the applicability of the conversational expectation, $\beta = .31$, $t(138) = 2.14$, $p < .05$, $f^2 = 0.03$.

When we added argument importance to the regression model, we observed that this variable significantly predicted participants' attitude, $\beta = .56$, $t(137) = 7.74$, $p < .001$, $f^2 = 0.44$. Again, argument order did not predict attitude, $\beta = -.08$, $t < 1$, $f^2 < 0.01$, however, we observed an effect of applicability of the conversational expectation, $\beta = -.21$, $t(137) = -2.14$, $p < .05$, $f^2 = 0.03$. Importantly, the interactive effect of both predictors on attitude was eliminated, $\beta = .09$, $t < 1$, $f^2 < 0.01$.

The Sobel's Test revealed that the rated importance of arguments served as a mediator for the interactive effect of argument order and applicability of

Figure 3
Mediational analysis: Effects of argument order and conversational context on attitude, mediated by perceived importance of arguments.



conversational expectation on attitude, $Z = 2.60$, $p < .01$. According to Baron and Kenny (1986), this pattern reflects perfect mediation. Note that the effect for the applicability of conversational expectation on attitude was not reliably mediated by the perceived importance of arguments ($Z = -1.59$, $p > .10$ for the Sobel's Test).

Discussion

The study examined recency effects in nonrefutational two-sided communications, their conversational basis, and the mediating processes. Overall, the findings are in line with our hypothesis. As predicted, a target was judged as more favorable when pro arguments followed con arguments than for the reversed order, and this recency effect was reduced when the conversational expectation was discredited. Importantly, consistent with our prediction, it was observed that the second set of arguments was perceived to be more important than the first, but this was the case *only* when the conversational expectation was applicable. Moreover, the impact of

argument order and applicability of conversational expectation on favorability of the target was mediated by the perceived importance of the arguments. Specifically, when the analysis controlled for this impact, no direct influence of the interaction on the attitude judgments was obtained.

The present findings support our general hypothesis that order effects in persuasion are partly due to recipients' assumptions about the order of arguments. We argue that recipients expect communicators' most important arguments at a certain position within persuasive messages. Thus, by being cooperative (e.g., Grice, 1975), recipients infer the quality of a target as a function of the order in which a communicator presents her arguments. For one-sided communications, recipients expect communicators to present their important arguments at the beginning of the message. However, for two-sided communications they expect the most important arguments at the end (Igou & Bless, 2003, Study 1).

The important feature that defines the difference between one- and two-sided communications is whether arguments have opposing implications. We argue that this defining feature is responsible for the expectation that recipients hold: As long as arguments have similar implications, individuals expect the most important arguments at the beginning of the message (see Igou & Bless, 2003). However, when implications of arguments are inconsistent with arguments that were presented before, recipients' expectations switch. Then recipients expect the most important arguments at the end of the message, leading to recency effects.

Compared to Igou and Bless (2003, Study 2), the two-sided communication of the current study differed in the number of arguments and in how these arguments related to each other. Specifically, a *nonrefutational* instead of a refutational two-sided communication (e.g., Allen, 1991; Allen et al., 1990) was presented. Therefore, these results demonstrate the robustness of conversational recency effect across different stimulus materials and structures of two-sided communications.

These results are in accordance with previous research on the impact of conversational rules on order effects (e.g., Igou & Bless, 2003; Krosnick et al., 1990). Krosnick and colleagues investigated base rate neglect (e.g., Kahneman & Tversky, 1973) as a function of conversational processes. According to their reasoning, individuals neglected the base rate in part because this information was presented prior to the conflicting individuating information, thus reflecting a recency effect. Krosnick and colleagues attributed this recency effect to conversational rules. Individuals expect the most important information at the end because "the speaker should only give additional information if it is highly relevant and informative, so the experimenter must believe that the individuating information should be given special weight" (Krosnick et al., 1990, p. 1141). On the theoretical level the current approach is similar, but it is argued that the base rate neglect scenario is a special case of two-sided persuasive communications in general (see Igou & Bless, 2003).

Interestingly, in the mediational analysis arguments were evaluated as more important when the applicability of the conversational expectation regarding the

order of arguments was discredited. In addition, for the same condition we observed a (nonsignificant) increase in participants' attitudes. This may indicate that explicit hints about how to interpret messages may result in a favorable evaluation of the actual conversation and may thus transfer to the target in question. That in itself is an interesting issue, however, we did not find a similar tendency in earlier studies (Igou & Bless, 2003) and in the current study the described tendency was qualified by the predicted interactions. Therefore, we conclude that this tendency does not reduce the validity of our central claim.

As hypothesized, the second block of arguments was perceived to be more important than the first. However, the order of the arguments affected importance ratings less when the conversational expectation about the argument order was non-applicable. Presumably, in these conditions, participants judged the importance of arguments more on the basis of idiosyncratic criteria than on the basis of the argument order. This may explain why overall the reliability of the perceived importance of arguments was low. Interestingly, despite this rather low reliability, we observed convincing results for perceived argument importance as a crucial mediator for the effects of arguments order and the conversational context on participants' attitudes.

We conceptualized the inferred importance of arguments as the mediating variable. It could be argued that the perceived importance of arguments is not the only mediating process. Note that we do not deny that other variables may also contribute in this process. For example, as described above, *after* the inferred importance of arguments, individuals may allocate more processing effort on those arguments that seem to be most important. However, it is theoretically also conceivable that recipients process all presented arguments (especially under high elaboration condition), and that the final judgment is a function of weighing the arguments by considering the conversational implications of importance as a function of their order. Future studies should examine whether these conversational expectations on the differential impact of arguments are mediated by the difference in effort that is allocated to the arguments or by a weighing process.

In this study participants were informed in advance that they would be confronted with pro and con arguments regarding the purchase of a coffeemaker. The expectation of being confronted with a certain type of persuasive communication (e.g., two-sided) may influence the elaboration of subsets of arguments. However, given that in earlier studies we also observed conversational recency effects when participants were not informed about the message structure (e.g., Igou & Bless, 2003, Study 2) it seems that the occurrence of conversational order effects is independent of this sort of expectation.

Under which conditions are conversational order effects more or less likely to occur? We pose that recipients' expectations regarding the position of the most important arguments guide information processing. Specifically, we argue these expectations lead recipients to focus in more detail on a subset of message arguments instead

of carefully scrutinizing all of the arguments. If, however, recipients are motivated (and capable) to process all message arguments in detail, conversational order effects may be reduced. Therefore, at least in this respect, the conversational expectations regarding the order of arguments may resemble "heuristics" or "energy-saving devices" (cf. Macrae, Milne, & Bodenhausen, 1994).

However, it is also conceivable that under some conditions these conversational expectations may become *more* influential under *high* elaboration conditions. For example, imagine recipients who are motivated to impress others by counterarguing the position of the communicator (for impression motive, see Chaiken, Liberman, & Eagly, 1989; Eagly & Chaiken, 1993). Recipients may infer the position of the communicator by relying on the conversational expectations described above (see also Igou & Bless, 2003) before counterarguing the subset of arguments that seem representative for this position. As a consequence, this "biased" elaboration (e.g., Eagly & Chaiken, 1993) should result in more pronounced recency effects.

On a general level our reasoning is consistent with dual process models of persuasion (e.g., Chaiken et al., 1989; Petty & Cacioppo, 1986). That is, the role of these conversational expectations may change as a function of individuals' processing effort and processing motive. Conversational order effects may be *less* likely to occur under high elaboration conditions if individuals engage in an accuracy-motivated, complex processing style. However, conversational order effects may be *more* likely under high elaboration conditions if individuals' processing motive (e.g., impression) facilitates the reliance on a subset or communicated arguments.

There is good reason to assume that cultural differences in conversational styles moderate the emergence of order effects. For example, recent research suggests that cultures differ with regard to their adherence to conversational rules (e.g., Haberstroh, Oyserman, Schwarz, Kühnen, & Ji, 2002). Specifically, cultures can be distinguished with regard to predominant self-construals. That is, in some cultures individuals construe the self as distinct from others (independent self-construal), and in other cultures the self is understood more in terms of relationships to others (interdependent self-construal; e.g., Markus & Kitayama, 1991). Based on this distinction, Haberstroh and colleagues predicted a pronounced conversational cooperation for individuals with interdependent self-construals. Consistent with this reasoning, the authors demonstrated that Chinese participants (interdependent self-contrual) avoided giving redundant answers (i.e., adhering to the maxim of quantity; Grice, 1975) more than German participants (independent self-contrual). Given these results, future research should address whether in cultures with predominantly interdependent self-constural conversational order effects are more pronounced than in cultures with predominantly independent self-construals.

A review of order effects inside and outside the domain of attitude change led many authors to complain about the inconsistency of results (e.g., McGuire, 1969). Within the last years there have been some successful attempts to find relevant moderators that explain these inconsistencies (e.g., Hogarth & Einhorn, 1992). One field

of interest should be the differences and similarities between order effects in impression formation (e.g., Anderson & Hubert, 1963; Anderson & Jacobson, 1965; Asch, 1946; Webster, Richter, & Kruglanski, 1996) and in persuasion (e.g., Haugtvedt & Wegener, 1994; Hovland et al., 1957; Petty & Wegener, 1998). For instance, studies of impression formation typically focus on the presentation of inconsistent traits (for an overview see Anderson, 1981), which often leads to primacy effects. On the one hand, these effects seem to be inconsistent with the conversational recency effects that we observed for two-sided communications (see also Igou & Bless, 2003). On the other hand, impression formation contexts may differ from persuasion contexts with regard to underlying conversational processes (e.g., Wyer, 1973).

In retrospect, adherence to conversational rules may explain why many studies investigating order effects often resulted in rather inconsistent findings. In particular, when conversational rules were discredited by the experimental procedure, the obtained findings are difficult to compare with research in which the applicability of the conversation rules was not discredited. For example, these conversational rules are not applicable when the different arguments are attributed to different communicators (e.g., Haugtvedt & Wegener, 1994; Igou & Bless, 2003; Walker, Thibaut, & Andreoli, 1972), or when the different orders of a message are presented to participants in a within-subject design (e.g., Gulley & Berlo, 1956).

The approach presented here is in line with research on the interface of communication and information processing (e.g., Higgins, 1981; Igou, 2007; Igou & Bless, 2005; Igou, Bless, & Schwarz, 2002; Schwarz, 1994, 1996). It is our conclusion that order effects in persuasion are due to adherence to conversational rules. Specifically, these conversational rules relate to the location of the most important arguments within persuasive messages. Attention to these rules partly determines which subset of information is more influential on attitudes and decisions. Therefore, these results further underline the importance of paying heed to the interface of communication and information processing (for an overview see Schwarz, 1996).

Notes

1. This composite measure is reported to inform the reader about the results in adequate generality. Note that the same patterns of results can be observed for each specific variable.

2. We expected the opposite pattern of perceived importance for the two blocks of arguments. Therefore, we recoded the items for one block of arguments (10 – x, with x as individual value for importance) before aggregation of all items. The reliability of the importance ratings was $\alpha = .50$.

3. Cohen's f^2 values were based on the squared partial correlations of predictors and criteria.

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