Cues to identity in CMC: the impact on person perception and subsequent interaction outcomes
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CHAPTE RR III: FRO M ATTRACTION TO CO-ACTION

In the previous chapter, effects of cues to identity on people’s anticipations were examined. In two studies it was shown that the availability of cues to identity affect how people think about the efficacy of a medium, and how they form impressions of a target. Results showed that respondents valued the presence of cues to identity, especially where socio-emotionally complex tasks are concerned (Study 2.1). Study 2.2 extended these findings in showing that these relatively minimal cues also have a strong impact on the impression formation that occurs prior to an exchange. Cues to identity such as portrait pictures or rudimentary biographical details give participants a relatively strong feeling that they know who they are interacting with, thereby reducing ambiguity and fostering more positive impressions.

Where the previous chapter focused on the anticipated value of cues, this chapter examines effects of similar types of cues to identity during interaction. Study 3.1 reports the results of an experiment in which participants were made to believe that they were interacting online with a partner. Participants were randomly allocated to having an interaction with a fake “partner” of whom they were either given a portrait picture and / or a name, or neither name nor picture. The study examined a number of dependent variables related to the interaction. Compared with the findings in the prior chapter, results were contradictory and surprising. In line with previous findings, cues to identity led to more positive impressions. However, participants indicated feeling more certain when cues to identity were not present, and users that are experienced in using CMC were more satisfied with the medium in the absence of cues to identity. Study 3.2 affirms these findings in a setting in which participants collaborated on a task of greater relevance and complexity. Study 3.3 finally provides a possible explanation for these effects. In this study it is suggested that in the absence of cues to identity, participants perceived themselves and their alleged partner to be part of the same (overarching) social group, whereas when cues to identity were present, this feeling of shared group identity decreased. A mediational analysis showed that this feeling of shared group identity predicted subjective performance. In other words, the absence of cues to identity
boosted a stronger feeling of shared group identity. In turn, shared group identification predicted the (perceived) performance on the collaborative task. The implications of these findings are discussed towards the end of the chapter.
**STUDY 3.1: EFFECTS OF CUES TO IDENTITY ON INTERACTION EVALUATIONS**

At least part of the literature dealing with the social effects of computer-mediated communication makes very clear suggestions for what happens when people are anonymous and are physically isolated from each other. Overall these theories, such as those of media choice, emphasize the value of cues to identity in facilitating the interaction and in making communication more “personal.” This idea was substantially confirmed in the previous chapter where it was demonstrated that cues to identity indeed play an important role in influencing people’s perceptions about the efficacy of a medium, especially for socio-emotionally complex tasks. Indeed, Study 2.2 confirmed that the presence of a portrait picture and biographical information gives people a sense of knowing with whom they are interacting. Not only do such cues reduce ambiguity about the other, they also lead to more positive impressions. Similar conclusions are drawn in a study by Walther, Slovack, and Tidwell (2001) which found that especially in new, unacquainted teams, the possibility to picture one another promotes affection and social attraction.\(^8\)

The question of why people value cues to identity, especially in initial contacts, might be answered by the *uncertainty reduction theory*, or URT (Berger & Calabrese, 1975). According to URT, one of the main goals in initial interaction between strangers is to reduce uncertainty (a similar assumption to that underlying Information Richness Theory, see Chapter I). Exchanging information, verbally as well as nonverbally, is believed to serve as an input that enables people to describe the other, make judgments, and predict and explain the other’s behavior, even if the information is believed to be non-evaluative in itself (Berger, 1988). Although this theory was originally developed for FtF interactions in which encounters between strangers are necessarily physical, there is no reason to assume why this natural urge to reduce uncertainty would be fundamentally different in mediated interactions (cf. Tidwell & Walther, 2002). In fact, it might be argued that many computer-mediated settings offer conditions under which uncertainty is quite high—for example due to anonymity or a lack of guidance for proper behavior. According to Kiesler (1986) for example, the lack of cues in CMC environments is to be held responsible for people “to focus their attention on the message rather than on each other. Communicators feel a greater sense of anonymity and

\(^8\) Their study showed that pictures are especially important when interaction time is restricted. When groups are able to afford time, the relevance of portrait pictures decreases over time (Walther et al., 2001).
detected less individuality in others" (Kiesler, 1986, p. 48). The absence of cues that decrease
attention for the "other" is held responsible for the reduction of social and normative
constraints, which makes communication unregulated (Kiesler, 1986; Kiesler et al., 1984). As
a consequence, uninhibited and deviant behavior is expected, in which people will become
irresponsible and disregard social norms and conventions (Kiesler et al., 1984). Although this
thesis has been severely criticized, there is nonetheless a consensus that online contexts
present users with a greater degree of flexibility and freedom than most online group contexts
would do, and that this may partly be due to the relative lack of expectations, values and
explicit social codes and norms which have emerged for proper and appropriate conduct (e.g.,
Lea, O'Shea, Fung, & Spears, 1992; see also Turkle, 1995).

Following URT, the inability for uncertainty reduction prevents, or at least obstructs,
the development of personal relationships (Berger, 1988; Berger & Bradac, 1982). The
presence of cues to identity, even though they might be as minimal as a portrait picture or first
name, can facilitate this process of uncertainty reduction. This desire for personal information
in order to reduce uncertainty could be the explanation for the results found in a variety of
studies which show that people have more favorable perceptions of media when cues to
identity are present during interaction, especially when tasks are complex and uncertain (cf.
Rice & Gattiker, 2001). In sum, URT would provide a clear suggestion that cues to identity
are helpful in online interactions (as well as face-to-face ones) as a key factor in reducing
uncertainty and thereby developing a more personal relationship.

Thus, URT clearly points to the key role of uncertainty in explaining social effects of
CMCs. Indeed, the results presented in the prior study seem consistent with this idea in yet
another way. In Study 2.1, cues made a difference especially for the more inexperienced
users; experienced users seemed to have a lesser need for cues to identity. This is consistent
with URT if one assumes that experienced users feel less uncertain than inexperienced users
would feel. This would certainly suggest that it is worth considering URT's explanation for
these outcomes, and expand our knowledge on the influence of individual differences that
might moderate the extent to which people "need" certainty in online interactions.

Purpose of the Present Study

Above, I argued that although support has been found in prior studies for traditional theories
of media effects, this support was in studies in which no actual interaction took place. Thus,
classical theories are most strongly supported when interaction is anticipated. In the present
studies, I examine the same thesis as before, but now with an eye to examining the evaluation of interactions afterwards.

Moreover, as argued by URT, the effects of cues to identity on the development of a social relationship are likely to be affected by the reduction of uncertainty. Following up this suggestion, the present studies devoted particular attention to assessing the effects of cues on various dimensions of certainty as one of the dependent variables, alongside person impression variables and outcome variables related to the success of collaboration. The effects of uncertainty are also taken into account by making the distinction between more experienced and more inexperienced users of CMC technology (as in Study 2.1, in which this variable appeared to moderate uncertainty effects as predicted by URT).

In order to examine how cues to identity influence the perceptions of (online) interactions, an experiment was conducted in which participants were made to believe that they were interacting with another person. In reality, no real interaction took place and all feedback received during the interaction was generated by a computer program. In line with the prior chapter, the predictions were that cues to identity would affect the impressions that are formed of the communication partners. Cues to identity were expected to reduce ambiguity and lead to more positive impressions. In addition to these interpersonal evaluations, based on uncertainty reduction theory (Berger & Calabrese, 1975), it was predicted that people use personal information to reduce uncertainty with respect to the interaction. Therefore, a lack of cues to identity was believed to decrease the level of certainty faced by the communicators. However, this effect could be moderated by the participants' experience with computer-mediated communication: The effect of cues to identity on certainty was predicted to be stronger for inexperienced users than for experienced ones. A similar pattern was predicted regarding satisfaction with the medium.

**Method**

**Participants and Design**

One hundred and five undergraduate students of the University of Amsterdam (32 males, 73 females) participated in return for a gift voucher. The experiment had a 2 (cues to identity: cues vs. no cues) x 2 (CMC experience: inexperienced vs. experienced) factorial design. Cues to identity were manipulated by either showing participants a portrait picture and first name of the alleged partner and themselves, or not. The experience with computer-mediated communi-
cation-factor was created by dividing the participants in two groups based on their past experience with online interactions other than e-mail.

**Procedure and Independent Variables**

The experiment was conducted in a laboratory consisting of eight cubicles, each with a PC connected to a local network. In the cues condition, a digital portrait picture of participants was taken as soon as they entered the laboratory. They were then taken to an isolated cubicle. In the no-cues condition, participants were led to the cubicles straight away. All instructions were provided via the computer. Participants were led to believe that they were going to exchange opinions with a randomly selected online partner on five different topics.

Following the instructions, demographic questions were asked (name, age, sex) as well as their experience with online communication (“How often do you use computer applications to communicate, apart from e-mail?”). Subsequently, participants were told that the computer would randomly select a partner. Next, participants saw the computer establish a connection with this person via a server. In reality, the computer program simulated the connection process and the “partner’s” responses. The simulated partner was always of the same gender as the participant in order to prevent biases on the basis of gender. In the cues to identity condition, the partner was visible on screen: the computer randomly drew a same-sex picture and name from a database. In the no-cues condition participants saw only a gray rectangle with the text "no personal information available". When the connection was established, a first discussion topic was presented on screen. Participants were asked to read the topic and give their opinion in the text box. The computer generated a response that was presented as the response of the alleged partner. The feedback was kept constant over the conditions, so variations in outcomes cannot be attributed to the interaction itself. The topics and responses were pre-tested, and matched to be of approximately equal novelty, persuasiveness and relevance, and were constant across conditions. After having read the response, participants clicked “continue” to proceed with the next topic. In total, participants “exchanged” opinions on five topics. The amount of interaction was thus quite limited—the participants only learnt the opinion of the other on these five issues through a brief sentence. The discussion topics included items such as the disappearance of small movie centers from

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9 Pictures were drawn from the same database as used in Chapter II. As then, pictures were pre-tested for neutrality on salient cues for personality traits and attractiveness.
the city center, the use of English idiom in Dutch language, and the building of a new airport near Amsterdam.

**Dependent Variables**

Following the simulated interaction, participants were presented a number of statements. They indicated their agreement with the statements on 7-point scales (1 = strongly disagree, 7 = strongly agree). *Ambiguity of impression* was measured by two statements ("I have got a clear impression of what kind of person this is" and "I feel uncertain about this person [recoded]). Two statements assessed *positivity of impression* ("I have got a positive impression of this person" and "I find this a nice person", α = .71). Feelings of *certainty* were measured using three statements ("At this moment I feel at ease / not at ease" (recoded), "At this moment I feel uncomfortable / comfortable", and "At this moment I feel insecure / secure", α = .73).

Two questions related to *medium satisfaction* ("I feel confident about this medium" and "I find this a pleasant medium to use", α = .65).

**Results**

In order to compare results per condition, a 2 (cues to identity) x 2 (experience) analyses of variance was conducted. Table 6 shows the effects of cues and experience for the dependent variables described above.

*Reduction of Ambiguity of Impression.* Keeping in mind the low reliability of the scale measuring ambiguity of impression (alpha = .39), no significant reduction of ambiguity was found due to the presence of cues, $F(1, 101) = 0.24$, ns. Also experience did not show to significantly affect ambiguity, $F(1, 101) = 0.68$, ns, and the interaction proved not significant either, $F(1, 101) = .05$, ns.

*Positivity of Impression.* The prediction that cues would lead to a more positive impression was confirmed. Results showed a main effect of cues, $F(1, 101) = 3.85$, $p < .05$. Impressions were more positive in the cues condition ($M = 5.12$, $SD = 0.88$) than in the no-cues condition ($M = 4.79$, $SD = .87$). Neither the main effect of experience, $F(1, 101) = 0.02$, ns, nor the interaction were significant, $F(1, 101) = 0.60$, ns.

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10 Although the reliability of the ambiguity scale was unacceptably low in this study (alpha = .39), the same two items yielded good reliability in all other studies reported in this thesis. We computed scale averages for reasons of consistency and brevity, but more importantly, the results as reported are identical to those obtained when analyzing the individual items separately.
Table 6. Mean Scores and Standard Deviations of the Dependent Variables by Experience and Cues to Identity

<table>
<thead>
<tr>
<th></th>
<th>Inexperienced</th>
<th>Experienced</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No Cues</td>
<td>Cues.</td>
</tr>
<tr>
<td>Reduction of ambiguity</td>
<td>4.46, a</td>
<td>4.59, a</td>
</tr>
<tr>
<td>SD</td>
<td>1.07</td>
<td>1.19</td>
</tr>
<tr>
<td>Positivity of impressions</td>
<td>4.86, a</td>
<td>5.07, a</td>
</tr>
<tr>
<td>SD</td>
<td>0.75</td>
<td>1.00</td>
</tr>
<tr>
<td>Certainty</td>
<td>5.67, a</td>
<td>5.54, ab</td>
</tr>
<tr>
<td>SD</td>
<td>1.01</td>
<td>0.94</td>
</tr>
<tr>
<td>Medium satisfaction</td>
<td>4.40, a</td>
<td>4.47, a</td>
</tr>
<tr>
<td>SD</td>
<td>1.50</td>
<td>1.55</td>
</tr>
</tbody>
</table>

Note: Means in the same row with a different subscript differ significantly from each other at p < .05.

Certainty. With respect to participants' level of certainty, results showed a main effect of cues, F(1, 101) = 4.87, p < .05. Contrary to the expectations, participants in the cues condition felt less certain (M = 5.40, SD = 0.94) than those in the no-cues condition (M = 5.77, SD = .93). Experience with the medium had no significant effect on certainty, F(1, 101) = 0.04, ns. Although the interaction was not significant, F(1, 101) = 2.30, ns, the means portrayed in Table 6 suggest that cues had a somewhat stronger effect on certainty among the experienced users.

Medium Satisfaction. A main effect was found for cues, F(1, 101) = 4.04, p < .05. In the cues condition, respondents were less satisfied (M = 4.40, SD = 1.42) than in the no-cues condition (M = 4.84, SD = 1.40). Experience had no significant effect on satisfaction with the medium F(1, 101) = 2.49, ns. However, the interaction effect was significant, F(1, 101) = 5.14, p < .05. Inspection of the means showed that there was no difference between cues conditions for the inexperienced users, F(1, 55) = 0.03, ns. For the experienced users, however, there was a strong difference such that participants in the no-cues condition were much more satisfied (M = 5.43, SD = 1.00) compared to those in the cues condition (M = 4.28, SD = 1.28), F(1,46)= 11.71, p = .001.
Discussion

Expectations with respect to the effect of cues to identity on interpersonal evaluations regarding impression formation were partially confirmed. Contrary to the predictions, the presence of cues to identity did not show to reliably reduce ambiguity. Although the mean score for reduced ambiguity without the presence of cues to identity was slightly lower compared to the conditions with cues to identity, this difference proved not significant. However, no decisive conclusions can be drawn, since the reliability of the scale was unacceptably low. The prediction regarding the positivity of impression was confirmed. As in Study 2.2, the presence of cues to identity resulted in more positive impressions.

Contrary to these positive effects of cues to identity on impression formation, however, cues to identity had negative effects on variables related to evaluations of the interaction. This is a paradoxical finding: When people liked their partners more, they disliked the interaction more and evaluated the medium more negatively. For example, participants felt more certain when interacting without having any cues to the identity of their partner. The same effect was found for satisfaction with the medium: again, absence of cues to identity rendered more satisfaction compared to the condition where cues to identity were given. Closer inspection of the results showed that inexperienced users’ satisfaction on both dimensions was more or less unaffected by the presence of cues to identity. The experienced users were the ones who were markedly more satisfied with the medium (and certain) when cues to identity were absent.

These results are contradictory to expectations based on prior research and a large portion of the wider literature on CMC and its social effects. Although expectations were that experienced users should value the presence of cues to identity less than inexperienced users, this does not account for a reversal of the type found. That users would be more happy to collaborate anonymously does not sit comfortably with the ideas derived from URT that people will try to reduce uncertainty in order to predict outcomes of interactions (Berger, 1988; Berger & Calabrese, 1975).

Of course, it should be considered that cues to identity may not have had the effects on certainty and medium satisfaction as predicted by URT, because the interaction was not really a socio-emotionally complex one, and quite minimal as well. As was shown in Chapter II, cues to identity are especially valued when a task is socio-emotionally demanding, and results of Study 2.1 would suggest that the task used in the present research (exchanging ideas) does not score highly on socio-emotional complexity. It is certainly possible that the tasks used in
this experiment were not complex enough to find effects consistent with the classical theories and consistent with predictions (i.e., that cues to identity would be associated with more satisfaction). However, the usage of a less complex task should, according to these classical theories and according to the results of Study 2.1, lead to results that show that people will be indifferent with respect to the presence of cues to identity or not. In other words, it is difficult to rhyme classical theories with the findings of the present research that people prefer to interact anonymously. Moreover, classical theories would have difficulties accounting for the inconsistencies across results: cues had a positive influence on person perception, but not on satisfaction with the medium and certainty.

It is important to stress that the cues presented in this design were not related to the message itself: As was discussed in Chapter I, it is vital to distinguish cues to meaning from cues to identity. The assumption that is made by the Information Richness Theory (Daft & Lengel, 1986), suggesting that richness of the content of a message should be matched by the richness of a medium therefore provides no explanation for the results in this study. As discussed earlier, Information Richness Theory draws heavily on the importance of cues to meaning: being able to convey a complex message by using body language, tone of voice, or the communication of feelings and emotions is in a fundamentally different category than are cues to identity that primarily provide background information about the communicators. In sum, the conclusion that people prefer anonymity because of the limited complexity of the content of interaction (both in terms of informational as well as socio-emotional complexity) does not appear satisfactory either.

Because classical theories offer no satisfactory alternative explanation for these paradoxical results, it would appear prudent to replicate the study in a setting that involves real interaction and is more demanding in many ways. Doing so, would overcome the potential weakness of this first study. Because of the limited false feedback that was generated by the computer, very lively interaction was impossible, which might have restricted the ecological validity of the findings to “real” computer mediated communication. Moreover, using a more socio-emotionally complex task would contribute to a better test of the hypotheses, for reasons outlined above. A similar improvement to this study could be made with regard to the relevance or importance of the interaction. It would be a fairer test of URT’s predictions and classical media theories if participants interact on a topic that is of interest to them: it is under these conditions that the need to reduce uncertainty should be strongest. Thus, in an attempt to overcome these shortcomings of Study 3.1, the next experiment examines the same hypotheses, but in a context in which participants had real
interaction in a more natural setting. In fact, the setting was one in which the interaction and its outcomes were of considerable importance to the participants.
STUDY 3.2: CUES TO IDENTITY IN ONLINE CO-ACTION

Study 3.2 was an experiment conducted within two modules of the undergraduate program in Communication Science at the University of Amsterdam. Participants were regular students who undertook the online interaction as part of their coursework. They discussed opinions and ideas about a case that was presented in a seminar meeting. The discussants were motivated to exchange their thoughts about the presentation, and to express to what extent the ideas discussed matched their own opinions and beliefs. This exchange was to be used as input for a paper they had to write in order to complete the module successfully. Thus, the assignment was one which was both relevant to the course and upon which their final grade depended in part. The experiment was designed to replicate Study 3.1 in a setting with real interaction. Participants interacted with each other via an online java-chat.

As in Study 3.1, the purpose of the experiment was to test how the presence of cues to identity would affect evaluations of the interaction. One key difference with the prior study, however, was that in this study it proved impossible to distinguish between experienced and inexperienced users because all users had approximately equal levels of experience.

Predictions were simply that findings of Study 3.1 would be replicated: cues to identity would have negative effects on the perceptions of the interaction. Again, the cues to identity that were provided were not in any obvious way related to the meaning or content of interactions, for they consisted of portrait pictures and first names only. In addition to satisfaction with the medium, the effect of cues to identity on (subjective) performance was examined. Thus, this study asked the additional question of whether the presence of cues to identity affect the subjective performance during the interaction.

Method

Participants and Design

Sixty-six undergraduate students of the University of Amsterdam (18 male, 48 female, aged 23.62 on average, $SD = 2.79$) participated in the experiment. All participants were engaged in

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11 After the experiment, participants were carefully debriefed. Participants were made aware that the presence of cues to identity was manipulated, and that this could have had an influence in how they performed during the chat. Participants were told that the outcomes of the interaction would not be evaluated by the instructor, and would thereby not be of influence on their grade for the course.
the same university course, which was split in different subgroups taught at different times and locations. Dyads were quasi-randomly formed, such that participants within a dyad came from a different subgroup. This procedure minimized the chance that partners would have had extensive or close contact prior to their discussion. The task was to discuss a topic that formed the basis of a paper they had to write in order to complete the course successfully. The experiment had one factor within which two conditions were compared (cues to identity: cues versus no cues). As in Study 3.1, cues to identity were provided by means of presenting first names and portrait pictures (taken 2 weeks before the interaction).

Procedure and Independent Variables

The experiment was conducted in two separate laboratories. In each laboratory a number of personal computers were placed, connected to a network. Participants were invited to one of the two laboratories based on the subgroup they belonged to. This was done in order to prevent the members of one dyad meeting each other prior to the interaction. Dyads were randomly assigned to one of the conditions and dyads were randomly formed, each partner belonging to a different group. Instructions were given via the PC. Participants were asked to reflect on the topic over a period of fifteen minutes. The participants were stimulated to discuss the case that was presented and to express to what extent the ideas presented were in line with their own thoughts on the topic. The output of the discussion would form the basis for a paper they were to write in the following week. Participants were told that they would interact with a student from a different subgroup. In the condition without the cues to identity, participants were asked not to reveal their names or any other personal information.

Dependent Variables

Following the interaction, participants were presented with a number of statements which they indicated agreement with on 7-point scales, ranging from 1 = Strongly disagree to 7 = Strongly agree. Satisfaction with the medium was measured with three statements ("I feel confident about this medium", "I find this a pleasant medium to use", and "I prefer this way

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12 Participants were to reflect on a lecture given by a guest-speaker.

13 In the condition where cues to identity were provided, sex was kept constant in order to prevent (possible) biases on the basis of sex. Unfortunately, due to skewed distributions between the groups, it was not possible to control for sex in all of the no-cues dyads. However, results in the mixed sex dyads did not differ from the same sex dyads.
of collaborating over communicating FTF”; Cronbach's alpha = .64). Three statements measured (subjective) performance (“I feel confident about the product we delivered”, “I have learned much about the topic”, “I have told a lot about the topic”; α = .66). Two statements addressed the certainty of the participants (“I felt uncertain during the interaction” (recoded), “I felt comfortable during the interaction”, α = .54).

**Data**

Due to some technical malfunctioning not all data were filed, and missing values for the variable measuring subjective performance were found for six cases. These missing values were replaced by the mean values per condition.

**Results**

After controlling for outliers by computing Mahalanobis distances (Tabachnick & Fidell, 1996), one case was identified as a multivariate outlier on the key dependent measures and subsequently removed from the analysis. In order to compare results per condition (cues versus no cues), t-tests were conducted. Table 7 shows the effects of cues to identity on both dependent variables.

*Medium Satisfaction.* The finding that cues have a negative effect on medium satisfaction was replicated, \( t(63) = 2.01, p < .05 \). In the cues condition respondents were less satisfied with the medium \( (M = 3.50, SD = 1.07) \), compared to the no cues condition \( (M = 4.07, SD = 1.20) \).

*Subjective Performance.* The presence of cues had a negative effect on how respondents perceived their performance, \( t(63) = 2.32, p < .05 \). In the cues condition respondents were less satisfied with their performance \( (M = 3.19, SD = 1.14) \), compared to the no cues condition \( (M = 3.80, SD = .97) \).

*Certainty.* The presence of cues did not affect the certainty of the participants. \( t(63) = 0.54, ns. \)
Table 7. Mean Scores and Standard Deviations of the Dependent Variables for the Conditions With and Without Cues to Identity

<table>
<thead>
<tr>
<th></th>
<th>No cues</th>
<th>Cues</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medium satisfaction</td>
<td>4.07a</td>
<td>3.50b</td>
</tr>
<tr>
<td>SD</td>
<td>1.20</td>
<td>1.07</td>
</tr>
<tr>
<td>Subjective performance</td>
<td>3.80a</td>
<td>3.19b</td>
</tr>
<tr>
<td>SD</td>
<td>.97</td>
<td>1.14</td>
</tr>
<tr>
<td>Certainty</td>
<td>5.53a</td>
<td>5.61a</td>
</tr>
<tr>
<td>SD</td>
<td>1.01</td>
<td>.85</td>
</tr>
</tbody>
</table>

Note: Means in the same row with a different subscript differ significantly from each other at p < .05

Discussion

The findings of this study largely replicate those of Study 3.1. Results show that participants that worked together on a task without the information that describes the communication partner, evaluated the interaction more positively compared to those who had personal information present. Again, this study indicates that people are more satisfied when interacting in the absence of cues to identity. Not only were they more satisfied with the medium, they also indicated to have performed better. In contrast to the previous study, presence of cues to identity did not affect certainty. A possible explanation for this could be that, in comparison with Study 3.1, a different measure of certainty was used. I used retrospective questions in which it was made explicit that people were to self-assess their levels of comfort and certainty during the interaction (hoping this would strengthen the findings). However, it may have been more difficult for participants to assess such states retrospectively, and also the participants may have been reluctant to qualify themselves as uncertain or less than comfortable. Nonetheless, the effects on the other two dependent variables are clearly suggestive that satisfaction with the interaction was decreased in the presence of cues to identity.

It should be noted that the cues to identity that were presented in this study were not tested for neutrality. Contrary to the previous studies, where false feedback was used, “real” names and pictures of both participants were shown. So we can not be certain that portrait pictures were content neutral. Even though the experimenters motivated the participants to look “neutral” (i.e., all pictures were taken from the same angle, participants were asked not
to smile or look bored or angry) results may have been affected by physical appearances. The usual way of overcoming this, and the technique used in all other studies in this thesis, is to use a standardized set of photographs to cue identity. A procedure like this might offer more insight in the mere presence of cues to identity in this form, but also risk contamination in that participants might mention physical features in the photograph that do not belong to the actual partner (cf. Walther et al., 2001). In any case, taking the results of the present study in conjunction with the prior one, it seems unlikely that a lack of neutrality of the cues was solely responsible for the results reported.

The results corroborate the finding that cues to identity are actually associated with dissatisfaction. This result is puzzling when viewed compared with the results of Chapter II with regard to anticipated interaction, when compared with the wider research literature on media choice, and when compared with what traditional theories of media choice and uncertainty reduction would predict. More specifically, these results seem contradictory to Social Presence Theory (Short, 1974; Short et al., 1976), Reduced Social Cues Approach (Culnan & Markus, 1987), and the Cuelessness Model (Rutter & Stephenson, 1979), all of which would lead to predictions that having cues to identity would benefit the interaction (or possibly be neutral in conditions in which cues would not be appreciated, such as non-complex tasks). All in all, there appears to be no clear-cut explanation suggested by either of these approaches for the fact that anonymity was preferred in this study.

A possible explanation is that it is not so much the identifiability of the other that is responsible for the effects found, but more the discomfort caused by the presumption of being seen by the other. In other words, it could be that the presence of a portrait picture and biographical information may have reduced the freedom of self-presentation that comes along with anonymous communication (see Walther, 1996; Walther et al., 2001). Support for this is found in a study by Walther, Slovacek, and Tidwell, that showed that in the presence of photographic information, participants were less able to mold the impressions that others impressions formed of them (Walther et al., 2001). However, whether this would result in dissatisfaction about the interaction remains unknown. If this were the case, one would have to presume that in the absence of cues, participants felt less self-aware. Unfortunately, self-awareness measures were not included in the study, so there is no possibility to check for this. However, in two studies by Postmes and colleagues (2002), no proof was found that being identifiable caused participants to be more self-aware. Thereby, the assumption that identifiability of the self is responsible for the discomfort seems no completely satisfactory explanation.
Another tentative explanation is that it is not merely the medium or the interaction itself that is responsible for the outcomes, or that it is something in the interpersonal impressions and perceptions that causes these social outcomes. Indeed, the wider context in which the interaction took place should also be taken into account. It may be that despite the greater potential for interpersonal affection and disambiguation that cues to identity provide, their effects are rather different at a higher level of social abstraction. In other words, despite the fact that these are all studies of two individuals in interaction, it might be beneficial to examine whether these individuals recognize themselves to be part of a larger social structure. The reason for this being beneficial becomes apparent when taking into account the research literature on the effects of anonymity in groups: Here there is clear evidence of a parallel effect whereby anonymity is sometimes associated with a variety of strong social effects.

**Individuation as Explanation**

In research on groups, there is quite a bit of evidence to suggest that under specific circumstances (namely when social identity is made salient) anonymity can accentuate the perceptual unity of the group, and thereby enhance group members’ feelings of attraction and identification to the group (e.g., Lea et al., 2001; Postmes et al., 2001; Sassenberg & Postmes, 2002). The reason for this is that information about idiosyncratic characteristics of someone stresses the unique individuality of the person, thereby individuating a person (Spears & Lea, 1992). According to the Social Identity model of Deindividuation Effects, or SIDE for short, it is the inability to individuate a person that can emphasize the shared group identity (Reicher et al., 1995; Spears & Lea, 1994). SIDE proposes that when perceptions of people cannot be formed on the basis of idiosyncratic characteristics, because cues to identity that stress the individuality of a person are not available, the emphasis can shift to a higher level of inclusiveness (Spears & Lea, 1992). This is because an absence of these cues provides a context in which individual differences are obscured (cf. Sassenberg & Postmes, 2002). So, provided that there is a basis for social categorization, not being able to perceive the self and the other as individuals may accentuate the unity of the group, and cause persons to be perceived as group members rather than as unique individuals, and maybe more importantly, the other way around, presence of cues to identity might individuate, and focus attention on the individuality of group members, automatically disrupting the “unity” of the group.

If one applies this reasoning to dyads, the same processes could be operating, provided that there is a recognition within that dyad that each member is part of the same overarching social group (e.g., both are students of the University of Amsterdam, both are
Communications students, both follow the same course). Such reasoning may be also applied to interpersonal encounters, because the recognition of shared group membership is not restricted to groups of larger sizes: As Turner (1987) points out, people can see themselves as closely intertwined with, and functionally indistinguishable from their groups even in complete isolation. The consequence of this is that an isolated individual can display group behavior just as much as a member of a crowd: all it takes is to act in terms of a social identity. Thus, also in the dyads under observation here, the same group processes could operate to those studied by SIDE. Of course, the findings reported above could only be identified as being SIDE effects if there was a shared group membership to provide a sufficiently strong awareness of a shared social identity. Under such conditions, it makes sense for the absence of cues to one’s individual identity to foster a feeling of being part of the same group, which in turn had a positive effect on how participants perceived (or enjoyed) their collaboration, and the quality of the medium facilitating it.

In sum, it would appear that the contradictory pattern of results emerging from the studies presented so far in this chapter and the preceding one may be explained more fully if we turn to the third aspect of person perception that was identified in the introduction—the social-categorical effects of cues on the perception of self and other as belonging to the same (or different) social group. In the next study, this was tested directly by examining the individuating effect of cues to identity such as portrait pictures and first names, and looking at the effect of an absence of these cues on perception of shared group membership and the perceived performance.
**STUDY 3.3: ABSENCE OF CUES AND SHARED SOCIAL IDENTITY**

This study seeks to confirm that the presentation of cues to identity as idiosyncratic person characteristics stress the individuality of that person, and may cause this person to be "set apart" from a social background, be it other people in general or certain groups in particular (cf. Spears & Lea, 1992). In particular, this study seeks to demonstrate that not having those cues can shift the perception of the person's relation to the self to a higher level of inclusiveness—shifting the focus within the dyad from an interaction between "me" and "you" to "us" (Spears & Lea, 1992). This would be consistent with research in groups showing that the absence of cues to identity may provide a context in which individual differences are obscured (cf. Sassenberg & Postmes, 2002). Moreover, this addresses a third aspect of person perception that was hitherto not considered in this research, namely that of social categorization of members of the dyad in terms of a shared social identity.

In order to test these assumptions, an experiment was conducted that was almost an exact replication of Study 3.1. Participants were made to believe that they were interacting with a partner while in reality the interaction was false (cf. procedure of Study 3.1). Again, cues to identity in the form of portrait pictures of both the participant and the alleged partner were presented along with first names, or not. However, in this study, one extra variable was introduced. In an attempt to explain the effect of the preceding studies, the degree to which the participants saw themselves and the other as being part of one group was manipulated. Based on assumptions derived from SIDE, expectations were that, when impressions cannot be formed on the basis of personal (idiosyncratic) information (i.e., when cues to identity are absent), people are likely to be seen as representatives of their group in a context where a salient shared identity is known or can be inferred. Thus, in the present study participants' personal or social identity was made salient (or more prominent) within the context of the experiment. In one condition an attempt was made to enhance participants' personal identity (as distinct and idiosyncratic individuals), whereas in the other condition a social identity was made salient which participants shared with their partner—both being members of the same group at a higher level of social abstraction. It was predicted that the absence of cues to identity in the form of a photograph and first name would enhance the experience of having a shared identity, particularly in the conditions in which this shared identity was made salient. Moreover, a similar pattern of results was predicted with regard to the (subjective) perfor-
mance of dyads: The absence of cues should boost performance, particularly when a social identity is salient.

**Method**

**Participants and Design**

One hundred eighty students from the University of Amsterdam (52 male, 128 female, aged 20 on average, $SD = 2.23$) participated in return for a financial compensation. The study had a 2 (cues to identity: no cues vs. cues) x 2 (personal identity salience vs. group identity salience) factorial design. The cues condition was manipulated in identical fashion to Study 3.1: by showing portrait pictures and first names, or not. Identity salience was manipulated by means of the “three things manipulation” of identity salience developed by Haslam et al. (1999). Through this technique, group versus personal identity was made salient by letting participants think about themselves in terms of their unique individuality as a person, or in terms of their social identity as both being a student at the same university.

**Procedure and Independent Variables**

With the exception of the manipulation of identity salience, the experiment was an exact replication of Study 3.1. The procedure was the same, until after participants were asked demographic questions. At that point, identity salience was manipulated by means of the “three things-manipulation”. This manipulation encourages participants to think about themselves as an individual or in terms of their membership of a social group. This was done by asking participants to list up to three things that they did relatively often, rarely, well, and badly as a person or as a group (Haslam et al., 1999). The social group that was made salient was the University of Amsterdam. Participants were told that their partner also studied at the same university. Subsequently, participants were told that the computer would randomly select a partner, and they saw the computer establish a connection with this person via a server. The experiment then proceeded as in Study 3.1. As before, participants “exchanged” opinions on five topics.

**Dependent Variables**

Following the simulated interaction, participants were presented a number of statements (7-point scales, 1 = I strongly disagree, 7 = I strongly agree) measuring the effect of the manipulations on the dependent variables. Dependent variables were perceived shared identity, as
well as those of Study 3.1 (reduction of ambiguity, positivity of impression, certainty, and medium satisfaction), and subjective performance from Study 3.2. Finally, a statement was added assessing work satisfaction.

Shared identity was measured with a 6-item scale. Participants indicated agreement with 3 items (“I have the feeling that my partner and I are part of the same group”, “I think my partner and I are part of a larger group” and “I feel connected to the other person”). In addition to these, three pairs of pictorial representations of the dyad were presented, with participants indicating which picture depicted their dyad best (see Figure 1). The scale had good internal reliability (α = .70).

Figure 3: Pictorial measurements of shared identity

Three statements assessed the reduction of ambiguity (“I have got a clear impression of my partner”, “I have a complete impression of my partner”, and “I think that I see my partner the way he/she really is”; α = .76).

Positivity of impressions was measured with two statements (“I have got a positive impression of this person” and “I find this a nice person”; α = .57).

Certainty was measured using four statements (“At this moment I feel at ease / not at ease” (recoded), “At this moment I feel uncomfortable / comfortable”, and “At this moment I feel insecure / secure”, “At this moment I feel uncertain / certain, α = .81).

Two questions related to medium satisfaction (“I feel confident about this medium” and “I find this a pleasant medium to use”, α = .71).
Work satisfaction was measured by five items (“Our dyad collaborated well”, “I was able to concentrate on the task”, “Our dyad worked effectively”, “Our dyad communicated clearly”, and “I prefer this way of collaborating over Face-to-Face interaction”; $\alpha = .67$).

Subjective performance was measured by two statements (“I feel confident about our result” and “We have delivered a good product”; $\alpha = .91$).

Results

Results were analyzed with 2 (cues to identity: no cues vs. cues) x 2 (personal identity salience vs. group identity salience) analyses of variance. The identity manipulation (whether the participant perceived him/herself in terms of his/her personal identity or group identity) had no effect on any of the dependent variables (none of the main effects or higher order interactions were significant, all $F$s < 1.70). Therefore, I shall not report results for this manipulation, and results will be based on t-tests. Table 8 shows the main effects of cues on the dependent variables.

The perception of a shared identity was significantly influenced by the presence of cues, $t(178) = 2.35$, $p < .05$. In the condition where cues to identity were present, the participants perceived less shared identity ($M = 3.73$, $SD = .72$), compared to the conditions without cues ($M = 3.97$, $SD = .63$).

With respect to impression formation, the presence of cues had no significant effect on reduction of ambiguity, $t(178) = 1.33$, $ns$, nor with respect to positivity of impression, $t(178) = 1.28$, $ns$. The presence of cues also did not significantly affect the degree of certainty, $t(178) = .68$, $ns$.

Medium satisfaction was not significantly affected by cues to identity, $t(178) = .68$, $ns$. However, the availability of cues did influence work satisfaction, $t(178) = 2.41$, $p < .05$. In the condition with cues, participants were less satisfied ($M = 4.22$, $SD = 1.02$), compared to the conditions without cues ($M = 4.58$, $SD = .94$).

Subjective performance was also influenced by cues, $t(178) = 2.00$, $p < .05$. Participants who were given cues to identity were less satisfied with their performance ($M = 4.10$, $SD = 1.32$), compared to participants in the no-cues condition ($M = 4.48$, $SD = 1.21$).
Table 8. Mean Scores and Standard Deviations of the Dependent Variables for the Conditions With and Without Cues to Identity

<table>
<thead>
<tr>
<th></th>
<th>No cues</th>
<th>Cues</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shared Identity</td>
<td>3.97_a</td>
<td>3.73_b</td>
</tr>
<tr>
<td>SD</td>
<td>1.05</td>
<td>.92</td>
</tr>
<tr>
<td>Positivity</td>
<td>4.49_a</td>
<td>4.63_a</td>
</tr>
<tr>
<td>SD</td>
<td>0.71</td>
<td>0.76</td>
</tr>
<tr>
<td>Certainty</td>
<td>5.55_a</td>
<td>5.45_a</td>
</tr>
<tr>
<td>SD</td>
<td>0.97</td>
<td>1.06</td>
</tr>
<tr>
<td>Medium satisfaction</td>
<td>4.89_a</td>
<td>4.73_a</td>
</tr>
<tr>
<td>SD</td>
<td>1.31</td>
<td>1.40</td>
</tr>
<tr>
<td>Work satisfaction</td>
<td>4.58_a</td>
<td>4.22_b</td>
</tr>
<tr>
<td>SD</td>
<td>0.94</td>
<td>1.02</td>
</tr>
<tr>
<td>Subjective performance</td>
<td>4.48_a</td>
<td>4.10_b</td>
</tr>
<tr>
<td>SD</td>
<td>1.21</td>
<td>1.32</td>
</tr>
</tbody>
</table>

Note: Means in the same row with a different subscript differ significantly from each other at p < .05

Summarizing the results, the participants experienced more of a shared identity in the absence of cues to identity, and in the same condition they experienced greater work satisfaction and better (subjective) performance. In order to test the prediction that the effect of these cues on subjective performance was mediated by shared identity, a path-analysis was performed (Baron & Kenny, 1986). Results of this path-analysis are displayed in Figure 2.

Regression analysis showed that presence of cues had a significant negative impact on shared identity (β = -.17, p = .020). Shared identity significantly affected subjective performance (β = .22, p < .005). The presence of cues to identity was also significantly negative related to subjective performance (β = -.15, p < .05). However, a mediational analysis showed that the effect of the cues was reduced to insignificance (β = -.12, p = .12) when the mediator shared identity was entered into the regression equation. The reverse model did not show mediation, all of which supports the conclusion that mediation has been
Figure 2: Path model for the effect of cues to identity and shared identity on subjective performance.

![Path model diagram]

**p < 0.005
*p < .05

**p < 0.005
*p < .05

demonstrated (Baron & Kenny, 1986). So, the analysis showed that shared identity partially mediates the effect of presence of cues and subjective performance: Without the mediator, the explained variance was lower ($R^2 = .022$) than with the mediator included ($R^2 = .059$). Although this added explained variance is relatively small, the change in $R^2$ proved significant, $F(1, 178) = 6.94, p < .01$.

**Discussion**

The results of this study provide us with important insights into what might be an explanation for the counter-intuitive results that were found in the Studies 3.1 and 3.2. In some ways, people prefer to work anonymously to having cues to identity that enable them to perceive their interaction partner as a distinct individual. In this study, the effect of cues to identity on interpersonal judgments (ambiguity reduction and positivity of impression) proved insignificant, as well as the effect on satisfaction with the medium itself. On other variables, however, the results corroborated those of prior studies. Thus, the presence of cues to identity did affect how satisfied the participants were when working with their partner, and on how well they thought they performed. In conditions without these cues, participants were more satisfied about the collaboration and were more confident about the outcomes. As was shown in the mediation analysis, this effect is partially mediated by the feeling of a shared identity, in other words, the social categorization of members of the dyad as part of a larger social group.

Contrary to what was expected, the manipulation of social identity salience did not affect the relation between cues to identity and perceived shared identity. Although unfortu-
nate, this may point to a failure to manipulate identity salience—a concept which is notoriously hard to manipulate in such a fashion that it has strong effects which persist over the course of an experiment (e.g., Turner, 1999). Moreover, this failure to detect effects may be because participants remained quite aware to be interacting with an ingroup other, even when personal identity was made salient. Thus, interacting in the absence of cues itself provided sufficient basis for the perception of being part of an overarching group. As a result, the mere fact that participants expected their alleged partner to be a student, sufficiently fostered a feeling of a shared social identity, which was strengthened by the inability to individuate one another.

These results indicate that cues to identity do not only affect perceptions on a (inter)personal level, in such a manner that they contribute to a more “personal,” and less “mechanical,” impression of the other (cf. Culnan & Markus, 1987; Rutter & Stephenson, 1979; Short et al., 1976). In fact, the results of the present study failed to find support for this prediction. However, results also show that cues to identity can have quite strong effects on perceptions of the other and self as related to each other on a higher level of social abstraction. The assumptions derived from group research, and more specifically research examining the influence of (de-)individuation, are supported (see Postmes & Spears, 1998; Reicher et al., 1995; Spears & Lea, 1992). Factors that have traditionally been held responsible for limiting individuation in groups, such as anonymity and group immersion (Zimbardo, 1969) do not preclude social effects (Postmes & Spears, 1998). Working together on a task, in a context where the feeling of belonging to the same group is strengthened by the inability to focus on interpersonal differences has positive consequences in that it leads to more work satisfaction and more confidence in the outcomes of the interaction. These outcomes qualify the “straightforward” assumptions made in classic theories of CMC regarding the effects of cues to identity. Whereas they seem to have somewhat positive (although not generally consistent) effect on interpersonal judgments, their effect on outcomes connected to social relations seem to be more complex.
This chapter presented effects of cues to identity that seem contradictory to one another. On the one hand, the cues to identity as used in the studies have proved to be beneficial when it comes to forming positive, less ambiguous impressions of the other, in line with theories that emphasize the importance of "personalizing" communications such as Social Presence Theory (Short, 1974; Short et al., 1976), Reduced Social Cues Approach (Culnan & Markus, 1987), and the Cuelessness Model (Rutter & Stephenson, 1979). All of these approaches stress the importance of cues to identity, for, as it was put by Rutter (1987) "Cuelessness leads to psychological distance, psychological distance leads to task-oriented and depersonalized content, and task-oriented depersonalized content leads in turn to a deliberate, unspontaneous style and particular types of outcomes" (Rutter, 1987, p. 74). This implies that interactions that do not allow the transmission of these cues are less personal and increase the psychological distance between communicators. This idea is in line with the general belief that communicators strive to develop a positive and meaningful relationship, and in order to achieve this, information about the individual with whom one is interacting is desired (cf. Walther, 1992; Walther et al., 1994). Indeed, the studies reported here show some evidence that cues to identity are valued for their impact on person impressions: some studies indicate that they reduce ambiguity and make impressions more positive. Even the relatively minimal and neutral cues that were used positively influenced impression formation, and were believed to be valuable, especially when tasks were thought to be socially complex.

Yet, the effect of these cues to identity on perceptions of the interaction seem contradictory to these findings. Based on assumptions derived from Uncertainty Reduction Theory (URT, Berger & Calabrese, 1975), which states that one of the main goals of strangers meeting each other is to reduce uncertainty, exchanging information is believed to be vital. Exchange of information, both verbally and non-verbally, enables people not only to picture the other, but also to describe and predict the other's behavior (Berger, 1988). Therefore, it seems surprising that interaction-related perceptions, such as medium satisfaction, work satisfaction or (subjective) performance are not affected in the same positive way by the presence of cues to identity. Results for the direct measures of certainty in these studies were mixed: Participants indicated feeling less certain when cues to identity were present in one study, and although effects were in similar direction in the other studies these were not reliable. Nonetheless, a meta-analysis across the three studies reveals that cues have a small
but reliable effect on certainty, such that cues to identity decrease certainty. \( r = -0.11, Z = 1.96, p < 0.05 \). Moreover, when it came to evaluating the interaction in terms of work satisfaction (Study 3.3), (subjective) performance (Study 3.2, 3.3), or satisfaction with the medium (Study 3.1 and 3.2), participants preferred to be working anonymously.

In the search of an explanation for these results, Study 3.3 investigated the possible effect on a third aspect of person perception: the social categorization of the dyad in terms of a shared social identity. In a context where there is ground for participants recognizing themselves as belonging to a same (social) group, shifting attention away from individual characteristics of the partner might emphasize shared group membership. Inversely, emphasizing unique individual characteristics of a person might very well distract attention from what is shared by focusing attention on idiosyncratic differences between group members. The cues to identity that were presented in the studies so far, were believed to fulfill just this function: Information about physical appearance, in combination with biographical information and a first name, all provide information that helps to form a clear and distinct impression of the individual, with the consequence that this person is likely to be seen as an idiosyncratic individual. Individuating a person in this way by stressing his or her unique individuality is believed to set an individual apart from his or her (social) background (Spears & Lea, 1992).

It is this process that was shown to be operating in Study 3.3, and which could be underlying the counter-intuitive results in this chapter. If so, this would be consistent with SIDE (Reicher et al., 1995; Spears & Lea, 1994) which assumes that individuation de-emphasizes shared group identity. On the other hand, if idiosyncratic information about an individual is absent, and there is a reason to assume some kind of shared group membership with the other actor in the dyad, the inability to individuate might enhance feelings of a shared identity as members of a higher-order social category or group, because individual differences are obscured (cf. Sassenberg & Postmes, 2002).

When interpreting the above, it should be realized that the cues to identity which were used (e.g., pictures, or information about age, or first names) may cue not just individual distinctiveness (or personal identity). On the one hand a certain cue stresses a target’s personal identity (e.g., knowing that someone’s first name is Anthony), on the other hand the same cue signals his belongingness to particular social groups (e.g., with this name, he can be identified as male, as having a name from a Christian tradition, etc.). Thus, where in the present studies the presence of portrait pictures and first names emphasized the personal identity of targets, and as a consequence diminished attention to the shared social identity, this need not always be so. The same cues can, at least at a theoretical level and within a particular
social context, be used to glean information about group membership. Thus, certain cues to identity may foster social categorization whereby people are perceived as more or less interchangeable members of a particular group. To a certain extent, such cues were also given in the experiments in this chapter. For example, the fact that participants knew that their counterparts from Study 3.3 were students at the University of Amsterdam, as were they, served as a social identity cue, which enabled the participants to see themselves and the other as members from the same group. Both forms of cues can be considered as cues to identity, for they provide information about the person involved, but at a different level.

It is important to stress that the distinction between these two ways in which cues to identity may be used can only be made with reference to the specific context in which they are given. For example, knowing that someone supports Ajax is likely to be highly informative about social identity in the context of a Dutch soccer match (Ajax is generally seen as the best soccer team in the Netherlands) but it is more likely to be perceived as individuating information in the context of an international conference on communication.

Another issue involves whether cues to identity will be used as pointers for social identity or for individual identity is the particular combination of cues available: Knowing that a person is male or female is not individuating in itself (and might even foster social categorization if this social identity is contextually made important or if, say, male gender is cued in conjunction with signals that the person is dominant and aggressive). It is the complete array of characteristics that stresses the individuality of a person, thereby making it harder to perceive someone as an interchangeable member of a specific (social) group (Simon, Pantaleo, & Mummendey, 1995).

Summarizing the above, it becomes clear that in order to investigate precisely the effects of cues to identity, it is vital to make a distinction between two ways in which cues are used or deployed by perceivers. On the one hand cues to identity can be used to individuate a target in terms of personal identity (turning particular cues to identity, in effect, into cues to personal identity). On the other hand, cues to identity may be used as a basis for social categorization and assignment of a target to a psychological in-group or out-group (turning cues to identity into cues to social identity). In order to prevent confusion between these two radically different effects which cues to identity can have, they will be labeled cues to personal identity and cues to social identity from now on. It should be understood, however, that there is nothing intrinsic about these cues to suggest that they will be used for the one or the other purpose.
In the next chapter, the effect of these different functions of cues to identity will be investigated in more detail. In particular, I will look at the effect of cues that define a target as a member of the ingroup or the outgroup. The effects of such cues to social identity are compared to effects of cues to personal identity, manipulated in a similar fashion to the studies reported in the current chapter.