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Oliver Fischer, Antony S. R. Manstead*

Computer-mediated Leadership: Deficits, Hypercharisma, and the Hidden Power of Social Identity**

This paper sketches a theory of computer-mediated leadership, drawing on research on computer-mediated communication (CMC) and leadership. The forecast it makes for computer-mediated forms of leadership is mixed. Leadership interactions that focus on the personal and dyadic level are predicted to be deficient under conditions of CMC as compared with face-to-face interaction. Two notable exceptions are identified. If message or task equivocality is low, CMC can be more efficient than face-to-face interaction. The second exception concerns attributions of charisma: For leaders who present themselves skilfully and strategically in CMC, followers' impressions are hypothesised to become accentuated or 'hypercharismatic'. The above effects are all hypothesised to occur under conditions of high salience of the personal identities of both leader and follower. If, however, the leader and follower belong to the same salient and positively evaluated group, the effects of CMC are hypothesised to be positive. These effects are a direct result of integrating the SIDE-theory of computer-mediated communication and Hogg's social identity theory of leadership.

Key words: **Computer-mediated Leadership, Computer-mediated Communication (CMC), E-leadership, Social Identity Theory, Hypercharisma**

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Introduction

Despite an initial 'Virtuality Frenzy' in the mid-1980s to late 1990s, during which the advent of text-based computer-mediated communication (CMC) in organisations was touted as a precursor to increased organisational democratisation, decentralisation and overall efficiency, fully non-hierarchical, boundary-less, or even virtual organisations are still rare (e.g. Dutton 1999). However, what can be stated with certainty is that firms are now acquiring more virtual characteristics than they had in the past (e.g. DeSanctis/Monge 1999). The use of a computer for communication purposes in general, and email communication in particular, has become an integral part of organisational communication across a broad range of sectors. Both theory and practical experience suggest that these developments do not render leaders obsolete, but on the contrary pose a fundamental challenge to conventional conceptions of what leadership is (see Avolio/Kahai/Dodge 2000).

It therefore seems surprising that theories of computer-mediated leadership are rare. Although research in organisational and social psychology, as well as in information systems, has looked in some detail at computer-mediated communication (CMC), and although leadership has for some time been an immensely popular topic in organisational psychology, these two streams of research have so far remained quite distinct. Theoretical and empirical work on the likely consequences of CMC for management and leadership is still patchy (Dodge/Webb/Christ 1999; Fjermestad/Hiltz 1998). Avolio, Kahai, and Dodge (2000) have suggested a nomological framework for the understanding of 'e-leadership', a concept that is for all practical purposes identical to what we label computer-mediated leadership. The reason for our preferring the term 'computer-mediated leadership' is that we want to highlight the relevance of research on computer-mediated communication (CMC) and at the same time avoid confusion with a notion of e-leadership as a more global process that is aimed at general organisational effectiveness and necessarily involves a complete restructuring of an organisation (Annunzio 2001; Kissler 2001; Mills 2000), or as the leadership of a whole industry in an age of electronic commerce (e.g., Shulman 2001). The framework suggested by Avolio et al. (2000) draws on DeSanctis and Poole's (1994) Adaptive Structuration Theory (AST), which is in turn grounded in Giddens' (1979) structuration theory. Structuration theory is useful in conceptualising the embeddedness of leadership and technology in a broader context in which individual agency, technology and social structures are reciprocally related. However, we argue that on a more micro level it is beneficial to draw more directly on concepts from CMC and leadership research to formulate hypotheses that are more causal in character.

There is reason to believe that an integration of research on CMC and leadership would provide a good basis for conceptual explorations of computer-mediated leadership, particularly in terms of the possibly counter-intuitive effects of CMC. Over the past 20 years, research on CMC has developed dramatically. Early theorising about the likely effects of the advent of electronic communication predicted deficits and the weakening of social norms. This, it was argued, would either result in democratisation or in anomie and chaos. However, more recent approaches have stressed the impor-

tance of strategic media use and of social context, and lead to more positive predictions about the effects of CMC.

Changes in leadership research have been equally fundamental. Following the well-charted shifts from trait theories to behavioural and contingency approaches, an important strand of present-day leadership research focuses on transformational or neo-charismatic leadership. Social psychology has recently made a significant contribution to the understanding of charismatic leadership through an examination of social identity processes.

A theory of computer-mediated leadership should take both these areas of research into account. It should specify the conditions under which leadership is likely to benefit or suffer from electronic mediation. The present paper therefore begins with separate overviews of research on CMC and on leadership. The theory of computer-mediated leadership that will then be outlined will draw on a number of the theories that are explained in these earlier sections, specifying the conditions under which the (sometimes counterintuitive) results are likely to occur.

1. Computer-mediated communication: Necessary evil or blessing in disguise?

Computer-mediated communication is defined as synchronous or asynchronous communication between a sender and one or more receiver, involving a computer on both sides. The term CMC is similar to, but not identical with that of 'Advanced Information Technology' (AIT) as used by DeSanctis and Poole (1994). The terms are similar in that they both include, but are not restricted to, email systems, message boards, groupware and group support systems (GSS). They differ in that CMC has a stronger focus on the transmission of a message to a specified receiver, whereas AIT also includes less personalised systems, such as supply-chain management systems. The possible effects of computer-mediated communication (CMC) have stimulated considerable debate in both psychology and management. This is hardly surprising, given that the use of computers is increasingly prevalent in both professional and private domains. It can be argued that the basic assumptions and methodological approaches adopted by different theorists vary to such an extent that they should be classified as belonging to one of three paradigms: The 'deficit paradigm', the 'contingency paradigm', and the 'meta-communicative paradigm'. Our theory of computer-mediated leadership draws on theories from the deficit and contingency paradigms.

A common assumption of theories belonging to the deficit paradigm is that any type of mediation detracts from interpersonal communication, as compared with face-to-face situation. While some theories are driven mainly by engineering interests (interactivity, immersion, and telepresence), the two most influential deficit theories to date are 'Social Presence' theory and the 'Reduced Social Context Cues' approach. Social presence theory was introduced by Short, Williams and Christie (1976) at a time when CMC as we know it today did not even exist. It is nevertheless one of the most influential theories when it comes to assessing and predicting the consequences of CMC. The pivotal concept of social presence is defined as

the degree of salience of the other person in the interaction and the consequent salience of interpersonal relationships (Short/Williams/Christie 1975, 66).

According to social presence theory, media differ with respect to the degree of social presence they make possible. Short, Williams, and Christie (1976; Christie 1973, 1974) suggested that social presence should be regarded as a holistic subjective perception, although they recognised that this perception was dependent on the objective properties of a medium. Despite discussing the importance of tasks in some depth, these authors did not specify exactly which cues were responsible for which aspect of the communication experience, or what types of interaction would be positively or negatively affected by a higher degree of social presence.

In the 'reduced social context cues approach', Kiesler (e.g. Kiesler/Siegel/McGuire 1984; Sproull/Kiesler 1986) and her associates popularised the view that the loss of nonverbal channels in CMC deprived the interaction of social context cues, and that this would generally lead to anomie and a reduction in the salience of social norms. This, the argument continues, can lead to an equalisation between communication partners, such that group processes become more democratic and participative and are therefore less prone to domination by a single member (Rawlins 1989; Weisband/Schneider/Connolly 1995). In organisations, this has occasionally been heralded as the end of traditional hierarchies. Siemens' Chittur Ramakrishnan described the organisational consequences of this phenomenon:

There was a very significant number of e-mails to top management. The idea of going through a secretary to get an appointment has changed. People can send e-mails to anyone and expect a response. It is very democratising (Economist 2000, 11).

However, Sproull and Kiesler pointed out that the absence of norms could equally lead to deviant and antisocial behaviour, such as offensive verbal 'flaming':

When social context cues are weak, people's feelings of anonymity tend to produce relatively self-centered and unregulated behaviour. That is people are relatively unconcerned with making a good appearance. Their behaviour becomes more extreme, more impulsive, and less socially differentiated (Sproull/Kiesler 1986, 1495).

Smilowitz, Compton and Flint (1988), who replicated Asch's (1951) social influence experiment in a text-based communication environment, also pointed out that "it is easier for a deviant person to persist in the CMC-environment" (320). Perhaps unsurprisingly, this notion has also received some anecdotal support. Walt Disney's Michael Eisner remarked

that e-mail had served to increase the intensity of emotion within this company and become the principal cause of workplace warfare (Economist 2000, 11).

While the above hypotheses have not received unanimous empirical support (for critical assessments see Walther 1992, 1993, 1994, 1996, 1999; Spears/Lea/Lee 1990; Reicher/Spears/Postmes 1995), the underlying assumption of deficiency is still widely accepted. Cummings, a former associate of Kiesler, has repeatedly argued that geographical distance among distributed workers, which is usually bridged by CMC, has a range of negative effects (see Kiesler/Cummings 2002; Kraut, Kiesler et al. 2002), resulting from lack of social presence (Short/Williams/Christie 1975), social facilitation (Zajonc 1965; for an overview see Forsyth 1998, 272-277), or social impact (Latané 1981; Latané et al. 1995).

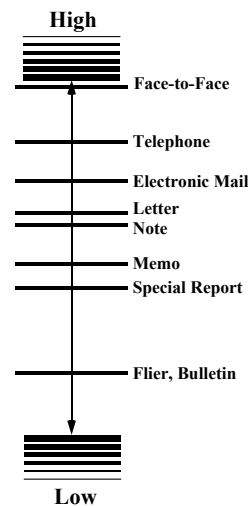
The postulate of deficiency has been somewhat moderated in theories that can be classified as belonging to the 'Contingency Paradigm'. The main assumption here is

that the impact of CMC depends on the situational context. Media richness theory, probably the most popular contingency theory of CMC to date, was originally introduced by Daft (Daft/Macintosh 1981) and later developed in collaboration with Lengel and Trevino (Trevino/Lengel/Daft 1987; Trevino/Daft/Lengel 1990). These authors proposed that media vary in their suitability for accomplishing different tasks. Tasks, it was argued, involve different degrees of equivocality. This concept is pivotal for the understanding of media richness theory as a whole. It is defined as follows:

Information that is clear and specific and that generally leads to a single, uniform interpretation by users is considered unequivocal. Information that lends itself to different and perhaps conflicting interpretations about the work context is considered equivocal information (Daft/Macintosh 1981, 211).

Although the proposed hierarchy of 'media richness' was structured by more objective criteria than the ones suggested by Short, Williams and Christie (1975), the result was essentially identical to social presence theory. Media settings were ordered along a single 'media richness' dimension (see Figure 1), face-to-face communication being the richest of all communication settings (Trevino, Daft and Lengel 1990; for similar views see Rice 1992, 1993; Sitkin, Sutcliffe and Barris-Choplin 1992).

Figure 1: A media richness hierarchy (from Trevino/Daft/Lengel 1990)



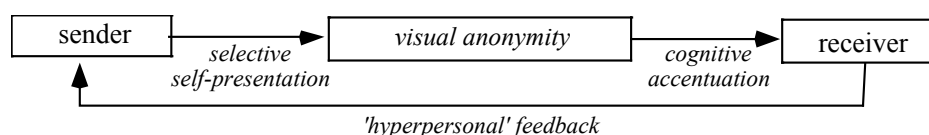
However, Daft, Lengel and Trevino drew one rather counterintuitive conclusion from the process of relating media richness to task criteria: Whereas rich media are clearly appropriate for tasks that are high in equivocality, unequivocal tasks should be accomplished using 'lean' media. Rich media, Daft, Lengel and Trevino (1990) argued, serve to make things unnecessarily complicated by adding 'surplus meaning', i.e., meaning that is not needed for the accomplishment of unequivocal tasks. The result of this 'task-media-fit' contingency of computer-mediated communication is illustrated in Table 1.

Table 1: The contingency of Media Richness and Task Equivocality
 (based on Trevino/Daft/Lengl 1990)

		Task Equivocality	
		high	low
Media Richness	high	Efficient Communication Media richness matches task complexity	Inefficient Communication Unnecessary media richness creates confusion and 'surplus meaning'
	low	Inefficient Communication Cue-system too simple for complex task	Efficient Communication Low richness is sufficient for message and avoids confusion

However, some authors regard even the concept of media richness as unduly pessimistic. Walther (1992, 1993, 1994, 1996, 1999; Walther/Burgoon 1992; Walther/Anderson/Park 1994) has advocated a 'social information processing model', the main postulate of which is that people use computer technology creatively. Skills, motivation, time, and norms permitting, users can compensate for any potential deficit created by the medium. Walther later developed this into a model of 'hyperpersonal communication', summarised in Figure 2. One facet of creative media use, Walther argued, is that users can engage in selective self-presentation. The receiver's impression of the sender is therefore biased towards the strategic presentation and (s)he will in turn reinforce the selected bit of self-relevant information. This process is recursive, applying to both sender and receiver, making the interaction 'hyperpersonal' rather than just 'personal', or even – as deficit theories would lead us to expect – 'impersonal' (see also Parks and Floyd 1996; for experimental evidence see Parks and Roberts 1998).

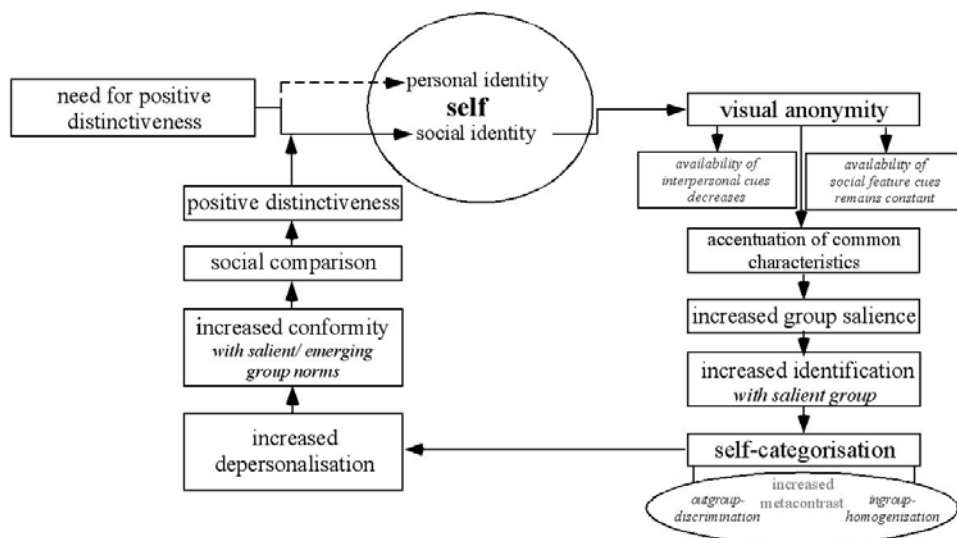
Figure 2: Walther's theory of hyperpersonal communication



Although Walther recognised that mediated communication can be more personal than face-to-face interaction, his analysis focused mainly on dyadic interaction. The broader social context, in other words, does not feature in his theoretical account. This is why the SIDE theory of computer-mediated communication was a major development in CMC research. Spears and Lea (Spears/Lea 1992, 1994; Spears/Lea/Lee 1990) introduced their Theory of **S**ocial **I**dentify and **D**eindividuation **E**ffects (SIDE) in the early 1990s, when theories predicting anomie and chaos as a result of CMC were at a peak (Spears/Lea 1992, 1994). Drawing heavily on social identity theory (Tajfel/Turner 1986) and its close relative self-categorisation theory (Turner 1985, 1987), these authors argued that the effects of CMC depend to a large extent on social context. 'Visual anonymity' (Lea/Spears 1995) may be an important characteristic of email communication, but it does not necessarily lead to loss of identity and deviant behaviour, as the deficit paradigm would suggest. This point is structurally identical to the

position that social identity theory (Tajfel/Turner 1979; Tajfel 1982; Turner 1987; for an overview see Reicher 1987) had taken against classical deindividuation theory (notably Festinger/Pepitone/Newcomb 1953; Diener 1980; Prentice-Dunn/Rogers 1989; Zimbardo 1969). While the latter had argued that anonymity causes loss of identity and social disinhibition, social identity theory re-conceptualised deindividuation as a shift from an individual's personal identity to a social identity, shared by members of a group. According to the social identity approach, anonymity does not necessarily lead to anomie and social disinhibition. Social norms can emerge even in an anonymous context. Indeed, these social norms and group characteristics can become more important under conditions of anonymity, because less personal, individuating information is available. If the individual regards the group's characteristics as generally positive and considers group membership to be desirable, he or she will be inclined to adopt group standards and norms in order to attain additional positive distinctiveness for the group. This process of approximation to salient group norms, called 'depersonalisation', is described in detail by self-categorisation theory (Turner 1985, 1987). In an attempt to maximise 'meta-contrast', the individual minimises differences among ingroup members while inter-group differences are accentuated. This is precisely why the SIDE theory argues that CMC can be more social than conventional face-to-face communication (Spears/Lea/Postmes 2001; Spears et al. 2002b; Spears et al. 2002a): The social qualities of an interaction do not rely exclusively on what is transmitted down the wire. They depend crucially on how individuals perceive themselves. If they consider themselves part of a positively evaluated group, visual anonymity tends to increase the salience of the virtual group, enhancing the individual's social identity, and thereby leading to a significantly higher level of conformity to norms and commitment to the group than would be observed in face-to-face interaction. The SIDE theory is summarised in Figure 3.

Figure 3: Spears, Lea and Postmes' theory of Social Identity and Deindividuation Effects



2. Leadership: Great men, prototypes, and fundamental attribution errors

Providing a brief overview of leadership research is a formidable task. To illustrate the point, the total number of available items on this topic at Amazon.com has now reached almost 14000 – enough for the aspiring leader to spend his or her whole working life digesting it all at the rate of one a day. At the same time, theories of what leadership actually is and how it is linked to effectiveness have changed quite radically.

Following decades of writing about leaders as ‘great men’ and about ‘aristocracies of leadership’, and empirical research on the traits of successful leaders, Stogdill’s (1974) analysis of the state of trait theories of leadership was disillusioning. There followed a decade of research on leadership styles. A more psychological perspective coupled with greater use of experimentation was gaining momentum at the time, stimulated by Lewin’s experimental research on social climates (Lewin/Lippitt/White 1939) and Bales and Slater’s (Bales/Slater 1955; Bales 1958) ‘two-complementary-leaders hypothesis’. These experimental studies, together with research conducted at the Universities of Ohio (Fleishman 1953; Hemphill/Coons 1957) and Michigan, resulted in the view that leadership behaviour incorporated both a task-oriented and a socio-emotional dimension. Both behaviour patterns, it was argued, were crucial to leadership efficiency: one to push the group forward and one to prevent it from falling apart. Fiedler’s (Fiedler 1964; for an overview see Graen et al. 1970) theory of leadership effectiveness went on to specify which of these behaviour patterns was appropriate under which circumstances. His primary point was that leader-follower relations, task structure, and the leader’s position power should all be taken into account in order to predict which type of leader would be most effective in leading a group to success. Fiedler’s theory was arguably the last significant social psychological contribution to the study of leadership before the sub-discipline’s research focus shifted from small group research to social cognition. Leadership research was then taken over by researchers in organisational and management studies (for a historical overview see Abrams/Hogg 1998).

One perspective that has acquired considerable momentum over the past decade is that of charismatic and transformational leadership. The terms charismatic (House 1977; Conger/Kanungo 1987), transforming (Burns 1978) or transformational (Bass 1985), inspirational (Yukl/Van Fleet 1982) or visionary (Bennis/Nanus 1985; Sashkin 1988) leadership are sometimes difficult to distinguish, and there is a need for greater consistency in this matter. Although Burns’ concept of transforming leadership focused on political leaders, it soon became a topic of interest in psychological research on leadership, in terms of both theoretical development (House 1977; Bass 1985; Bass/Avolio 1989; Bennis/Nanus 1985; Conger/Kanungo 1988; Sashkin 1988; Bryman 1992; Shamir/House/Arthur 1993) and empirical inquiry (Lowe/Kroeck/Sivasubramaniam 1996; House/Aditya 1998). In essence, what is now termed transformational leadership was seen as a ‘new leadership paradigm’ that was close enough to Weber’s original conceptualisation of charismatic leadership for House (1977) to suggest using the label ‘neo-charismatic leadership’ as an umbrella term for this still relatively heterogeneous group of theories. Empirical studies appear to support Weber’s assumption that conditions of stress and uncertainty increase the likelihood of

the emergence of a charismatic leader (House/Spangler/Woyke 1991; Pillai/Meindl 1991; Waldman et al. 1999). This type of 'new leadership' seems to occur not only in the context of politics, but also in business organisations (Howell/Higgins 1990; Curphy 1992; Hater/Bass 1988; Howell/Avolio 1993; Koh/Terborg/Steers 1991; Roberts 1985; Trice/Beyer 1986; Waldman et al. 1999).

It was primarily Bass (Avolio/Bass 1988; Bass 1985, 1990; Bass/Avolio 1993) who operationalised Burns' terminology for use in psychological leadership research. In constructing his Multifactor Leadership Questionnaire (MLQ), Bass (1985) argued that transformational leaders' behaviour patterns differ substantially from those displayed by so-called transactional leaders. Transactional behaviour focuses on the administrative side of leadership and refers to behaviour such as performance monitoring, correcting follower's mistakes, and rewarding them if results are as expected. Transformational leaders, on the other hand, are capable of motivating followers to perform beyond expectations. To achieve such performance, transformational leaders are thought to exhibit behaviour patterns such as setting high standards to be emulated, and providing followers with challenges and reasons for engaging in shared goals and undertakings. While there is still a need for additional empirical results and theoretical clarification (see e.g. Shamir 1999; Yukl 1999), the results are generally encouraging (see e.g. Lowe, Kroeck/Sivasubramaniam 1996).

There is, however, some doubt about whether leadership is, as a large part of transformational and charismatic leadership research seems to suggest, mainly a matter of leader behaviour and automatic follower reactions (see Brown and Lord 2001). It has been argued that the specific reaction of any follower to behaviour shown by a leader depends crucially on the symbolic structures followers employ to represent these actions, as well as the behavioural consequences that follow from them (Hollander/Julian 1969; Lord/Maher 1991). Drawing on Rosch's (1978) probabilistic concept of concept organisation, Lord (Lord/Foti/Philips 1982; Lord/Foti/De Vader 1984; Lord 1985; Lord/Maher 1991) argues that followers will only categorise another individual, or 'target', as a leader if there is sufficient overlap between the target's characteristics and the features that define the cognitive category of a leader, i.e., the leader prototype. In his leadership categorisation theory, Lord follows Rosch (1978; Cantor/Mischel [1979] applied this – thus far very general – concept to person perception) in that he assumes that prototypes are cognitive categories that are essentially fuzzy and ill-defined, such that the absence of a single feature does not necessarily preclude a target from being classified as a leader. However, different targets vary in prototypicality, i.e., in the extent to which their characteristics overlap with the central and peripheral characteristics of the social cognitive category of what makes a leader. Although not all structural properties of the leader prototype are universal across context, developmental stages (Matthews/Lord/Walker 1990) or cultures (Gerstner/Day 1994; Den Hartog et al. 1999), there seems to be at least some consistency regarding the features that characterise a leader (Offerman/Kennedy/Wirtz 1994). A recognition-based perspective on leader categorisation, one could argue, is complementary to behavioural theories of leadership, including that of transformational leadership. It conceptualises both individual antecedents and cognitive processes that underlie the followers' reactions to a leader's behaviour, and these processes do not contradict the

assumptions made by charismatic and transformational leadership research. However, leader categorisation theory has also highlighted the point that the categorisation of a leader may be heavily influenced by factors beyond the leader's immediate control. In particular, studies utilising the 'performance cue' paradigm have shown that the outcome of a leader-follower interaction can have a dramatic impact on whether or not a leader is perceived as a 'real leader' (e.g., Binning/Lord 1980; Larson/Lingle/Scerbno 1984; Lord et al. 1978; Phillips/Lord 1982). In other words, the positive, or indeed negative, outcome of a group is – *ceteris paribus* – likely to affect followers' categorisation of the leader.

Complementing these developments, Hogg (2001) has recently suggested a group-oriented interpretation of leadership processes. While his social identity theory of leadership recognises both the importance of leader categorisation and the potential influence of performance cues, it suggests that leadership is a structural property of an ingroup and, as such, more than merely a matter of individual information processing. As group membership becomes cognitively salient, he argues, followers' perceptions will be increasingly influenced by whether potential leaders personify the group's norms and distinct characteristics, rather than the individual followers' pre-existing schemas of what a leader is. A follower's perception of the leader is still influenced by a prototype, but this prototype is an *ingroup prototype*, rather than an *individual leader prototype*. As with the SIDE theory of CMC discussed above, Hogg's (2001) approach draws heavily on social identity theory (Tajfel/Turner 1979; Tajfel 1982; Turner 1987). Driven by a universal need for both self-enhancement (Turner/Brown/Tajfel 1979; Abrams/Hogg 1988) and self-evaluation (Hogg/Abrams 1993), followers are thought to identify with a salient group and categorise themselves as an ingroup member. According to Turner (1985; Turner et al. 1987), this process of an individual's 'self-categorization' as either 'ingroup' or 'outgroup' is in itself effectively based on the group prototypes described above, i.e., on

context specific, multidimensional fuzzy sets of attributes that define and prescribe attitudes, feelings, and behaviors that characterize one group and distinguish it from others (Hogg 2001, 187).

The leader prototype and the ingroup prototype are similar in that they both draw on Rosch's (1978) notion of fuzzy cognitive categories defined by prototypical exemplars. However, while the individual leader prototype contains each follower's assumptions about the characteristics of a leader given the particular situation, it is a structural property of the individual and not systematically related to the group. The ingroup prototype, on the other hand, reflects the distinctive characteristics of the group and effectively emerges from the group members' interaction. In a process of depersonalisation, one's own characteristics and those of other group members are perceptually assimilated to these ingroup prototypes. At the same time, members of other groups are perceived as different from the ingroup prototype. This depersonalisation process has a significant bearing on group members' feelings towards each other. According to the social attraction hypothesis (Hogg 1992, 1993; for empirical tests see e.g. Hogg/Cooper-Shaw/Holzworth 1993), feelings of sympathy become increasingly based on how typical an individual is of the ingroup prototype (called *social attraction*). Personal relationships and idiosyncratic preferences (called *personal attraction*), on the

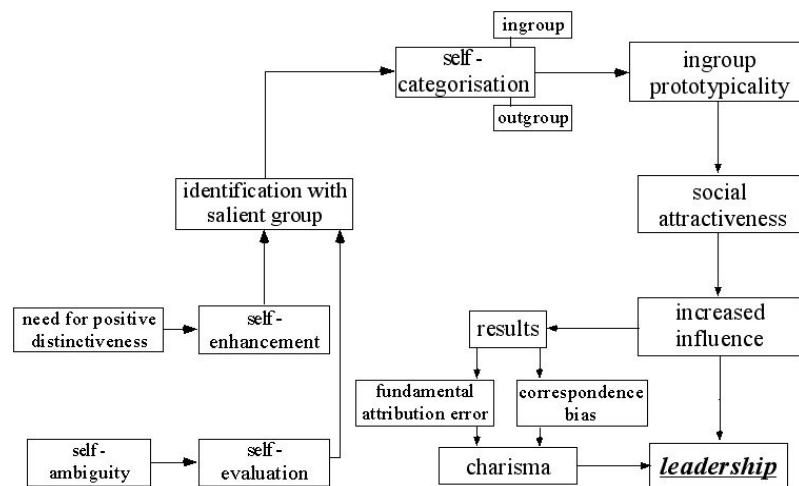
other hand, become less important. Whether a person is liked or not now depends on whether he or she complies with the distinctive characteristics of the salient ingroup, which has become the primary source of positive distinctiveness for its members. Ingroup members are liked more than outgroup members and within the ingroup consensual liking is stronger for more prototypical than for less prototypical members. Members that epitomise the ingroup prototype will be socially most attractive. According to Hogg, social attraction is directly linked to social influence. Because they attract more attention, ingroup members who epitomise the norms and behaviours that are characteristic of the group will also appear to be in charge of the group. In ad hoc groups, this relation between prototypicality and leadership is only an “appearance” (Hogg 2001, 189), but in established groups this appearance can be backed up by actual power.

Over time and with increasing group salience, however, even an embryonic leadership role can turn into actual leadership. Prototypical members are socially more attractive than non-prototypical members and, as a direct result of their attractiveness, better able to exert influence over other group members. As Hogg puts it,

In this way, the most prototypical person is able to exercise leadership by having his or her ideas accepted more readily and more widely than ideas suggested by others (2001, 189).

This effect is heightened by both attributional biases and information processing. Ingroup prototypical and socially attractive leaders attract more attention than other group members. It is therefore to be expected that, due to correspondence bias (Gilbert and Jones 1986) and the fundamental attribution error (Ross 1977), any group result will tend to be attributed to the perceptually salient leader and his or her personal dispositions. This, essentially, is Hogg’s explanation of charismatic leadership: Ingroup prototypicality, social attractiveness and misattribution can lead to the ascription of charisma, and this attribution is particularly likely in individualistic cultures because these cultures favour the belief that leadership reflects personality (e.g., Morris and Peng 1994). Figure 4 summarises the main elements of Hogg’s SIT theory of leadership.

Figure 4: Hogg’s (2001) social identity theory of leadership



3. Computer-mediated leadership: Reduced social impact, hypercharisma, or prototypicality?

The preceding overviews of CMC and leadership research might make the two topics appear to be quite disparate, but there are also some significant parallels. In both cases, research began using a generalist approach; however, the nature of the task confronting the individual or group was then identified as a crucial factor, and both streams of research have in recent years focused to some extent on the importance of social context. Because none of the theories discussed above is in itself broad enough to account for computer-mediated leadership across the different situations identified as important, the theory of computer-mediated leadership we sketch below draws on a combination of theories.

As argued earlier, text-based CMC entails a reduction in the range of social context cues available. This is likely to have an impact on the level of social presence experienced during any social interaction (Kiesler/Siegel/McGuire 1984; Sproull/Kiesler 1986; Hinds/Kiesler 2002; Kiesler/Cummings, in press), including those that take place in a leadership context (see especially Cummings, in press). Although this does not, as Kiesler and colleagues seemed to suggest, necessarily mean that this lack of social presence will lead either to democratisation or to anomie, it will certainly reduce the ability of leader and follower(s) to exchange socio-emotional cues. This might, as Kiesler and Cummings have argued, mean that direct social impact will be reduced and that personalised influence will be more difficult to exert (see also DeSanctis/Monge 1999). Given that theories of charismatic leadership often refer to the importance of both verbal and nonverbal cues, as well as socio-emotional inspiration (Fiol/Harris/House 2000), it seems questionable whether charisma can easily be transmitted down the wire to motivate followers to perform beyond expectations. The theoretical consequence of this line of reasoning is as follows: *To the extent that leadership depends on personalised and/or charismatic influence, its impact is likely to be diminished by CMC.* Of the set of hypotheses that constitute our model, this is probably the most intuitively obvious one. It is also the one that can be derived from the literature with the least ambiguity.

However, this reduced impact does not necessarily mean that the outcome of the leadership interaction is impaired, regardless of task and social context: From a media richness perspective it seems likely that the effects of CMC on leadership depend crucially on the task at hand. For messages that are low in equivocality, leaders can, and possibly even *should* use lean media in order to avoid the 'surplus meaning' that arises from the use of rich media in general and nonverbal communication channels in particular. Interaction via lean media may not result in any increase in perceived charisma, but charisma may not be needed when the task to be performed is simple and straightforward. Messages that are high in equivocality, however, call for rich media. In other words, tasks that lend themselves to a range of different interpretations, that are unstructured and hence require a process of grounding before further action is taken, are less well suited to the use of email than, say, simply exchanging information. Although these effects of using different media are likely to be moderated (as Walther's social information processing theory suggests) by individual differences in motivation, skills, time and norms, it seems unlikely that high motivation, good computing skills, ample

time, and supportive norms will be sufficient to compensate for the loss of nonverbal information in an average leadership interaction.

The conclusions that follow from this first line of reasoning are as follows. *The use of a computer for text-based communication will impact on a leadership interaction. Because it deprives both sender and receiver of a range of communication channels, notably interpersonal cues, CMC will have detrimental effects if leadership, social presence and direct social impact are needed. However, if the task is simple and straightforward the effects of CMC will be less detrimental, and may even be positive, due to the reduction in surplus meaning and the fact that social impact is unnecessary.* The potentially advantageous effects of low media richness for unambiguous tasks are more counterintuitive than the hypothesis that the use of CMC for leadership purposes implies impediments. However, in addition to being an integral part of media richness theory (Trevino/Daft/Lengl 1990), there are some empirical data to support the assumption that mediated communication can be equally efficient (e.g. Zack 1994) while simultaneously making followers feel more autonomous and self-managing (Manz/Sims 1987).

However, careful integration of theories of CMC and leadership yields an even more counterintuitive prediction concerning of computer-mediated leadership. Depending on the circumstances, it might be precisely the lack of social presence and personalised information that leads followers to an accentuated perception of leader charisma. One reason for this prediction follows directly from Walther's (e.g. 1999) theory of hyperpersonal communication. If the main components of this theory generalise to leadership contexts, then email communication should enable leaders to present themselves more strategically than they could in face-to-face interaction. The overall impression they create is easier to manipulate and is therefore less likely to be disturbed by less easily controllable nonverbal information. A follower whose perception of the leader relies solely on this strategically presented information might be led to an accentuated impression of charisma, thereby strengthening the leader's motivational influence. In other words, the perception of charismatic leadership is due to the effects of 'hypercharismatic communication'. Walther's theory has thus far not been applied to leadership. However, there is ample evidence to support the notion that charismatic leaders engage in image building (House 1977) and impression management (Bass 1985; Gardner/Avolio 1998; see Schlenker 1980, for the original concept; and Leary/Kowalski 1990 for an overview), and that "they pick and choose from the rough materials of reality to construct pictures of great possibilities" (Conger 1989, 1992). Whether they do so by means of CMC, and whether followers will readily make attributions of charisma still needs to be established empirically. The work on Virtual Politicking by Romm and Pliskin (1997a/b, 1998, 1999a/b) is, one could argue, at least an indicator of how substantial the impact of email communication can be when used strategically.

A second reason for suggesting that mediated communication might result in greater leader influence derives from a combination of Hogg's social identity theory of leadership and the SIDE theory of CMC. The hypotheses discussed so far have focused on leadership as an interpersonal process that is based on individual information processing. From a social identity perspective, this means that we have so far assumed that the personal (rather than the social) identities of leader and follower are sa-

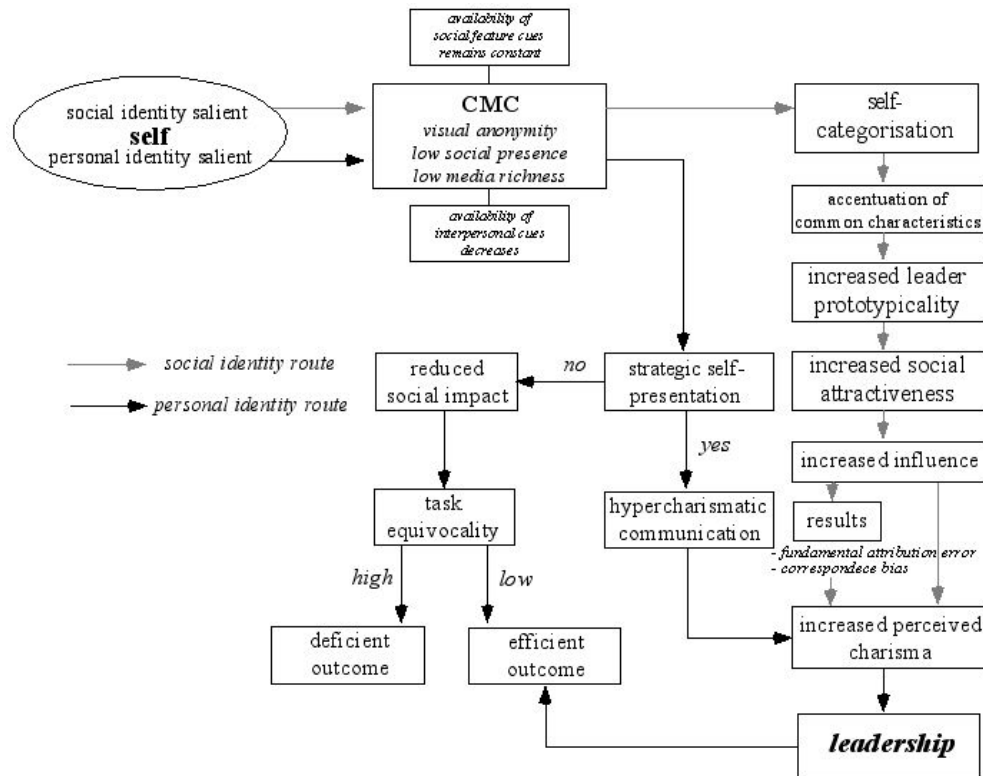
lient. In our model we call this the 'personal identity route'. However, personal identity salience is not a necessary element of either computer-mediation or leadership. Drawing on the SIDE theory and Hogg's SI theory of leadership, we make predictions about the effects of computer-mediated leadership under conditions of social identity salience. This part of the model is accordingly named the 'social identity route'. A social identity perspective on computer-mediated leadership would suggest that the result of an interaction depends crucially on how the follower perceives him- or herself in relation to the leader. If social identity is salient, i.e., if an individual considers him- or herself to be a member of the same salient and positively evaluated ingroup as someone who epitomises the norms and attributes of the group, computer-mediated communication should result in higher levels of charisma being attributed to this person than would face-to-face interaction.

Our first set of predictions draws mainly on the SIDE theory. The use of email implies a lack of interpersonal cues, or 'visual anonymity'. If prior to, or indeed as a result of, the interaction the follower considers both him- or herself and the potential leader to be members of one and the same, positively evaluated ingroup (e.g., a department or work-group), a social identity perspective suggests that followers will cognitively accentuate those characteristics of both the self and the leader that make them part of the same ingroup. In other words, through self-categorisation and depersonalisation effects, visual anonymity is likely to enhance a follower's perception of the leader's prototypicality. This is where Hogg's SI theory of leadership becomes important. Once the leader's ingroup prototypicality is enhanced, he or she will become more socially attractive and thereby more influential. In other words, to the extent that an individual identifies more strongly with a group, attraction to other group members becomes increasingly based on the degree to which they exemplify the group's defining attributes. Finally, as social attractiveness and influence increase, followers are more likely to perceive the leader as charismatic, because perceptions of social attraction and influence are likely to be directly related to perceptions of charisma, and because group achievements are more likely to be attributed to the leader due to correspondence bias and the fundamental attribution error. The consequence of this argument is as follows: *To the extent that followers perceive themselves to be members of a positively evaluated group, i.e. if the followers' social identity rather than their personal identity is salient, then the decrease in personalising information that comes with CMC can strengthen followers' perceptions of leader ingroup prototypicality. This will in turn lead to an increase in perceived leader attractiveness, influence, and charisma. It will also increase the likelihood of group results being attributed to the leader's personal characteristics.* It is this component of our model that is probably most counterintuitive, although it follows directly from an integration of the two theories we have described. It is also the component for which it is most difficult to find empirical support, partly because Hogg's SI theory of leadership is a relatively recent development, and also because leadership and CMC have so far remained two distinct areas of research.

Finally, we posit that an increase in perceived leader charisma will generally foster an effective group outcome. This is in line with a broad range of empirical results, many of which were included in the meta-analysis published by Lowe, Kroeck and Sivasubramaniam (1996). However, it is important to stress that the link between at-

tributed charisma and performance is not a linear one. Charisma can be used for purposes that are independent of, or even incompatible with, performance (Bass 1990; Conger 1989, 1990). And, as discussed above, it is also likely that a certain level of performance is a prerequisite for the attribution of charisma. Our model of computer-mediated leadership is summarised in Figure 5.

Figure 5: A model of computer-mediated leadership



It is worth stressing that the model we suggest is conceptual and – necessarily – speculative. While most of the theories it draws on and integrates have received ample support in their respective research domains, the effects they postulate have not been tested in combination; nor have CMC theories been applied to the context of leadership. The predictive validity of the model therefore hinges on whether the effects it combines are compatible, applicable to leadership, and potent enough to outweigh the influence of other – mediating or moderating – variables. The predictions we have made should therefore be subjected to empirical investigation, ideally using a range of different research methodologies to optimise both internal and external validity.

4. New research directions and conclusions

In this article we have advanced a model of computer-mediated leadership that integrates theories from CMC research with recent developments in leadership research. We posit that, under specific conditions, the use of email can accentuate the percep-

tion of a leader as charismatic, either because the leader presents him- or herself successfully, thereby achieving a form of 'hypercharismatic' communication, or because the lack of personalising information leads to depersonalisation and thereby to an increase in perceived group prototypicality. This increase in leadership charisma can lead to an effective group outcome, despite the reduction in social presence. We also posit that if task equivocality is low, the group outcome can be effective even if attributed leader charisma and social presence are low. The primary contribution this model makes to the understanding of leadership, we would argue, is to explain and predict the potentially counterintuitive effects of text-based electronic communication for leadership purposes, and to show how strategic behaviour on the part of the leader and how the social context as perceived by the follower can have a significant impact on perceived leader charisma and, ultimately, performance.

We should reiterate, however, that the model is speculative in character, and that the propositions we make rely on the compatibility of the theoretical components we have integrated. A broad range of issues still needs to be clarified, some of which we have already mentioned. In particular, further research should focus on the following:

- *Do actual leaders use CMC strategically to achieve hypercharismatic communication effects, or to increase ingroup prototypicality?* Although the reasons why hypercharismatic effects and increases in ingroup prototypicality can occur have been discussed in depth, it is possible that leaders simply do not take these factors into account when choosing a communication medium. There is strong evidence that users generally adapt technology to their needs. However, research usually focuses on unintended consequences, i.e., how features that are designed into a system are used incorrectly or even ignored completely (Poole/DeSanctis 1990; Olson/Olson 2000). Whether this seemingly incorrect use can be seen as strategic in the sense that it increases hypercharismatic communication effects or ingroup prototypicality has yet to be explored.
- *Do charismatic leaders differ from non-charismatic leaders in how they use media, either to achieve hypercharismatic communication effects or to increase ingroup prototypicality?* Given that charismatic leaders focus more strongly on impression management and image building (e.g., House 1977; Bass 1985; Gardner/Avolio 1998), it seems likely that their patterns of media use will differ from that of non-charismatic leaders. Despite the potentially beneficial effects of CMC on follower perceptions of leader charisma, it is possible that charismatic leaders are more hesitant to use CMC, because it impairs their ability to use nonverbal cues (Fiol, Harris/House 2000) and reduces control over the socio-emotional effects their behaviour can achieve.
- *Do hypercharismatic communication effects occur in established groups, in which the leader is known to the followers and in which face-to-face interactions still occur regularly?* Effects of hyperpersonal communication as described by Walther (1996) are particularly likely when the receiver relies almost exclusively on the information presented by the sender, rather than on prior knowledge. It should therefore be established empirically whether such effects also occur when other information, such as that which can be derived from regular face-to-face interactions, is available.

- *Are hypercharismatic communication effects and CMC-based attributions of increased ingroup prototypicality stable over time?* Assuming that the effects predicted by our model do indeed occur, it would be worth investigating whether these effects are stable or volatile. It has previously been argued that relationships that rely on CMC in general, and those that involve hyperpersonal communication effects in particular, tend to be vulnerable to a 'boom-and-bust' phenomenon (Cooper/Sportolari 1997): While receivers initially inflate the personality of the sender, there is also a drastic increase in the risk of being disappointed if the information that follows is inconsistent with raised expectations.
- *Do CMC-based depersonalisation effects and increases in perceived group prototypicality occur in situations in which there is an alternative group that does not rely on CMC?* While empirical tests of the SIDE theory (Spears/Lea/Postmes 2001; Spears et al. 2002b; Spears et al. 2002a) have shown that positive social identities can develop and flourish online, researchers have not yet examined whether this is also the case when individuals can choose between groups that are online and those that are not. Kiesler and Cummings (2002) have recently stressed the relative importance of geographical proximity and direct face-to-face contact for the development and maintenance of a coherent group identity. Email communication may well increase social identity salience and depersonalisation effects when the social identity is salient to start with. However, it is possible that interpersonal contact and physical proximity are more likely to render the social identity salient in the first place, so that the potentially advantageous effects of email communication can, depending on the circumstances, be outweighed by the disadvantages of mediated communication.
- *Is the use of email for leadership purposes in itself compatible with the leader prototype, i.e. the behaviour of someone who is perceived, or perceives him- or herself as a leader?* This is highly relevant for both the personal and the social identity routes of our model. If the use of email is generally perceived as incompatible with the leader prototype, followers' perceptions of charisma are less likely to increase as a result of either strategic self-presentation (personal route) or biased attributions for group results (social identity route), even if the hypothesised effects of hyperpersonal communication and group prototypicality do occur.

In conclusion, the theory of computer-mediated leadership is grounded in two areas of research that have so far remained distinct: computer-mediated communication and leadership. Some of the predictions of the model are counterintuitive in the sense that the hypothesised effects of computer-mediated communication on leadership are beneficial. Others are in line with what we take to be a more intuitive understanding of the consequences of virtual leadership, in that they predict a deficit. Which of these predictions will attract support in experimental and field settings remains to be seen. However, the central ideas of the model should provide a basis for further conceptual explorations and empirical research into computer-mediated leadership.

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