

On Side: Purview, problems and prospects

In this contribution we provide a general overview of the SIDE model — the social identity model of deindividuation effects — reviewing developments in chronological perspective. We consider the theoretical purview of the model, and identify some problems and future prospects. The SIDE model refers to a rather specific theoretical framework and research program, albeit now spread over a number of different research teams and domains. This is evident from the diversity contributors to this volume, drawn from all parts the world. However SIDE is not the only framework to address the issues raised at this conference and in these pages. Although not all of the contributions here are concerned specifically with the SIDE model they all confront closely related issues. Before going into further details of SIDE it is therefore important to locate this approach in relation to these more general questions. We will then proceed to describe the more specific aims and achievements of the SIDE research program, giving particular emphasis to collaborative research with Sue Watt, Paul Rogers and others.

So what are the general issues addressed by this conference that form the basis for the SIDE model? As with social psychology in general, the contributions here are all concerned with trying to understand the various aspects of being and behaviour in the social world, and to explain the reasons for the diversity and specificity of both. It is possible to identify at least three central themes that unite the SIDE and other approaches in this general aim. First there is a central concern with issues of the *self* and *self-definition*. How we define the self, and by implication that idea that the self can be defined in multiple ways (e.g., as an individual, as a group member), is a recurring theme that is used to enrich the analysis of behavior and to understand its diverse forms. Second, an analysis of the effect of *social context* is often indispensable in understanding psychological effects and behavioural outcomes, particularly in interaction with the question of self (Spears, Doosje & Ellemers, 1999). Third, a central theme here which often forms a bridge between self and context concerns the question of *communication*, and particularly how the self is expressed or influences communicative behaviour as a function of context. In short, who is the audience of our behaviour, and how do we take this into account? This implicates the *strategic* dimension, and acknowledges that we are reflexive beings who are able to step back from our self-definition and appreciate the effects of self-presentation on others. This theme means that we also have to consider our reactive impact as researchers: our critical role in the communication game of research

defines how the participants react in producing what we study, and often goes beyond the independent variables of our designs. The nexus of these three themes provide a powerful framework in which we can understand both the experience and expression of self in diverse contexts. Of course they are not separate from each other and a critical issue is how these themes interrelate. For example, how does self define context and how do communicative context and strategic concerns feed back into questions of self-definition? These themes are addressed below and in many subsequent contributions to this volume. We now turn to how the SIDE model has attempted to address these issues and how the model developed as an attempt to tackle certain problems.

Purview

Here we consider the scope or purview of the SIDE model. First we give an overview of the model, how it developed and what it set out to explain. As its name indicates the SIDE model grew out of social identity theory (SIT; e.g., Tajfel, 1978; Tajfel & Turner, 1979; 1986). More accurately it has probably been even more informed by its sister theory, self-categorization theory (SCT: Turner, 1987), although its roots in research started before SCT was formulated as such. Providing a historical overview of the roots of SIDE is useful to understand its aims and scope as well as furnishing a background for the more SIDE-related contributions presented later in this volume.

Its beginnings can be traced back to Steve Reicher's work on *crowd behaviour*, and his social identity based critique of *deindividuation theory*. (e.g., Reicher, 1982; 1984). First it is important to state that, as indicated above, this analysis is firmly grounded in social identity and subsequently self-categorization theory. Social identity theory drew an important distinction between interpersonal and (inter)group behaviour (Tajfel, 1978; Tajfel & Turner, 1979). Within self-categorization theory, this distinction was further elaborated and developed into a fully-fledged theory of self in which a crucial distinction is drawn between personal and group identity, which correspond to the level of self-definition in interpersonal and intergroup contexts respectively. However, the effects of specific contextual conditions remains rather unspecified in SIT and SCT, and the focus on factors producing deindividuation effects facilitated a refinement of how these contextual factors and questions of self-definition might interact.

The early research of Steve Reicher has been very important in laying the foundations for what we have since come to call the *cognitive*, and *strategic* dimensions of the SIDE model. The cognitive dimension refers to how some classic deindividuation effects of anonymity in the group can affect self-definition by influencing the salience of group identity in particular. As other contributors to this conference have noted, the reference to the 'cognitive' dimensions of SIDE is in many respects less than ideal and can perhaps better be labelled as being concerned with 'self-definition' (see McGarty et al., this volume). However, the cognitive reference does connote the 'salience' of a particular identity in order to distinguish this from the strategic manipulation or presentation thereof.

Successive generations of deindividuation theorists had proposed that immersion and anonymity in the group could result in a 'loss of self' or at least reduced self-awareness (e.g., Diener, 1980; Festinger, Pepitone & Newcomb, 1952; Prentice-Dunn & Rogers, 1982; Zimbardo, 1969). In his 1984 study, Reicher proposed that anonymity in the group does not produce a *loss* of identity, but actually promotes a *switch* to social identity and an enhanced salience of these group identities. To examine this he conducted a social influence study involving science and social science students. The salience of group identity was manipulated by separating these two groups and seating them at two different tables (high group salience) or seating them, interspersed, seated at a single table (low group salience). Moreover, a classic deindividuation/anonymity manipulation was introduced by dressing people in masks and overalls (à la Zimbardo, 1969) or leaving them identifiable in their normal clothing. The idea was that this manipulation would accentuate the effects of group salience by reinforcing group distinctions when group salience was already high (i.e. by eliminating a focus on interpersonal difference), but not when group salience was low (where group boundaries were not distinguishable in any case).

The effects of this deindividuation manipulation were not strong or general across conditions in this study. However, there was some evidence that when group boundaries were clear (high group salience), and people were anonymous in their group, this led to more social influence in a group normative direction (specifically for the science students: See Figure 1). The argument here is that anonymity enhances the salience of group identity, and this stimulates group related behaviour (see also Reicher, Spears, & Postmes, 1995). Science students became more pro-vivisection (a science norm) when group identity is salient, and they are anonymous.

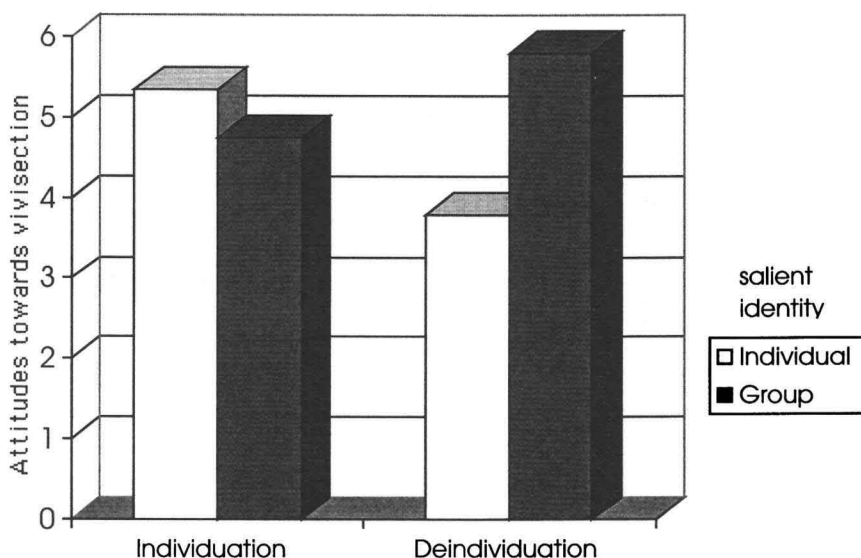


Figure 1: Pro-vivisection attitudes for science students as a function of salient identity and deindividuation.

This point was important because it was the first study to question the accepted wisdom of previous deindividuation research. Rather than behaviour becoming *deregulated* under deindividuation conditions, it seems to be highly socially *regulated*. Although it took some time for the implications of this finding to filter through to the deindividuation literature (and still has not permeated fully), this study was influential in starting a line of analysis that has received much empirical attention that has started to snowball.

Shortly after this study, Reicher also laid the foundations for the study of the strategic dimension of behaviour as affected by identifiability (see Reicher, 1987; Reicher & Levine, 1994a,b). In a series of studies he and Mark Levine have shown how a) identifiability to powerful *outgroups* can suppress the expression of punishable behaviour (although it can also encourage the expression of group behaviour that is not punishable) (Reicher & Levine, 1994a), and b) how the co-presence of *ingroup members* can provide the social support to transgress norms that might otherwise be followed (Reicher & Levine, 1994b). These strategic themes will recur in the contributions of these authors later in this collection (see also Barreto, this volume). However I think it is important to note the theoretical importance and influence of these lines of research; we will see echoes of these themes in many of the present contributions as well as in our own research program to which we now turn.

Our own research: Extending SIDE to computer mediated communication

The cognitive side of SIDE. We now want to return now to the cognitive dimension and focus on some of our own research and how it picked up on these leads. The research by Reicher and colleagues described above was originally designed to model social influence processes that help to explain social influence in the crowd. In our research we have applied these ideas to the realm of computer mediated communication. This program of research started when Russell Spears was a post-doctoral fellow at Manchester University in the mid-80s where Martin Lea was working on a large project concerned with computer mediated communication (CMC). At that time CMC was a new technology and social scientists were keen to measure and to understand (often in that order) its social effects. Prior to this research position Russell had been at Exeter with Steve Reicher and was familiar with his work on crowd behaviour. Given the centrality of anonymity to CMC, we saw a theoretical link with Steve's work on crowd behaviour and we started to apply these ideas to the computer communication domain. At first our work was concerned with social influence in the group, and did not consider more complex intergroup contexts (at least those excluding the role of the experimenter) in which strategic and self-presentation processes can play a role. Most of our work has concentrated on the cognitive dimension of SIDE, namely how anonymity could affect group salience (self-categorization) and social influence in CMC.

Our first study was a group polarization study (Spears, Lea, & Lee, 1990). In certain respects this was a conceptual replication of the 1984 study by Reicher described above, but with the classic deindividuation manipulation being replaced

by the isolation and thus lack of visibility of others characteristic of CMC. This study also implicated a single group (of psychology students) rather than trying to model an explicitly intergroup context. Specifically, we manipulated the salience of personal identity by telling participants that we were only interested in them as individuals and that the study concerned personality differences in communication styles (personal identity salient). In the group identity salient condition we informed them that we were interested in them as psychology students and were making comparison with other groups. Additionally, participants were either isolated in (3) separate rooms, or were located in the same room and this visible to each other, resulting in a 2x2 factorial design.

Our assumption was that group polarization on the discussion topics would reflect conformity to an extremized group norm (Turner, 1991; Wetherell, 1987) and we reinforced this by providing participants with representative feedback about the progressive student group norms on the discussion topics gleaned from students in the previous cohort. We predicted that most group polarization in the direction of a group norm when group identity was salient and people were anonymous. In this condition we expected the most depersonalisation in terms of group identity (little individuation between participants would be possible) and thus enhance group salience and conformity to group norms. When personal identity was salient, however, anonymity might increase the sense of isolation and individuation resulting in least normative polarization. The visible conditions were predicted to lie somewhere in between. These predictions were confirmed (see Figure 2).

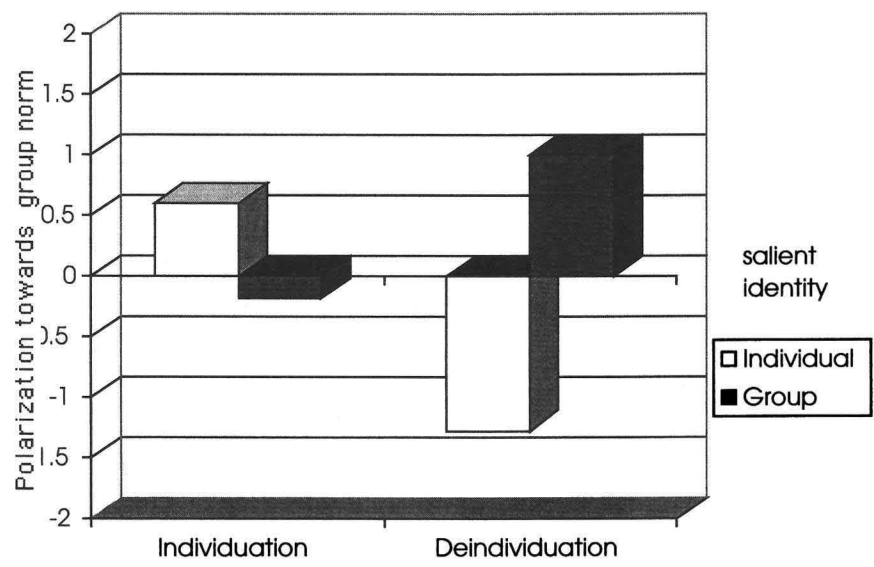


Figure 2: Polarization of attitudes as a function of salient identity and deindividuation.

Around about this time we tried to formalize the theoretical framework that had developed out of the crowd and the CMC research. Thinking that the research might be taken more seriously with an acronym and a model Martin came up with the term SIDE to capture the social identity analysis of deindividuation effects. Steve was never keen on the idea of such a simplification, as he has made clear during the conference, but after some ‘acronyms debate’ we started using this title as shorthand for the research program (e.g., Reicher et al., 1995). It has had the useful effect of focusing attention and resources as well as bringing people together at the meeting from which this volume derives. In terms of the model the *cognitive* side of SIDE looks something like this (see Figure 3; adapted from Spears & Lea, 1992):-

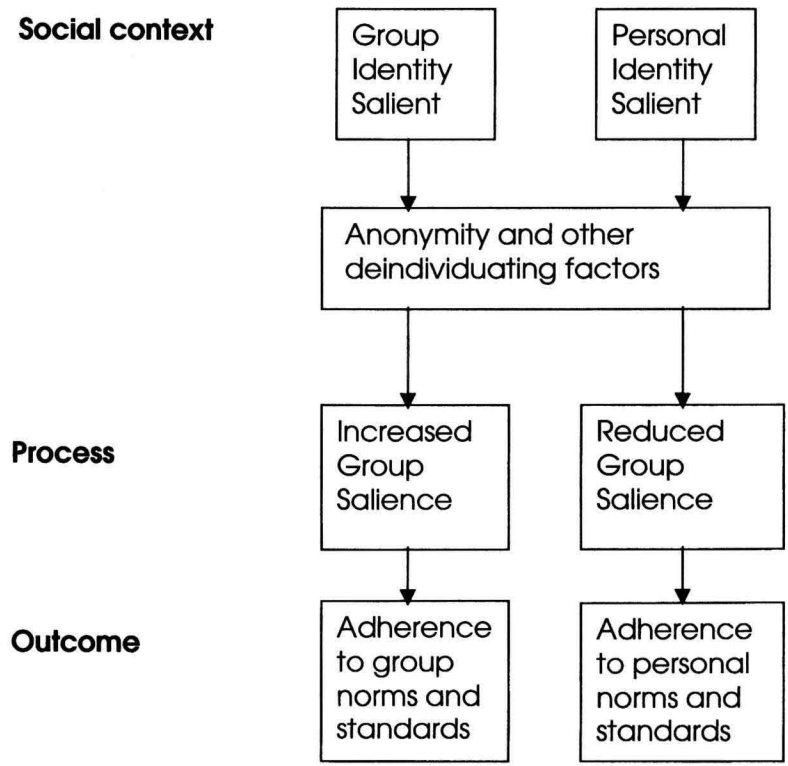


Figure 3: The Social Identity Model of Deindividuation Effects (SIDE):
The cognitive dimension

Much research since has provided further support for the idea that anonymity in the group strengthens rather than weakens social influence. For example, Tom Postmes conducted a CMC study in which group norms were primed surreptitiously in

order to see whether these would have more impact in anonymous groups (Postmes, Spears, Sakhel & De Groot, 1999). As in the previously described study groups were anonymous and thus deindividuated or identifiable and thus individuated. In this study all participants were isolated in separate cubicles and individuation was manipulated by having a scanned picture of the participants displayed on the computer screen during discussion. Participants were presented with a dilemma in which they had to propose solutions to problems confronting a hospital. We primed group norms relating to efficiency or pro-social behaviour using a scrambled sentence procedure (Srull & Wyer, 1979; Dijksterhuis, Spears, Postmes, Stapel, Koomen, Van Knippenberg & Scheepers, 1998). As predicted behaviour reflected group norms in anonymous/deindividuated groups with these groups proposing solutions that emphasized either efficiency or (prosocial) patient care depending on the norm that was manipulated. This pattern was not evident for the individuated groups (see Figure 4). The words used in the discussion transcripts also reflected the primed norms for the anonymous/deindividuated groups, with participants more likely to use efficiency related words in the efficiency prime condition and pro-social words in the pro-social prime condition. Once again there was little evidence of this in the individuated conditions (see Figure 5).

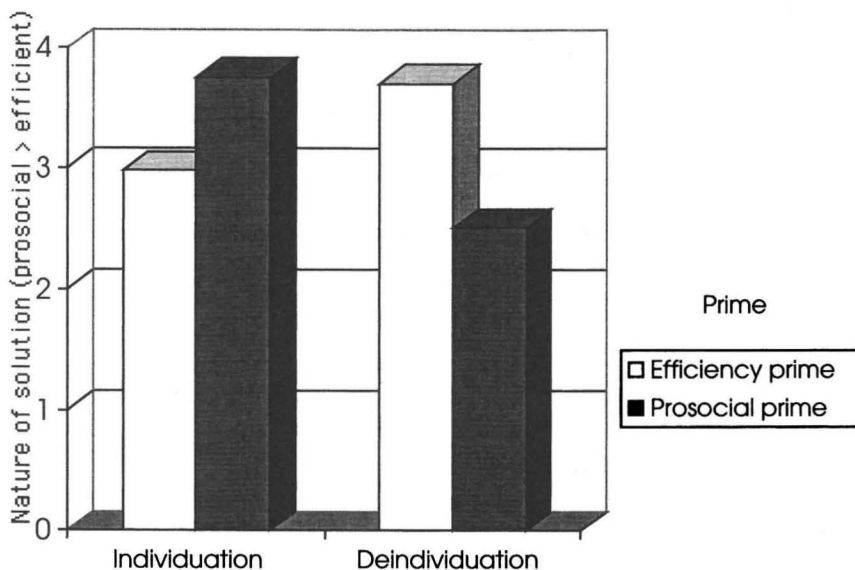


Figure 4: Solutions proposed after discussion as a function of deindividuation and priming condition.

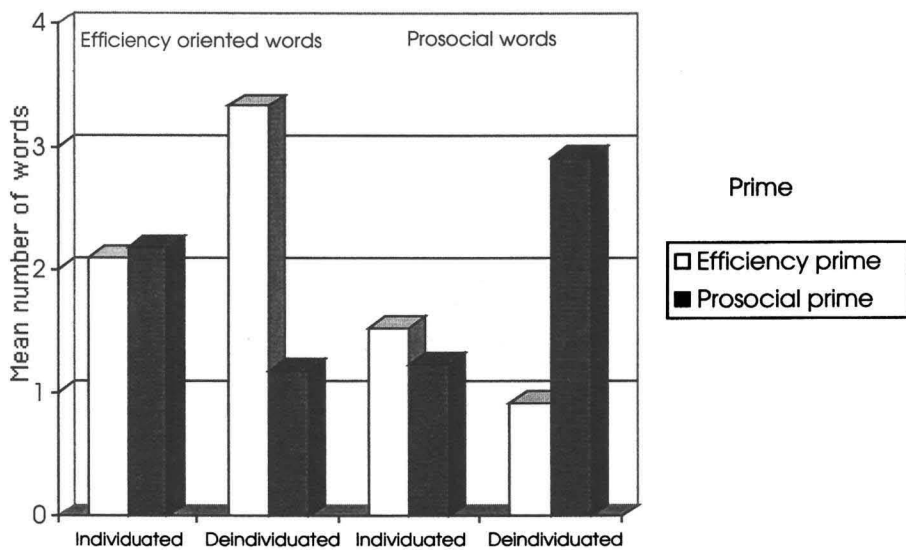


Figure 5: Number of efficiency-oriented and prosocial words by deindividuation and priming condition.

This study showed that the effect generalized beyond the group polarization paradigm and held up when group norms were subtly manipulated rather than simply being imposed as in Spears et al., (1990). However, it is conceivable that the priming effect in this study simply reflects an individual cognitive process (i.e. ‘priming’) rather than representing a group influence process. A follow-up study by Postmes et al. (1999) therefore attempted to show that this norm was actually transmitted within the group. In this study we primed two group members of four person groups with the efficiency prime as in the previous study, and gave the remaining two group members a neutral prime. The second factor consisted of the anonymity/identifiability manipulation as before. If there really is a group influence process, the effect should transfer to other primed group members, and especially so in the anonymous groups. This prediction was supported: More task-oriented solutions and efficiency related words were generated in the anonymous conditions, and these generalized equally to the neutral group members. Levels for both efficiency-primed and neutrally-primed participants in the individuated groups was lower (see Figure 6).

We also found some evidence in this study for the mediating process. One of the early problems of SIDE and one that continues to generate research is the question of the precise mediating process. Recall that we proposed that making groups anonymous increases group salience by removing attention away from the perception of interpersonal differences. Here we used group identification as an indicator of group salience. Subsequent research has provided further supporting evidence for the proposed mediating process in terms of group salience or self-categorization as a group member (Lea, Spears & De Groot, in press). Martin Lea in his contribution further addresses some of these issues of mediation.

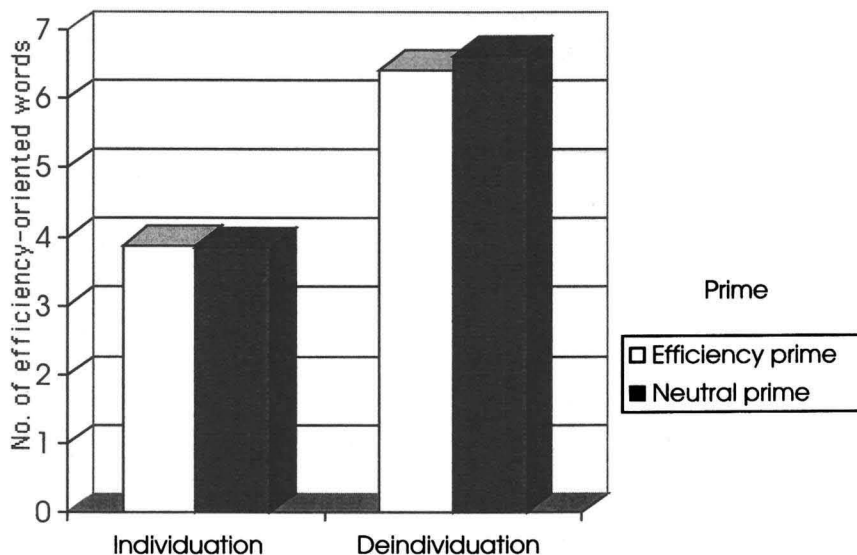


Figure 6: Number of efficiency-oriented words used as a function of deindividuation and priming condition.

Other studies have extended the SIDE analysis in CMC to intergroup contexts, similar to Reicher's (1984) study. For example studies by Postmes, Spears and Lea (1997; see Postmes, 1997) and Watt, Lea, and Spears (in press) have conducted research involving groups in Amsterdam and Manchester in which visibility to the ingroup (Postmes et al.) and to the ingroup and outgroup (Watt et al.) was manipulated. Such studies generally support the contention that anonymity will enhance group effects, although this does not apply to the category of gender which is communicated by visible cues (Watt et al., in press).

Further overall evidence for the cognitive dimension of SIDE has been provided by a meta-analysis of the deindividuation literature conducted by Postmes and Spears (1998). Here we showed that deindividuating conditions of anonymity were associated with conformity to situational group norms in support of the SIDE analysis and in contradiction with both classical and contemporary forms of deindividuation theory.

The strategic side of SIDE. Our research on CMC has focused somewhat less on strategic aspects of the model for a number of reasons. Perhaps the main reason is that in normal groups (i.e. non-CMC) visibility tends to be associated with the co-presence of other group members. This co-presence is also what gives group members the perceived social support and collective strength to resist a powerful outgroup. However, in CMC visibility is usually conceived as a baseline comparison condition in which people can see each other, but are usually just as isolated from each other as in the anonymous conditions (the study by Spears et al. 1990 was an exception here). Indeed in this research it has been important to keep degree of isolation constant in order to avoid confounds with identifiability per se. This means that the critical factor of social support deriving from collective strength is not present in the

CMC studies in the same way that it is in the crowd influence simulations of Reicher and Levine (1994a,b).

There are also interesting themes deriving from the strategic dimension for CMC research, however. Karen Douglas and Manuela Barreto address some of these issues in their contributions. In principle anonymity should be predicted to protect people from the accountability to powerful outgroups, allowing free expression of group identity, and thus eliminating the need for strategic presentation to powerful outgroups. This is what some early CMC researchers such as Kiesler and others have proposed (e.g., Kiesler, Siegel & McGuire, 1987; Kiesler & Sproull, 1992). However this is not so simple. First in practice although CMC is often visually anonymous, in practice or principle, identity can be traced (or there may be legitimate fears that it can). Second, even if anonymity does protect identity, as we have indicated above, anonymity in CMC is often paired with social isolation. This isolation may lead to reduced feelings of social support or group strength which may be a source of resistance to powerful outgroups. Consistent with this analysis, in one of our papers we noted the similarity of CMC to Jeremy Bentham's 'panopticon' — the ultimate surveillance device (Spears & Lea, 1994; see also Postmes, Spears & Lea, 1998), in the process challenging the notion of CMC as *necessarily* or always liberating. Indeed from the cognitive perspective of SIDE we have argued that power differentials could be accentuated in CMC. In a gender study, Tom Postmes has found some evidence for this (Postmes & Spears, 1999).

In more strategic terms, social support is not only communicated through the physical support implied by the co-presence of other group members. Social support can also be communicated by communication per se: the explicit or implicit promise of support from fellow group members through verbal or non-verbal communication. In this respect CMC does provide an obvious *communication* channel in which social support can be communicated.

With this idea in mind Martin Lea and one of his collaborators, Rolf Arne Corneliussen, started to look at some of the strategic dimensions of SIDE in CMC. In an unpublished study they separated out the visual dimension (anonymity) and *communication* dimensions of CMC. Specifically, they adapted the paradigm developed by Reicher and Levine (1994a) which capitalizes on the intergroup relation between student participants with the staff members conducting the research: the powerful outgroup. In this paradigm the student participants are asked their views on a range of topics and a distinction is made between attitude expressions endorsing behaviour that is punishable or non-punishable by the staff outgroup, and expressions that are normative or non-normative for the ingroup. For example 'copying essays' was an example of a behaviour that pretesting showed to be acceptable and even normative for students (!), but which they recognized would be unacceptable and potentially punishable by the staff outgroup. Missing lectures and party going however are just as acceptable to the students but are not sanctionable by staff. The strategic dimension of SIDE proposes that social support from fellow ingroup members will be necessary in order to give them the courage to express ingroup normative behaviours that are punishable by the outgroup (Reicher & Levine, 1994a). The question central to the present study was whether CMC might provide the channel in which this sense of mutual social support is communicated. In this study Lea and Corneliussen there-

fore provided participants with the possibility to communicate via computer or did not. This was crossed with an orthogonal manipulation of visibility in which participants could see each other or where this was obscured by means of screens. This resulted in a 2x2 factorial design.

In short, this design kept co-presence constant (all participants were present in the same locale) and looked at communication channel as a means of social support. CMC provide a direct means of linguistic exchange, and the visibility provided the means of non-verbal communication (no direct verbal exchange was allowed in any condition). We expected that social support would be most efficiently and effectively communicated in the CMC condition rather than by non-verbal means, suggesting that the CMC manipulation should have greater impact on the expression of normative punishable behaviours (the strategic dimension of SIDE). However, the visibility manipulation is relevant to the cognitive dimension of SIDE in that anonymity should enhance group salience and conformity to group norms (e.g. on the normative non-punishable items).

This is exactly what occurred. The visibility manipulation produced effects consistent with the cognitive dimensions of the SIDE. Participants endorsed more normative non-punishable attitudes in the anonymous conditions in line with earlier SIDE findings described above. However, as predicted, the CMC manipulation resulted in more strategic effects. The ability to communicate via CMC resulted in greater endorsement of normative punishable items. In other words, CMC did seem to provide a channel in which social support would be communicated. CMC seems to facilitate the communication of support although it should be remembered that in this study co-presence was a common factor, and may be necessary for social support to have its effects.

In this study, as in the earlier work of Reicher and Levine (1994a) the proposed mediating role of social support remains somewhat indirect. In a follow-up study conducted in Amsterdam (see Spears, Lea, Ter Haar, Postmes, & Corneliussen, in prep.) we followed this up by attempting to manipulate social support directly, while holding this independent of group norms. In this study student participants were told that we were doing a survey of study behaviour and what students thought of the participation of student in experiments. This study capitalized on the fact that first year psychology students at the University of Amsterdam are somewhat exploited with regard to the compulsory requirement to participate in experiments for course credits. In total they have to participate in 40 hours of mass-testing and experiments (!). In general the students are not happy about this. However, it is reasonable to assume that they might be reluctant to communicate this negative attitude directly to staff members, and especially to the experimenter in situ. (rather in the same way that they would not want to confess to copying essay assignments). It was expected that this issue would be particularly salient as the participants were themselves participating in this study as part of this system, and would have had many hours of experiments behind them at this stage of the year.

The cover story used appreciation of the delicacy of this issue and stated that students would get a chance to air their views on this topic confidentially with each other using anonymous CMC, before making their views known in a questionnaire. The questionnaire however was identifiable and would be used as the basis of interviews on this topic with the experimenter and staff afterwards. In other words we manipulated the

accountability of views within subjects, comparing the anonymous computer phase, with the accountable questionnaire phase. In this study, participants discussed this in groups of 3, but received false feedback about a) the *attitudes* of others, (always the same and in the normative direction — i.e. anti towards exploitation of students for the experiment participation), and b) the willingness of others to *support* the normative but critical views presented in open discussion with staff members. While the attitude expression presented by means of false feedback during the discussions was always constant and normative (i.e. critical of the exploitation by academic staff), the degree of public support the other two group members ostensibly were prepared to give to such attitude expressions was manipulated (high versus low).

As predicted higher support led to greater willingness to express the critical attitude on a subsequent questionnaire. In Figure 7 we see a clear effect of support in the computer phase on Item 1 ('participation in testing is a waste of time': anonymous, lighter bars, left hand panel), which generalizes to the identifiable questionnaire phase (identifiable, darker bars, left hand panel). In other words, students express more dissatisfaction when they receive support. It is important to observe that this effect is due to support, not differences in attitude, because attitude feedback was constant. Moreover this effect also generalized to a related item that was not used in the anonymous computer phase (Item 2 'You learn too little from experiments to justify participation', right hand panel). This study provides the first direct evidence that social support actually mediates the willingness of group members to express positions that could be sanctionable by the outgroup.

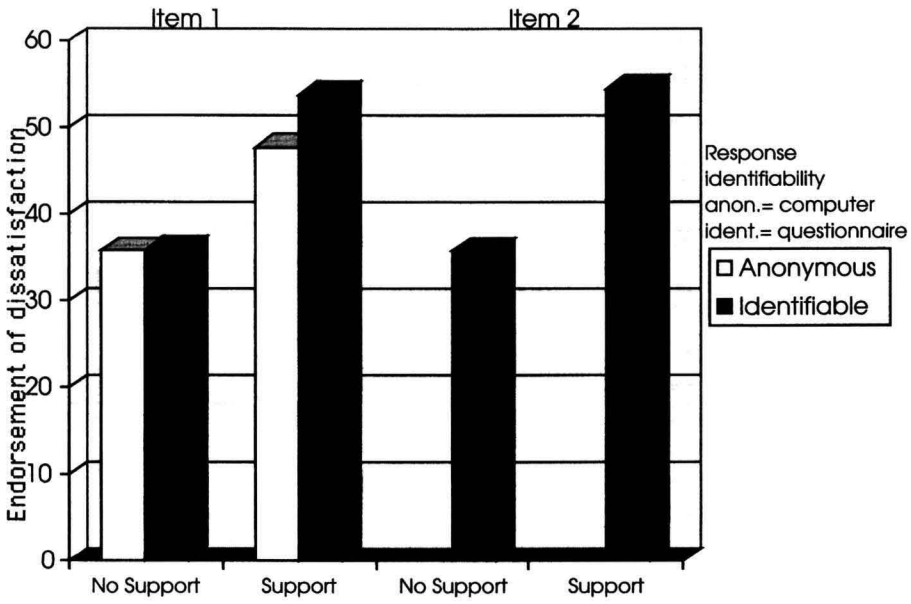


Figure 7: Expression of dissatisfaction with experiment exploitation as a function of identifiability and social support (Item 1= 'Participation in testing is a waste of time'; Item 2= 'You learn too little from experiments to justify participating').

Problems with SIDE

From this review one might get the impression that SIDE research in CMC has all been plain sailing. However there are problems and other researchers and ourselves have already started to come up with apparent contradictions for SIDE. For example Sassenberg and also Waldzus and Schubert (see this volume) have found greater influence in CMC under identifiable than under anonymous conditions. Is this the end of SIDE as we know it? No; this is an opportunity for theoretical refinement!

Two sides to the group? One possibility that Tom Postmes and I have been examining is the possibility that there are different types of groups that could explain these differences. We have drawn on the distinction made by Prentice, Miller and Lightdale (1994) between *common bond* and *common identity* groups. *Common identity* groups are groups or categories more or less as defined by SIT and SCT, in which people are simply united by a common category or shared attribute. They do not even have to know each other as individuals or have interpersonal contact. This is also the sort of group to which the cognitive principles of SIDE apply. *Common bond* groups on the other hand correspond to small groups in which group members are united by close interpersonal bonds or interdependence — closer to the classical group dynamics definition of a group (indeed according to SCT this might not even correspond to a group or category at all but may simply reflect the aggregate of interpersonal relations). It seems likely that in this common bond group, that *identifiability* or *visibility* might help to strengthen the interpersonal bonds. Tom Postmes (this volume) provides some evidence to support this and addresses the question of whether common bond groups lie inside or outside of SIDE (It may be SIDE but not as we know it). Manuela Barreto's contribution also touches on these issues.

Two faces of anonymity? A further issue is the role of anonymity in the model. In many manipulations of anonymity there is usually a natural confound between two faces of anonymity, namely: a) anonymity of others to self, and b) anonymity of self to others. In the SIDE model we have proposed that the *cognitive dimension* is driven by anonymity of others to self, influencing the salience of the category. Anonymity of self to others, on the other hand, is closer to identifiability, and this relates more to the strategic side of SIDE. However in research we need to separate these two aspects or components more clearly. Some research is already starting to do this. Kai Sassenberg has looked at this issue and reports on it in this volume. We have already made some attempts to separate these in our own lab' (e.g. Ter Haar, 1997) and in a joint project with Martin Lea and Sue Watt, some research of which is reported in the contribution by Lea et al. (this volume). Looking at this issue also allows us to consider the original assumptions and whether the processes emerging are so simple as proposed. For example, is it possible that anonymity of *self to others*, also increases the salience of the group by merging self with the group identity (see Lea, Spears & De Groot, in press)? Martin Lea presents data showing that 'anonymity to' can also impinge on the cognitive aspects of SIDE.

Mediation issues. This point also raises the issue of the mediating processes responsible for SIDE effects. We need more clarification here, particularly with respect to the

cognitive dimension. We have proposed salience, degree of self-categorization and perceived group homogeneity to be closely related mediators. However, we need better, and ideally *implicit* measures to tap the notoriously slippery and reactive constructs such as salience. In earlier research we have used indices of group identification (Postmes, Spears, Sakhel & De Groot, 1999) and self-categorization (Lea, Spears & De Groot, in press), but these may not be ideal as they are explicit rather than implicit. Kai Sassenberg has done some nice work in this regard, developing entitativity indices adapted from the measure of Aron, Aron, and Smollman (1992) and Gaertner and Schopler (1998).

Mediation is also an issue for the Strategic dimension. Perceived social support from fellow ingroup members is clearly important here. However this is not always measured. Nor is it transparent what it is about seeing others, or having CMC access that increases perceived support. Is it the mere co-presence of others that gives groups strength? Or are the non-verbal cues exchanged in the case of co-presence critical? The recent research by Spears et al. (in prep.) addresses some of these issues but much has yet to be investigated. The mediating processes will likely also depend on the nature of the groups. We referred above to common bond vs. common identity groups. Social influence for common identity groups should be related to relation to the category (identity) and salience. For common bond groups, interpersonal relations are more likely to be important. As we have seen, anonymity is also likely to be a critical moderator here, having opposite consequences for the different types of group.

This raises a recurring theme in SIDE research, namely the in vivo group/ parent category distinction. Does SIDE apply primarily to the category level or the in vivo group? We have often assumed that it applies to categorization at the in vivo level. Sometimes this distinction is fudged or confounded and we need to focus attention on this issue. Research by Lea, Spears and De Groot (in press) addresses this issue, as does the contribution by Waldzus and Schubert in this volume.

Prospects?

The problems for the SIDE model that have been signalled above indicate some ways forward for this research program and now we consider the future prospects more generally. Clearly this theoretical framework, if it to demonstrate its usefulness, will have to prove itself in a range of applications. So far it has primarily been applied to crowd behaviour and to computer mediated communication, and particularly to social influence processes in these domains. However as the contributions to this volume make clear, the processes and principles discussed here have also been applied to social stereotyping, intergroup relations, and specifically to the effects of power in intergroup contexts. In general, any social contexts in which factors such as anonymity, identifiability, isolation, co-presence and social support play a role will be of relevance to the SIDE model.

A second realm which will also feed into the range of application concerns the prospect of further theoretical developments in this framework. As we have seen, the applications and research themselves throw up issues that require theoretical development. New ways of thinking about self, group and context, and in particular the

relation between these, are likely to inspire if not require theoretical refinement. In the theory, and in the research we tend to neatly separate the cognitive/self-definitional side of SIDE from the strategic/self-presentational side of SIDE. However, with more dynamic models, and looking over time we can begin to see how, the strategic dimension might feed into the processes of self-definition (Spears, 1995). This may also require additional methods which are sensitive to the construction of identity in interaction and negotiation and thus able to examine transformation of identity (Reicher, 1995; Drury & Reicher, 1999). Similarly, new levels of self will feed into the strategic dimension, by raising consciousness and thus suggesting new possibilities. In other words we should not necessarily treat the two sides of SIDE as independent and additive: they may interact. Or to misquote Pythagoras: the interaction hypothesis may be more than the sum of the two sides of SIDE.

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