

*Group Identity, Social Influence and Collective Action Online: Extensions and
Applications of the SIDE Model*

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FINAL CHAPTER TO APPEAR IN:

S. S. Sundar (ed.) *The Handbook of Psychology of Communication
Technology*. Oxford: Blackwell.

Introduction

In this chapter we provide an overview of the SIDE model, the Social Identity model of Deindividuation Effects (Reicher, Spears & Postmes, 1995; Postmes, Spears & Lea, 1998; Spears, & Lea, 1990; 1994), especially as applied to the new media (email, internet, social networking). We review some of the evidence for the utility and heuristic value of this model in explaining social influence when using these media, and also its relevance for facilitating collective action in cyberspace, and the possibilities the new media provide for political action. Some of the so-called new media are not so new anymore, and there is a fairly large body of empirical research on the effects of email for example, also with respect to the SIDE model. In the meantime other related media (social networking such as Facebook and Twitter) are much newer and thus provide less evidence of the effects of these (and their specific features), also with respect to the SIDE model. However many of the principles of this model can also be used to interpret such media effects and can be used to anticipate and explain them where they occur. At the end of this chapter we develop this agenda in some new directions.

The SIDE model is primarily a framework to help us understand media and media effects (and social psychological processes such as social influence and collective behavior more generally), and not a “normative model” of media use (i.e. prescribing which medium to use when). This is partly a deliberate choice as history has shown that trying to match media to its optimal use more often put us on the slippery slope to technological determinism. History also tells us that what the inventors and developers of communications technologies envisage as typical use is often confounded by the subsequent reality (e.g., the telephone was originally expected to have only a narrow business application; Fischer, 1992). In retrospect,

predictions of media-task suitability therefore often seem to be an open invitation to subversion. However, while eschewing technological determinism SIDE may yet provide some lessons about media use and media design, and at the end of this chapter we also speculate on these issues.

Background, roots and development of SIDE

Understanding how SIDE came about can help to explain the meaning of the model and dispel some misconceptions that we sometimes encounter in the literature. A first point is that we, and our two main colleagues with whom we developed the model (Martin Lea and Stephen Reicher) have a background in social psychology rather than communication studies. One of the consequences has been that some of the theoretical refinements that we have proposed to the SIDE model have not always crossed disciplinary boundaries very clearly (of which more below). Lea was working on the new communications technologies (CSCW) in Manchester the mid-eighties when Spears arrived; Postmes joined the collaboration, working on these themes for his PhD, when Spears moved to Amsterdam a couple of years later. Our background in the social identity approach (social identity theory and self-categorization theory) formed a key theoretical foundation for the model.

One problem that had emerged from early work on effects of CMC was an overwhelming emphasis on the limitations of new communication media in comparison with face-to-face (FtF) interaction (e.g., Daft & Lengel, 1984; Short, Williams, & Christie, 1976): The restricted bandwidth of these new media was associated with a restricted communication of various social cues, and this in turn was supposed to reduce social regulation and social influence. An influential classic article by Kiesler, Siegel and McGuire, (1984), used this analysis to explain some

apparently antisocial effects of CMC such as disinhibition, “flaming”, and more extreme decisions that had been noted in some initial studies. This common emphasis on restricted bandwidth causing social and relational restrictions heavily influenced other researchers in the communications field.

There was no shortage of available theories and concepts to confirm and explain the asocial and antisocial image of CMC. In explaining disinhibited and deregulated behavior one of the most obvious and accessible candidates (but by no means the only one) was “deindividuation theory” (Festinger, Pepitone & Newcomb, 1952; Prentice-Dunn & Rogers, 1989), which we elaborate shortly. In explaining more extreme decisions, the most obvious and accessible candidate was the group polarization phenomenon.

Before explaining polarization and deindividuation, we should add that our hunch when we pondered this early literature was that something was not quite right. Our analysis had its roots in a theoretical tradition originating in European social psychology, which offered a very different explanation of the group processes that were central to the early literature on CMC. Specifically, this new approach stemmed from social identity theory (Tajfel & Turner, 1979), and especially self-categorization theory (Turner et al. 1987; together the “social identity approach”), and proposed that group identities and norms are central to both group polarization and crowd behavior. We consider how this approach viewed group polarization and collective behavior, and formed the basis of the SIDE model.

Group polarization.

The phenomenon of group polarization, in which group discussion results in group decisions that are more extreme (or “polarized”) than the mathematical average of individual group members’ attitudes, long presented an important

conceptual puzzle for social psychology. The phenomenon suggests that in groups, people are more extreme than they are as individuals (indeed it was originally called “risky-shift” until it was realized that groups can also shift to caution). This type of group behavior is not straightforwardly explained by conformity: after all, if every group member conforms, they would converge on the average and would not become more extreme.

However, the social identity approach to group polarization developed by Turner and Wetherell (see Turner, 1987; Wetherell, 1987) made a theoretical breakthrough that explained how an outcome could be polarized and yet still reflect a process of conformity to the *group*. The basic insight was that the normative or prototypical position within a given discussion group reflects not only the mean position within the group, but also what distinguishes this “ingroup” from others in the broader social frame of reference. Where there is no explicit outgroup from which to differentiate the discussion group, the idea was that the group tends to differentiate its own responses (e.g. risky choices on a choice dilemma) from the “other” contrasting choices available (e.g. cautious choices on the other side of the scale), creating an implicit outgroup or contrast category in the frame of reference. So when we add this intergroup differentiation to intragroup conformity, the resulting normative (prototypical) position tends to be more extreme or polarized. The elegance of this explanation is that it can explain both more risky and more cautious group decisions.

In sum, the social identity approach suggests that group polarization is (as in the critique of deindividuation theory discussed below) a sign of strong normative and social regulation. This interpretation does not correspond at all with the early interpretation of polarization effects in CMC because it implies that social behavior

in CMC could be *more* normative and *more* socially regulated, not less so (see Spears & Lea, 1992; Turner et al., 1987).

Deindividuation and group behavior.

Deindividuation is a concept that had been developed to explain antisocial behavior in the crowd and was inspired by the writings of Gustav Le Bon (1895/1995) in the previous century. He had argued that people lose their individual rationality in the crowd, reverting to the baser animal instincts. Although these ideas were considered speculative, even in their day, they had an enormous influence on attempts within psychology and sociology to explain crowd behavior in the following century. Le Bon's ideas were picked up in the early days of experimental social psychology (Festinger, Pepitone & Newcomb, 1952) and were further developed over three decades (Zimbardo, 1969; Diener, 1980; Prentice-Dunn & Rogers, 1989). The core idea in this modern research on deindividuation relied heavily on Le Bon: anonymity in the mass promotes a loss of self-awareness, which reduces inhibitions and increases the likelihood of antisocial behavior. One theme in the early models of behavior in CMC was that, although this context would seem to be very far from the madding crowd, the anonymity of this situation could have similar disinhibitory effects. As well as making sense of flaming, this also resonated with early evidence that group decision-making in CMC could result in polarized or extreme decisions compared to face-to-face groups (e.g., Siegel. et al., 1986).

As we will explain in more detail below, the social identity approach facilitated a very different understanding of deindividuation phenomena, and rejected the deindividuation explanation of crowd behavior inspired by Le Bon and continued by deindividuation researchers. For the moment, we can state that a key difference is

that deindividuation theory proposes a loss of identity, and/or a consequent deregulation of social behavior via self and social norms when immersed in (anonymous within) the group. By contrast the social identity analysis (see e.g., Reicher, 1987) suggests that such conditions in the group actually lead to an increase in the salience and role of social factors (social identities and associated social norms). In short the social identity analysis of “deindividuation effects” is a departure from Deindividuation theory. In fact, we make the opposite prediction to deindividuation theory in at least one key respect: we propose that behavior becomes more social or socially regulated, not less so. Hence, when we refer to “deindividuation phenomena” and “deindividuation effects” we refer to a cluster of specific phenomena and effects that need to be explained (i.e. the effects of group immersion and anonymity) because classical deindividuation theory fails to do so adequately.

Two aspects of anonymity. In order to understand the SIDE model we actually have to “unpack” deindividuation theory and distinguish two aspects of anonymity that are very relevant to the social identity analysis of deindividuation phenomena and the resulting SIDE model. To recap’ the claim that CMC was somehow less social or socially regulated concerned the lack of social cues in this medium (i.e., due to the visual anonymity or uniform representation of group members) and the consequences this would have for deindividuation. However, the basic argument of deindividuation theory actually crystallized into *two* elements concerning the effects of *anonymity*, which could reduce social accountability to others, and *submergence in the group*, argued to reduce (private) self-awareness. Both of these were predicted to result in reduced constraints on anti-normative or antisocial behavior, albeit by separate routes (Prentice-Dunn & Rogers, 1989).

Because anti-normative behavior stemming from reduced accountability is conscious, only reduced self-awareness was ultimately associated with the “deindividuated state” (Prentice Dunn & Rogers, 1989). As we shall see later, although the SIDE model rejects this process account of (anti)social behavior in deindividuation theory, the distinction between two aspects of anonymity (“anonymity of” and “anonymity to”, elaborated further below) became important in defining what has become known as the cognitive and strategic sides of the SIDE model. The cognitive dimension of SIDE refers to “anonymity of” and specifically how anonymity of/within the ingroup can enhance the salience of group identity (rather than *loss* of identity caused by immersion in the group, following deindividuation theory). The strategic dimension of SIDE argues that reduced accountability to outgroups (following from anonymity *to* them) can allow (normative) ingroup behaviors that might otherwise be sanctioned or punished by the outgroup.

The cognitive dimension of SIDE: “Anonymity of...”

Researchers working within a social identity tradition (e.g., Reicher, 1982; 1987), had taken issue with the deindividuation theory explanation for crowd behavior, and once again proposed a more “social” and normative explanation stemming from group identity. Rather than people losing their sense of self or identity in the crowd, Reicher argued that there was a switch from individual to group identity, making those within the crowd more sensitive to associated norms and not less so. So once again the argument here was for acute social regulation albeit by norms relevant to the crowd.

Sometimes of course these norms and behaviors might seem anti-normative in general terms or from an outside perspective (e.g. crowd aggression, violence, or

online hacktivism, flaming). However the point was that this analysis could explain both aggressive but also peaceful behavior, depending on the norms relating to the identity, often emerging in context. In sum, this social identity approach to crowd behavior offered a complete reinterpretation of the effects that were originally attributed to “deindividuation”. Indeed, in key respects this reinterpretation was a conceptual reversal of the original deindividuation theory: Crowd behavior is not antinormative and disinhibited (as deindividuation theory suggested), but rather it is the result of conformity to explicit or implicit norms. Moreover, this conformity occurs not because of a *loss* of self-awareness or identity (as deindividuation theory suggested), but through a *heightened* awareness of the crowd, by sharing its identity, and by acting in group terms: a process referred to as “depersonalization.”

It cannot be stressed enough that “depersonalization” is quite different to deindividuation, in process terms (a point that has sometimes plagued understanding and secondary accounts of the SIDE model, partly because of its title). Whereas deindividuation implies reduced self-regulation, depersonalization implies heightened social or group-level self-regulation. So, whereas deindividuation implies *a loss of self in the group*, depersonalization refers to *the emergence of group in the self*: the tendency to see others but also oneself in group terms (i.e., in terms of group norms and stereotypes). In short, although the terms seem to be similar, the processes could not be more different. It is perhaps no accident that deindividuation theory tends to see the influence of the group as generally bad or pernicious, in contrast to individual rationality, whereas the social identity approach is more open to the possibility that groups can also be good, self-defining, and key source of social rationality (Spears, 2010).

Reicher (1984) provided support for these ideas in an experiment where science and social science students dressed in overalls and hoods (a classic deindividuation manipulation), rendering them anonymous to each other, conforming more to ingroup norms than those who were in normal clothing and thus individuated. Moving back to the context of CMC though, a key question was whether we could find similar group influence effects when people were individually isolated at their computer terminals. This was far from a trivial question because it seemed to go against most classic theories of the group and group influence: how could physical isolation from the grip of the group lead to more group influence? For the identity-based understanding of group processes provided by self-categorization theory, this was not a problem.

Empirical support for the cognitive dimension of SIDE. Over the years, a body of research has emerged that has examined the various aspects of the SIDE model that we have discussed so far. It may be useful to summarize this initial research first, before moving on to a second strategic side of the SIDE model that has been more central to more recent research. In our first empirical study on this line (Spears, Lea & Lea, 1990) we combined the critique of deindividuation theory (modeled on Reicher's research), with the group polarization paradigm that had been used to ground the CMC research on the reduced social cues model (Kiesler et al., 1984; Siegel et al. 1986). Based on the social identity approach to group polarization and deindividuation we predicted the same kind of enhanced depersonalization and social influence effects as shown by Reicher (1984).

In our experiment we required first-year psychology students to discuss attitude topics: this provided a test of group polarization. Could isolation from the groups associated with CMC paradoxically increase the power of the group to

influence its members? This depended also on there being a salient group identity and an unambiguous local norm associated with that group (as in Reicher's study). So we manipulated group identity salience (by telling participants we were interested in them as psychology students) or personal identity salience (by telling participants that we were interested in personality differences in communication style). We also made sure that the group norms for psychology students were known by giving feedback on the typical distribution of views among psychology student for the discussion topics. Crossed with this manipulation we located discussants either in separate rooms (creating the standard visual anonymity typical of CMC) or had them facing each other in the same lab (visible, individuated condition). We predicted that participants would be most depersonalized and prone to conform to group norms when group identity was salient and they were isolated and anonymous.

This is what we found: When personal identity was salient, however, participants actually contrasted their views away from the group norm under anonymity, suggesting they were defining and affirming their individuality in contrast to this group identity under these conditions. In short we obtained the first evidence for the argument that polarized decisions in CMC groups might reflect a social influence process of conformity to group norms rather than reflecting the lack of social constraints implied by the reduced social cues framework. However, the group polarization paradigm remains a slightly idiosyncratic and perhaps controversial test-bed for the argument of group influence so we were keen to replicate and extend this finding using other social influence paradigms.

Two studies by Postmes, Spears, Sakhel and De Groot (2001) used a different paradigm to test the prediction that online depersonalization leads to more

group influence. In this research we had groups discuss a problem confronting a hospital and whether efficiency and economic considerations or patient-care should be the priority in the hospital's policy. We then surreptitiously primed norms relating to these two contrasting approaches using a scrambled sentence procedure before the group discussion. Group discussions were also conducted under conditions of anonymity or with participants identifiable to each with portrait pictures. As before we predicted that group influence would be stronger under anonymous conditions (depersonalization). This was confirmed. In a second study we showed that when the efficiency norm was primed in two members of a four person group, this norm also transferred to another two group members who were neutrally primed, but again primarily in anonymous groups, providing further direct evidence of a social influence process.

Overall there is now considerable evidence, from a number of different labs, for the prediction that communication via "anonymous" CMC (i.e., a user interface which obscures group members' personal or distinctive characteristics) can enhance rather than undermine social influence processes in contexts where a shared identity and shared norms are either unambiguously given or somehow contextually anticipated (e.g., Cress, 2005; Postmes, Spears, A.T. Lee, & Novak, 2005; E.J. Lee, 2007; Sassenberg & Boos, 2003; Sassenberg & Postmes, 2002; Waldzus & Schubert, 2000). Beyond social influence, research has zoomed in on specific processes. For example, several studies have shown that online anonymity *within* groups can enhance social identity salience and/or identification (e.g., Postmes et al., 2001; Lea, Spears, & de Groot, 2001; Sassenberg & Postmes, 2002; E.J. Lee, 2007). And finally, Lee (2004) provided direct causal evidence for the prediction that online depersonalization would foster stronger social influence

(and additionally showed that group identification statistically mediated this effect, see also Postmes et al., 2001, Study 2). Lee (2008) extended this effect by showing that among CMC users who are individually identifiable, there is more attention to and influence of the strengths and weaknesses of specific arguments. In contrast, among CMC users who are not individually identifiable, argument quality appears to be less influential than the prevalent group norm.

With respect to SIDE model predictions regarding deindividuation, in the deindividuation literature more generally Postmes and Spears (1998) found that anonymity in the group actually enhances conformity to local or specific group norms, rather than increasing anti-normative or antisocial behavior, supporting the SIDE model and contradicting deindividuation theory. More specific research in CMC contexts has shown that relative anonymity within groups (a) does *not* reduce personal self-awareness, as predicted by deindividuation theory, (b) that it tends to increase public self-awareness, if anything (e.g., Adrianson, 2001; Lee, 2007; Matheson & Zanna, 1998). Moreover, studies have found that neither private nor public self-awareness is associated with disinhibition or anti-normative behavior in the way predicted by deindividuation theory (Lee, 2007; Matheson & Zanna, 1998; Yao & Flanagan, 2006).

Conceptual recap'

Before moving on to discuss the second, strategic component of the SIDE model and the associated research program, it is important to make four observations about the SIDE model. First, although the model refers to “Deindividuation Effects” it does not endorse deindividuation theory, nor a “state of deindividuation.” On the contrary, the SIDE model is grounded in a critique of deindividuation theory. The term deindividuation in “SIDE” is used descriptively to

denote the range of effects that researchers using deindividuation manipulations had found but which we argue (and research confirms) were in need of an adequate (new) theory. So why not name it the social identity model of “Depersonalization Effects”? One answer is that we cannot assume that just because people are often visually anonymous within CMC that they will always share a group identity (or the same one). As our very first study described above showed, when group identity is not salient, anonymity will not lead to more group influence (see also Lee, 2007; Postmes et al., 2001; 2005). So we should not reify or essentialize CMC as always leading to greater social influence (this would be an example of technological determinism).

This brings us to our second point: SIDE argues that the social effects of characteristics of technology depend on the social relations in situ. Consistent with its roots in the social identity approach, SIDE holds that it is always necessary to take into account which identities might be relevant in a given social context, but also what norms are associated with that context and those identities. The technology (in this case CMC) does not determine the content or which identities are salient. Neither does the social side (content, identity salience) determine the effect technology may have. Though it can accentuate these through visual anonymity, the effect also depends on the salience of group identity or personal identity. In short, the model provides the scope to avoid both a technological determinism and a social determinism, and is sufficiently flexible to provide analyses of how these two factors (technological and social) may interact in producing effects. It is however, more than simply descriptive or ad hoc: it provides a process account of how social psychological processes interact with social context and characteristics of technology, and how these different processes

combine to produce certain social outcomes. We will elaborate further the implications of this openness to process specification further below.

A third point is to clarify SIDE's stance on *anonymity*. Some of the experimental research on the SIDE model has manipulated the relative degree of anonymity of ingroup members as a method of promoting *depersonalization*. This appears to have confused some readers, who have mistakenly assumed that anonymity is an essential component of the SIDE model itself. But for SIDE, the core issue has never been that users behave differently because they are (in some absolute sense) anonymous. This notion, which is actually more central to deindividuation theory, rests on a problematic and simplistic conceptualization of anonymity (Anonymous, 1998; Joinson, 2005; Lea, Spears, & Watt; Rains & Scott, 2007; Tanis & Postmes, 2008). As several scholars have pointed out, in CMC complete anonymity is rare. More often, CMC is characterized by a "pseudonymity" in which communicators may be traced but nevertheless less recognizable in situ. For SIDE, what matters is *how* group members (and self) are visually represented online. As pointed out by Tanis and Postmes (2008, see also Lea, Spears, & Watt, 2007), what aspects of users are made visible or disguised in technology design may provide cues to personal identity and cues to social identity, each of which may accentuate (or de-accentuate) aspects of social identity. Indeed, other research on SIDE has not manipulated anonymity, so much as the degree of uniformity (or heterogeneity) of group members in their online representations (e.g., E.J. Lee, 2004; Wodzicki, Schwämmlein, Cress, & Kimmerle, 2011), showing that such uniform representations enhance identification and pro-group behavior, respectively. In sum, SIDE is not about anonymity but about the online representation of individuals and groups.

Finally, the fourth point is that we prefer to call SIDE a model rather than a theory. The social identity approach provides the theoretical framework for our analysis. Within this, SIDE provides a more specific analysis of the effects of specific technological features. So far, SIDE has focused on cognitive and strategic effects of the communication medium (of which more below) but the scope remains to analyze additional features as they emerge (and thus to extend the model).

The strategic dimensions of SIDE: Anonymity to...

On this note it is now important to introduce a second key element of the SIDE model, namely the strategic dimension. The processes we have focused on until this point, explaining social influence based on enhanced social identity salience (depersonalization), refer to what has become known as the “cognitive” dimension of SIDE. In this case cognitive simply refers to the fact that certain features of technology have an effect on the salience of identity (for example a moderating effect of the salience of group identity). In other words, the sense of who we are is affected, or strengthened, by the online representation of others and of ourselves.

But equally important is the “strategic” dimension of SIDE (see Klein, Spears & Reicher, 2007; Postmes & Spears, 1998; Reicher, Postmes & Spears, 1995; Spears & Lea, 1994). The strategic dimension refers to the opportunities and constraints provided by structural features of technologies such as CMC or of particular social situations. These opportunities and constraints are likely to be interpreted and made use of through the prism of a particular identity (e.g., myself as an individual, or us as a group). So to take the example of anonymity again, when CMC makes us less visible and identifiable to others this can offer strategic advantages, especially where there are reasons *not* to be identified. This can occur

in the case where there is a powerful authority or outgroup whose aims and goals may conflict with your own (but this can also occur within a group, especially where there are power differentials and conflicts of interest). The fact that CMC is a medium where comments are on-record and we can be traced to an IP address can also make us *more* identifiable and accountable (as well as visually anonymous); the different features of CMC can be double-edged and contradictory, of which more below.

As we have seen, the earliest deindividuation research also focused on effects of identifiability and accountability (Festinger et al., 1952). Diener's (1980) "trick or treat" studies, for example, showed that children made anonymous by their costumes were more likely to take more candies. Later versions of deindividuation theory argued that such "antisocial" behaviors may stem from conscious knowledge that one would not be identified and apprehended (Prentice-Dunn & Rogers, 1986; 1989). These strategic considerations are associated with the implications of "anonymity to" (reducing accountability of self) rather than "anonymity of" (reducing individuation of others: more relevant to the cognitive SIDE).

The SIDE model develops the strategic dimension of deindividuation research in some important ways. First because the SIDE model contains an analysis of identity level, in line with the social identity approach, there is no blanket assumption that people will always act in line with *individual* self-interest when anonymous. Once again this will depend on the relevant salient identity, which could be a group identity. Reicher and colleagues have developed these ideas on the strategic dimension to understand collective behavior in the crowd. They used the power relation between students (low power) and staff (high power group) to test these ideas. They developed a paradigm in which they distinguished between

behaviors that were 1) normative to students, and acceptable to the staff (e.g., missing the occasional lecture); 2) normative for students but not acceptable to staff (e.g., copying from another student's essay) and 3) neither normative for students nor acceptable to the staff (e.g., cheating on an exam).

In one study they showed that students who were identifiable to staff were less likely to display behavior normative for them but unacceptable to staff (2 above), but when anonymous to staff they were more likely to display such behavior (because they could get away with it; Reicher & Levine, 1994a). In another study (Reicher & Levine, 1994b) the *co-presence* of other students also gave them more courage to endorse such punishable but ingroup normative behaviors (because of the social support implied by others). In both studies students always endorsed behaviors that were normative but not punishable (1), but never non-normative behaviors (3). So again group behavior is clearly normative, but also (strategically) constrained by power relations and the possibilities available.

Empirical support for the strategic dimension of SIDE. Applying these ideas to the context of CMC, Spears, Lea, Coneliussen, Postmes and Ter Haar (2002) manipulated the visual anonymity to others (by means of screens). All students were in the same location so the co-presence of others (and implied social support this provides) was kept constant. However we also manipulated whether people could communicate via computer or not, reasoning that the computer represents a channel by means of which people can communicate social support and coordinate resistance to the powerful out-group. The visibility manipulation had an impact on social influence for the normative but unpunishable items (1 above) in line with the cognitive SIDE effect already discussed (i.e. more influence when *not* mutually visible). However the availability of communication technology produced a strategic

SIDE effect, such that participants showed more support for the normative but punishable items (2) when they had email as they could then gauge the levels of support, and thus engage in normative behavior that was not acceptable to staff.

In sum, responses to the ingroup normative but punishable items (relevant to power differentials) showed the predicted strategic SIDE effect, whereas the ingroup normative but unpunishable items (not relevant to power) showed the classic cognitive SIDE effect discussed earlier.

One implication of this power-based strategic analysis is that less powerful groups might take advantage of the “pseudonymity” possible in CMC to conceal their group identities. For example, women might choose not to reveal their gender if they think that this puts them at a power disadvantage compared to men.

Research by Flanagin and colleagues (2002) showed that women were indeed more likely to conceal their gender identity. In some experimental research, moreover, we have found that women were less likely to adopt female gendered avatar identities, especially when discussion topics are more associated with male expertise (Spears, Lea, Postmes & Wolbert, 2011). Spears et al. (2011) further showed in an organizational context that women in more gendered cultures (in this case Italy; see e.g., Olivetti & Petrongolo, 2008) were less likely to reveal their gender identity when aware of the gender status differences than in less hierarchically “gendered” countries (UK, the Netherlands).

This shows the strategic possibilities of CMC and could be seen as endorsing the somewhat utopian view of cyberspace as a way to transcend power differentials, and also the restrictions of imposed identities that might blight us in everyday life. This motif has been heralded by some feminist scholars as a sign of liberation in cyberspace (Haraway, 1990; Turkle, 1995). However there may also be

a downside here. If women (or other groups suffering from status disadvantage) choose to conceal their identity and adopt others in cyberspace then paradoxically they become less “visible” and present as a group, giving ground to male domination either in appearance or reality (Spears et al., 2011). If, as some have proposed, cyberspace is often less than women-friendly, this does not provide the most inviting context for women competing for a space and for their voices to be heard.

On the other hand the fact that the internet provides a communication medium (via email, bulletin boards and blogs, social networking) means that it is powerful tool for making the contacts that can strengthen the connections within disempowered groups and allow them to coordinate action. Moreover, it can be more powerful than the FtF media because it facilitates contact between people whose group identity may not immediately be apparent and where there may even be reasons to conceal it to a majority or mainstream audience because of stigma or opprobrium (e.g., sexuality or radical political views for example; See Mckenna & Bargh, 1998). We consider such factors in more detail in the final section where we consider the possibilities that cyberspace provides as a tool for collective action.

To summarize, whereas the cognitive dimension analyses how the distinctive features of a communication technology affect the salience and operation of a particular identity, the strategic dimension analyses how such features might affect the ability to express such identities in line with norms that might be sensitive to surveillance by the audience (e.g., powerful out-groups, third parties, authorities, and even “policing” behavior within the ingroup). The structural features studied include the visual anonymity associated with CMC, but also the ability to communicate and commandeer social support that it engenders.

Extensions and elaborations of SIDE

Having considered the theoretical propositions and some empirical underpinnings of the SIDE model, the last part of this chapter will turn to specific questions that research has addressed in recent years. In turn, we will discuss the question whether the implications of the SIDE model extend beyond social influence, whether SIDE processes play a role beyond text-based CMC, and whether SIDE is of any immediate practical relevance beyond the sterile environment of the research laboratory.

1. Beyond social influence

Although the SIDE model, and specifically the cognitive side, applies its analysis to social influence (reflecting the initial focus on the effects of CMC for group polarization), the implications of the model were from the outset much broader in terms of process and also outcomes. The grounding in self-categorization theory means that the depersonalizing effects of anonymity within CMC contexts extend to a range of within-group behaviors and influences.

Many studies have found evidence that depersonalized online collaborations are associated with stronger identification, social identity salience, and group cohesion (e.g., Lea, Spears, & De Groot, 2001; Lee, 2007). Conversely, studies have found that individuation fosters the attention to individual contributions made by group members (Postmes et al., 2001; Lee, 2008). An extension of this basic phenomenon is that some studies have found that depersonalization is associated with a greater tendency to perceive the collaborative group or dyad as an entity or “as one” (Sassenberg & Postmes, 2002; Tanis & Postmes, 2008).

These effects of depersonalized CMC on psychological commitment translate to a range of outcomes which evidence greater behavioral commitment to

the group: Some studies have shown that depersonalized CMC fosters behavioral trust (Tanis & Postmes, 2007) and leads to more satisfaction with the collaboration, and to better performance among high identifiers (Tanis & Postmes, 2008). Studies from other labs have shown that depersonalized CMC fosters knowledge sharing, at least among those with pro-group intentions (Cress, 2005).

2. Beyond CMC: Relevance of SIDE to other communication technologies

Although SIDE was originally grounded in an analysis of the social effects of text-based CMC, more recent research has extended the model to other communication media. For example, the effects of communications media that do involve visibility (webcam, on line video) can be analyzed using the same theoretical principles and framework. Once again the key issue here is not to reify the effects of the technology, but to make a specific process analysis of how technological features (e.g. visibility vs. anonymity) will interact with social features (e.g. group identities) to affect social psychological processes and outcomes. One consistent finding relating to the cognitive dimension of SIDE is that, other things being equal, the visual anonymity associated with CMC will cause available social category cues (and the stereotypes and norms associated with them) to become relatively salient, because of the absence of individuating information. Moreover, whereas the norms and stereotypes associated with group identities are often known and shared, the characteristics associated with specific individuals are often by definition idiosyncratic and unknown beforehand (which is why group processes can so easily permeate the anonymity and isolation of CMC). However, to raise the argument that the anonymity of CMC will always strengthen group salience to a fixed “rule” without exceptions would violate the context-specific and interactionist approach of

SIDE. We now illustrate this point by examining the case of gender as a social category.

Initial research in the SIDE framework provided confirmatory support for the argument, derived from cognitive side of SIDE, that adding individuating information (e.g., personal profiles) to knowledge of people's gender did indeed undermine the salience and impact of gender, resulting in reduced intergroup differentiation and power differences around gender (e.g., Postmes & Spears, 2002). However it is important to note that in this research, all communication was via text-based CMC and thus visually anonymous, so the comparison was between cases where only gender information was available versus whether this was accompanied by additional (textual) information about individual differences (e.g., preferences, hobbies, etc.). However, providing a channel of visual communication (e.g., webcam) not only provides information about individuating characteristics of the category members, it can also provide cues as to category membership.

It needs to be acknowledged here that not all categories are equal in this regard: some social categories do *not* typically have visual cues that are diagnostic of the categories themselves (e.g., nationality, ideology, sexuality): you cannot tell someone's nationality, opinion, or sexuality simply by looking at them. Other social categories, however, such as gender, or "race" or age, do have clear visual markers. For visually cued categories like gender it is quite possible that gender identity becomes *more* salient under conditions of visibility (versus visual anonymity) and not less so, potentially overriding effects of individuation. In terms of self-categorization theory, when categories are visually distinct, they have "comparative fit" (Oakes, 1987) insofar as category differences (e.g. in appearance,

dress, etc.) will render the category dimension (and differences associated with it) more distinct and salient.

A study by Lea, Spears and Watt (2008) set out to test the hypothesis that visibility might actually increase group salience and group effects for visually cued categories such as gender. In this research we compared the effects of gender with those for another cross-cutting social category (nationality), which in this case was not expected to be visually salient. Specifically we examined CMC discussion groups comprising four people, namely two male and two female students, two of whom were British and two Dutch, with one of each gender in each case. These discussion groups were required to discuss a selection of pretested topics, two of which were designed to distinguish between men and women in terms of their stereotypic opinions (e.g., attitudes to relationships, attitudes to sport on TV), and two of which were designed to distinguish between nationality (e.g., the quality of British cuisine). We expected that the different social groups were more likely to (bi)polarize or diverge on these topics, rendering those categories more salient and producing more social influence and social differentiation, when the discussion topic were relevant to the social categories (e.g., men were predicted to be more interested in sport on TV than women; the Dutch were predicted be more critical about British food than the British). These predictions were upheld. Moreover the underlying processes mediating these effects supported the cognitive dimension of SIDE: depersonalizing factors mediated influence under anonymity for nationality-based discussion topics, but mediated influence under *visibility* for gender-relevant topics. In short the SIDE model is able to explain when and why visual anonymity but also *visibility* can lead to greater group salience and social influence effects.

This is important for understanding the (variable) effect of communication media depending on whether communicators are visible or not.

More generally, it may be instructive to attempt to glance ahead at the possibility to formulate a more generic SIDE-perspective on media characteristics. Traditionally, media are analyzed in terms of features such as “richness”. For SIDE, however, effects of the quantity of social and personal information conveyed is perhaps less important than their *content*. In this vein, one issue that has remained implicit and under-developed within SIDE, is the notion that the media themselves may acquire “identity” characteristics that reflect, influence and interact with the social identities of the users. Problems (albeit interesting ones) can arise when the social identity of the medium does not anticipate its technical scope and effects. Mismatches can arise between the “identity” and norms of the medium and its actual effects. For example the informality and inter-personal intimacy associated with Twitter, can lead to problems when statements usually treated as ephemeral, informal and restricted to the local ingroup, necessarily receive the scope, publicity, and permanence associated with this medium (and similar problems have arisen within CMC). This is of course not a new issue: as noted earlier, the telephone was originally thought to have only limited business applications (Fischer, 1992). Extending the identity analysis afforded by the SIDE model to the technology itself may take the interaction between social factors and technological features to a new level, and allow us to better understand these media effects (and perhaps even to propose “normative” models of media use).

3. Beyond the laboratory: SIDE in the field

From the outset, the emphasis in SIDE research was on testing of the model’s predictions in laboratory research. Nevertheless, practical tests of the

implications of the model in field settings were similarly important in the model's development (although less widely cited).

Several studies have put the SIDE model to the practical test in educational settings. From 1997 onwards, Lea and Postmes put various implications of the SIDE model to the test in international student collaborations involving Amsterdam and Manchester. Students had 6 weeks to complete a project during a course—giving them hands-on practical experience of collaborating via a CMC system. The experiences led to the formulation of a computer-supported collaborative learning system, called SIDE-view, the core premise of which is that (in line with SIDE principles) collaborations are facilitated to the extent that they start off with the development of a shared identity, in a collaboration system in which individuating features of group members are relegated to the background of the user interface (Lea, Rogers, & Postmes, 2002). In more recent research, SIDE predictions were upheld when it was found that anonymous student collaborations in a course were more successful than when collaborators were identifiable (Tanis & Postmes, 2008).

A recent field study, again in an educational setting, also found support for some strategic effects predicted by the SIDE model. Ainsworth and colleagues (2011) predicted and found that anonymous self-expression in classroom settings (where no unified shared identity was present) would provide schoolchildren with the strategic freedom to express views that were more in line with personal beliefs than with prevalent norms. They conclude that anonymous classroom voting systems have strategic benefits that are in line with strategic SIDE model predictions.

Perhaps the most eye-catching recent developments where the SIDE model has been put to the test concern the “stickiness” of online communities. A key

question in the design of online communities is how to design them so that users keep returning and develop a sense of community and commitment despite their virtual dispersion. SIDE makes the counterintuitive prediction that communities in which the individual characteristics of group members are in the background can be just as attractive (and sometimes even more so) for users as communities where personal characteristics are at the heart of their online activities. Indeed, it could well be that environments that undermine individual identifiability, and thus credit-taking, foster more prosocial and community oriented (even altruistic?) norms. What is clear now (with the massive growth of web traffic) is that highly successful communities can be sustained on the basis of high member identifiability (e.g., Facebook) or extremely low identifiability (e.g., Wikipedia). But when the SIDE model was developed, this was far from evident.

Some recent field experimental evidence shows important evidence that confirms the SIDE predictions. Ren and colleagues conducted several studies of the usage of a purpose built Movie database, which they had customized so that users would either be individually identifiable in all actions, or would be identifiable only as team members (Ren et al., 2007; 2012). They reasoned (in line with Postmes & Spears, 2000; Sassenberg, 2002; cf. Postmes et al., 2005) that team member identifiability would lead to group formation on the basis of a common identity, whereas individual identifiability would lead to team formation on the basis of common bonds. In line with the SIDE model, their findings showed strong support for the prediction that communities with a common identity were the most “sticky”: here they found the strongest psychological and behavioral commitment.

More recent research has sought to apply these same ideas to the development of an online community in a context in which there is absolutely no

reason for people to collaborate or commune. Farzan et al. (2012) manipulated the online visual representation of teams and individuals in the context of the popular Tetris game—a highly individualistic game with no clear collaborative benefits. Across several studies, results showed that (compared with an individual control condition) users played more games and were more likely to return when they were allocated to teams (irrespective of whether members were individuated or not, in this context). Again, it appears that turning the game environment into a social space considerably enhances its attractiveness, even if the game itself is a completely asocial activity.

4. Collective action and SIDE

A final important application of the SIDE model concerns collective action online. Many have heralded modern communication technology's ability to democratize nations and revolutionize collective action. But, as always, on closer inspection, reading the changing face of collective action is not as straightforward as the initial hype suggests. The process may be illustrated in the initial response to disturbances and riots such as those in London in 2011 and the Arab spring. In both cases, it was initially taken for granted that social media would have played a major role in mass mobilization. But identifying and comprehending that role turns out to be quite challenging.

What is clear is that initial assumptions that disturbances and unrest are in some way *caused* by the abundant availability of communication technology is simplistic (e.g., Anderson, 2011; Bohannon, 2012). In the London riots, speculations that Twitter and Facebook were instrumental in organizing actions were disproven (Postmes, van Bezouw, Täuber, & Van de Sande, 2013). In Egypt's uprisings, similarly, it appears extremely unlikely that mobilization was orchestrated through

social media, for the simple reason that a government shutdown of Internet and SMS traffic made this impossible (Dunn, 2011).

Of course this is not to deny the relevance of modern communication technology for collective action: Technology is anything but neutral. But the overall picture is likely to be more complex than the straightforward technological determinist viewpoint that the availability of means to organize or inform would automatically lead to better or more actions being organized, or to people being more informed than before (cf. Postmes & Brunsting, 2002). SIDE research may help shed some light on the complex factors involved.

To begin with we conducted some early field research, simply to address the basic questions whether the known socio-psychological predictors of collective action would differ (a) across different activist groups, and (b) across different types of (online and offline) action. Brunsting and Postmes (2002) compared online with offline actions (both in more normative vs. more anti-normative guises). We also contacted 4 different types of groups (non-activists, sympathizers, hard-core activists, and pressure group members). Interestingly, results revealed no huge differences in what variables predicted collective action intentions either online or offline (nor for different groups): it would seem that we would not need to reinvent an entirely new psychology of collective action online.

Moreover, we also did not find that online actions were somehow perceived as less desirable or less demanding and therefore “cheap” (although interestingly, activists did think that they would be more popular for *others*). On the contrary: online actions were viewed as equally effective. The only area in which some differences were found, was that cognitive calculations (expected action

effectiveness and expected self-effectiveness) played a slightly stronger role in predicting online action intention than in predicting offline action intentions.

The finding that the psychological processes that promote offline and online action are broadly similar is quite important, we believe. It shows that models of how social media and communication technology influence collective action (of which there are a few) are likely to be barking up the wrong tree if they propose that a completely different set of variables is involved in producing collective actions across technologies and social contexts (Postmes, 2007; Postmes et al., 2013). It is for this reason that we are somewhat skeptical towards recent proposals that variables involved in modern forms of protest would be radically different (cf. Bennett & Segerberg, 2012). Indeed, we are pretty certain that we can continue to assume that there are three key predictors of collective action: the existence of a shared social identity, assessments of the efficacy of action, and feelings of anger and injustice (Van Zomeren, Postmes, & Spears, 2008). Technology may affect all three.

First, feelings of group identification are directly affected by characteristics of communication media, as elaborated in the cognitive side of the SIDE model. A recent field experiment indeed confirmed that cognitive SIDE effects of anonymity can also predict real-life collective action. Chan (2010) studied how church groups responded to a call for action (making a financial donation). Calls were made by church group leaders either in person (face-to-face) or via email. In addition, Chan made the social categorization of Christian salient or not. Confirming the counterintuitive SIDE prediction, Chan found that *more* donations were made in the email condition, particularly when Christian identity was salient, and particularly among low identifiers (for whom salience manipulations tend to have more impact).

More generally, SIDE research has shown time and again that online representations of individual group members can exert a considerable influence in fostering impressions of the group as a unit (i.e., depersonalization). Thus, it is clear that strong social identities can be activated (or may emerge over time) even when computer users are physically isolated from the group and anonymous as individuals.

In addition there are the known strategic effects of anonymity, empowering people where there is a need to conceal identity due to risks of stigma or opprobrium. And other affordances of technology have strategic implications as well: technology provides means for establishing contacts, building networks and communities that can strengthen social connections within disempowered groups, also by blurring the distinction between inter-personal and mass communication (as illustrated by Twitter, *inter alia*). In this process, the importance of formal structures and established social movement organizations appears to be receding (Bennett & Segerberg, 2012; Castells, 2012). Instead, many modern collective actions are bottom-up and emergent phenomena (of which we shall provide one example below). This shift elevates the importance of the *psychological* drivers of collective action: individuals have greater autonomy in deciding to act, and choosing how to. Technology facilitates this: it lowers barriers to participation by reducing the need for physical presence and it also blurs the distinction between private and public action (Bimber, Flanagin, & Stohl, 2005). Most importantly, perhaps, is that it changes the composition and importance of interpersonal networks (Castells, 2012).

The implications of this shift are broad-ranging. Some have suggested that because of it, collective action would become increasingly determined by desires for personal identity expression (Bennett & Segerberg, 2012). In some ways, this

echoes the old idea that internet would be an essentially asocial medium populated by atomized individuals connected through interpersonal relations (at best). This is not a view we share. Individuals prove able (now as ever) to organize and mobilize others in large numbers to the extent that they succeed in harnessing social identities that connect and integrate people *across* individuals' social networks. Arguably, achieving this without recourse to a formal organizational structure should *increase* the importance of social identity processes.

This point is illustrated neatly by a large protest in Portugal on 12 March 2011. This was organized as a Facebook event by three individuals, without participation of any organization or trades union. They picked a random date, wrote a short manifesto to explain their concerns, and succeeded in mobilizing an estimated 300,000 people across 10 cities – one of the biggest protests since the Carnation Revolution. One might look at the medium through which this was organized and conclude that this as an exemplary tale of mobilization via personal networks. But this would ignore the manifesto, the context in which it was successful and the expressed concerns of participants (offline and online). Indeed, the protest revolved entirely around the shared concerns of the “endangered generation” (a shared identity with echoes in Italian and Spanish protests around this time, see Postmes et al., 2013).

Networks are increasingly important, too, because they *do* influence and change how social identities are defined. Thus, networks are maintained through interactions by which individuals, among others, align their ideas about reality including perceptions of ingroups and outgroups (Postmes et al., 2005). But networks also create physical infrastructures: bodies of people who are networked for a multitude of reasons, and who may come to think of themselves as a

community or group with certain shared concerns (thereby facilitating the transformation of private opinions to public social identities; Thomas, McGarty, & Mavor, 2009).

Second, perceptions of *efficacy* can be affected by social media in diverse ways. As hinted above, social media may change power relations by making transparent how many of “us” there are. In the Arab spring, for example, social media may not have played a key role in organizing the actions themselves, but they may have communicated awareness of just how widespread discontent with the status quo was. The realization (or even illusion) that “we” are many can clearly give a great boost to an otherwise powerless or oppressed subgroup. Indeed, as strategic SIDE research has shown, the ability to communicate within an ingroup offers channels for social support and may thereby boost efficacy (Spears et al., 2002). But similarly, the clampdown of authorities on freedom of communication may backfire: In Egypt, for example, the regime appears to have inadvertently strengthened the revolution by shutting down entire communication channels (such as internet and text messaging). These drastic measures may have communicated, more effectively than a relatively small revolutionary movement ever could have, that the regime was having difficulty coping with the unrest (Dunn, 2011).

Finally, it is possible that communication technology fires up or otherwise affects collective emotions. The Guardian (a UK national newspaper), in collaboration with researchers from the London School of Economics, has made some interesting analyses of the role that twitter played in the dissemination of rumors (www.guardian.co.uk/uk/series/reading-the-riots). It is a well-known phenomenon that collective unrest is often “triggered” by a particular incident or event that, for some reason, focuses collective emotions. In the case of the London

riots, Tottenham riot police were alleged to have sparked the riot by heavy-handed policing in which a 16-year old girl was mistreated. Rumors about this kept circulating for a day and a half (with 70 tweets per hour at peak moments) and were never contradicted. But it would be rash to infer from this that social media fan the flames of unrest: the research uncovered more substantial evidence that tweets about clearly erroneous rumors (e.g., the London eye is burning, tigers have escaped London zoo) were quickly quashed. Despite the lack of clarity at this stage, it is clear that communication media may have a strong impact on the way in which emotions are shared and expressed online, as well as providing the appraisals (e.g. news of unjust actions) that evoke them in the first place. This makes the topic of online emotions a prime candidate for future systematic research and for further extensions of SIDE.

Overview of SIDE extensions

In this section we have argued that the SIDE model has proved heuristic in leading to a number extensions and developments rising from the basic statement of the model. Although originally devised to analyze the effects of social influence in CMC and virtual environments, clearly it has broader relevance to a range of social psychological processes and can be used to analyze the effect of a range of different communication media, old and new, that vary in their key features. In considering these applications and extensions it becomes apparent how far the SIDE model has come and developed, itself. Whereas early statements and research focused on communications technology primarily in terms of the anonymity they afford (in line with the early focus on the cognitive side of SIDE), more recent research focusing on the mass dissemination potential of social media and microblogs, highlight the power of these media to influence others and coordinate

action, which has implications for strategic as well as cognitive SIDE effects. Although not technologically determinist, then, it is certainly true that changes in communication technology have pushed the SIDE agenda in terms of the social phenomena to be explained, and the model has developed as a result. While we would not claim it is the only framework of relevance, we think it continues to provide some heuristic value in making sense of diverse media effects.

Summary and Conclusions

In this chapter we have provided an overview of the SIDE model, its theoretical roots and how it developed, and its utility in explaining a range of social influence and other group phenomena as instantiated within the new communications technologies. As a model grounded in the social identity approach the SIDE model provides broad scope for analyzing how specific features associated with these technologies (visual anonymity, the means to connect, coordinate and coopt) interact with the levels of self and contents of identities, to predict key processes and outcomes. As a model (albeit grounded in theory) it remains provisional, a work in progress, open to being updated as new and relevant technological features, and their possible effects become apparent. However, rather than accounting for effects post hoc or ad hoc, the SIDE framework has been able to anticipate and explain some of the more counterintuitive social effects of CMC and cyberspace. The idea that social influence could be strengthened by anonymity and isolation went against the prevailing models as well as common sense, but has remained a robust and consistent finding replicated in much subsequent research (albeit circumscribed by identities in situ). Similarly the idea that these same features (anonymity and isolation) could actually strengthen power relations and the dominance of powerful groups, as predicted by the cognitive SIDE, went against

much of the theorizing and writing on the effect and potential of these new media (Spears & Lea, 1994; Postmes, Spears, & Lea, 1998). So far the SIDE model has been able to account for a wide range of influence phenomena and many related aspects of group processes (influence, stereotyping, group cohesion, power relations), as well as providing a framework to inform and guide applications in diverse domains (group decision making, cooperative learning and working, collective action, to name but a few). The SIDE model has been less prominent in prescribing media use and matching media to task demands although perhaps it is inevitable given its contribution to critiques of both technological and social determinism. However, this may yet be a realm in which it has a role to play, if only to define the scope and limits of such media-matching exercises.

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