



Virtual Group Dynamics and Social Networks

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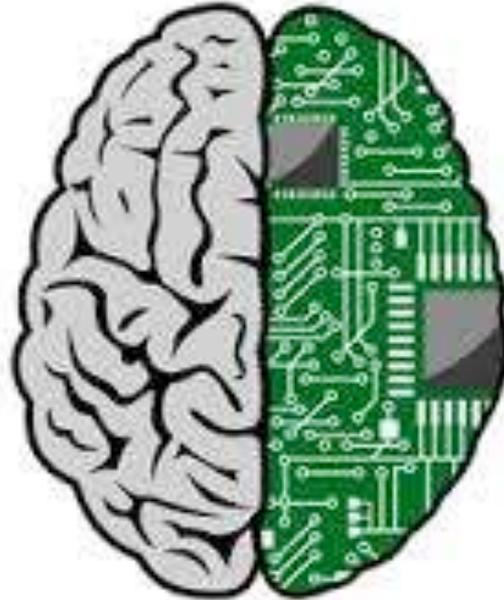
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Psychological Aspects of Internet Use



Reference: Joinson, A. (2007). *Oxford handbook of internet psychology*. Oxford University Press.

Psychological Aspects of Internet Use

Attitude change and social influence on the net



Communication via messengers, email, chats, online-phone calls and online-videoconferes is one of the prime applications of the Internet (Greenspan 2004).

- Indeed, the use of these means, referred to as computer-mediated communication (CMC), predicts whether Internet newbies stay online or stop using the Internet (Kraut et al. 1999) and thus seems to be one of the Internet's key incentives.

As the Internet restricts the information available about communication partners compared to direct communication, a large body of research addresses social influence on the net.

Reference: Joinson, A. (2007). Oxford handbook of internet psychology. Oxford University Press.

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Attitude change and social influence on the net

**SOCIAL
INFLUENCE**



Using The Power of Social Media To Attract A Crowd of Loyal Followers

Social Influence

Any social interaction involves a substantial amount of social influence, as the person initiating communication aims to influence the counterparts the other communication partners to show a certain behaviour (e.g., to answer a question), to influence their attitude (e.g., that online interaction is useful), or simply to inform them (e.g., about a talk by an invited speaker).

Social influence can be defined as the influence of a person or a group on an individual's thoughts, actions and physical states.

Within this, attitude change is a particular type of social influence.

Reference: Joinson, A. (2007). *Oxford handbook of internet psychology*. Oxford University Press.

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Types of social influence



An in-depth analysis of the impact of CMC on social influence presupposes a clear-cut idea of what social influence is.

In research on social influence, a classic distinction between two types of social influence is being made (for an overview see Wood 1999).

1. Deutsch and Gerard (1955) suggested distinguishing social influence resulting from ‘normative’ needs from social influence resulting from ‘informational’ needs.
 - a. When the influence is based on **normative needs**, individuals comply with the influence to conform with other people’s expectations.
 - b. People who are influenced for **informational reasons** are motivated by validity concerns.

Reference: Joinson, A. (2007). *Oxford handbook of internet psychology*. Oxford University Press.

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Types of social influence



An in-depth analysis of the impact of CMC on social influence presupposes a clear-cut idea of what social influence is.

- There is a long tradition of modifications concerning this dual distinction (e.g., Moscovici 1985), and as many authors have pointed out, Deutsch and Gerard's (1955) concept of **normative influence actually refers to compliance** (e.g., Allen 1965).
- Deutsch and Gerard's (1955) definition of informational influence has also been questioned. Importantly, **some informational influence is based on group-normative processes, and some have argued this needs to be considered as a separate form of influence.**
- This perspective has been advanced in social identity theory (Tajfel and Turner 1979) and **self-categorization theory** (Turner et al. 1987).

Reference: Joinson, A. (2007). *Oxford handbook of internet psychology*. Oxford University Press.

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Types of social influence



These theories suggest that the **self-concept consists of a personal identity and (many different) social identities.**

- **Personal identity** refers to those aspects of individuals' self-concepts which define them as idiosyncratic individuals.
- **Social identities** are those elements of individuals' self-concepts which they derive from membership in social groups.

By means of their social identities individuals internalize characteristics of the groups to which they belong (i.e., their norms), and are in turn influenced by those groups and their norms in their behaviour and thinking.

Such norm-based influence however is not due to conformity to social pressure from the group, but a result of self-determined action undertaken by individuals as members of their group.

Reference: Joinson, A. (2007). *Oxford handbook of internet psychology*. Oxford University Press.

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Types of social influence



According to the social identity approach, these normative processes related to social identity affect all our interactions with in- and out-group members:

- **Opinions and arguments in line with in-group norms are seen as more valid than those differing from them (Turner 1991).**
- In other words: **other in-group members' attitudes serve as standards for validity judgments** (i.e., they are considered more seriously) and can therefore elicit informational influence.
- Sassenberg et al. (2005) labelled this type of social influence **norm-based influence**.

Reference: Joinson, A. (2007). *Oxford handbook of internet psychology*. Oxford University Press.

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Types of social influence



According to the social identity approach, these normative processes related to social identity affect all our interactions with in- and out-group members:

However, social influence also takes place for purely informational reasons. This is likely to occur when personal identity is salient (i.e., people perceive themselves as distinct individuals and not as members of a group).

- It has been argued that **individuals influence each other more strongly the closer their interpersonal bonds are** (Postmes and Spears 2000; Sassenberg and Boos 2003)
- and that **social influence is also driven by individuals' striving for distinctiveness from the communication partners and by their attempt to fulfil other personal needs when personal identity is salient** (Spears et al. 1990).

Reference: Joinson, A. (2007). *Oxford handbook of internet psychology*. Oxford University Press.

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Types of social influence



To summarize,

When **personal identity is salient**, personal needs channel how relevant others are used as sources of social validation of information. This kind of (informational) social influence under a salient personal identity can be labelled **interpersonal influence**.

In sum, three forms of social influence can be distinguished:

- 1. compliance,**
- 2. norm-based influence,**
- 3. interpersonal influence.**

The distinction between these three types of social influence provides the basis for understanding social influence in CMC, but what are the special properties of the medium that have made the study of social influence in CMC into a research domain in its own right?

Reference: Joinson, A. (2007). *Oxford handbook of internet psychology*. Oxford University Press.

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Characteristics of CMC



To understand the effects of CMC on social influence, it is essential to first of all identify the characteristics of this communication mode that might alter the way in which influence is exerted in the first place.

- There are **three contextual features that differ between CMC and face-to-face (ftf) communication** and that are especially relevant concerning social influence (Spears and Lea 1994):

- 1. Anonymity**
- 2. Identifiability**
- 3. Physical isolation**

Reference: Joinson, A. (2007). *Oxford handbook of internet psychology*. Oxford University Press.

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Characteristics of CMC



Anonymity The hyperpersonal communication model (Walther 1996) as well as the social identity model of deindividuation effects (SIDE) (Spears and Lea 1992, 1994; Reicher et al. 1995; Postmes et al. 1998) suggest that, due to anonymity, users of CMC typically have less access to information about their communication partners. In turn, each of the remaining social cues has a stronger impact.



Reference: Joinson, A. (2007). *Oxford handbook of internet psychology*. Oxford University Press.

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Characteristics of CMC



Identifiability: The reduced transfer of information is not restricted to messages that are received, but it also applies (in a potentially different way) to sent messages. In other words, in CMC people are less identifiable than in ftf communication. If they become aware of this fact, they will also feel less identifiable and as a result fear the consequences of their actions less (Reicher and Levine 1994). **This in turn cannot only lead to uninhibited presentations of the actual self, but also to strategic and unrealistic presentations of the self** (Walther 1996).



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Characteristics of CMC



Physical isolation: A feature that CMC shares with all other media is that it allows communicators to be physically isolated – from each other, but also from other people. Above and beyond anonymity and low identifiability, which are outcomes of the physical isolation, **physical isolation can also have direct and independent effects on the psychological state.** In physical isolation, for example, **attention can be directed freely towards the self or any object of interest**, relatively independently of others' efforts to attract or retain that attention. As a result, in CMC **attention is more likely to be directed to the self.**

- Research has indeed shown that **private self-awareness – i.e., a focus on thoughts, feelings, and perceptions** (Prentice-Dunn and Rogers 1982) **increases in CMC compared to ftf communication** (Franke 1997; Matheson and Zanna 1998, 1999; Joinson 2001; Sassenberg et al. 2005).

Reference: Joinson, A. (2007). *Oxford handbook of internet psychology*. Oxford University Press.

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The state of the art in research on social influence in CMC



What can be predicted about the impact of anonymity, low identifiability, and physical isolation in CMC, on the three forms of social influence summarized above?

As mentioned above, models such as SIDE and the hyperpersonal perspective **propose that the relative anonymity (or lack of cues) in CMC increases the value attached to the remaining information** (i.e., each bit of information receives more attention). SIDE has become a dominant framework for the study of social influence in CMC.

SIDE (Spears and Lea 1992, 1994) considers not just what information is visible ‘out there’, but what information is cognitively attended to (‘in here’).

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Psychological Aspects of Internet Use

The state of the art in research on social influence in CMC



SIDE (Spears and Lea 1992, 1994) considers not just what information is visible ‘out there’, but what information is cognitively attended to (‘in here’).

1. It suggests that **the social categorization of the self and other group members as different individuals** (i.e., when personal identities are salient) **or as members of social groups** (i.e., when social identities are salient) **is a key factor guiding social influence processes.**
2. In communications in which **personal identity is initially salient, individual needs and attitudes related to them are more important and will be accentuated in CMC compared with ftf communication.**
3. Conversely, when **social identity is initially salient, the impact of social factors is amplified in CMC and thus attitudes will be oriented to a larger degree towards group norms.**
4. In other words: ***SIDE predicts that when personal identity is salient, CMC (compared with ftf interaction) will lead to less social influence, and that when social identity is salient, CMC will lead to an increase in normative social influence,*** understood as a form of autonomous self-expression. Hence, anonymity impacts on norm-based and interpersonal influence.

Reference: Joinson, A. (2007). *Oxford handbook of internet psychology*. Oxford University Press.

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The state of the art in research on social influence in CMC



In 1995, SIDE was extended to consider the “Conformity” as a form of social influence (Reicher et al. 1995).

In SIDE’s analysis, **conformity to another’s expectations is not affected by anonymity** (the ability of me to see them) **but by identifiability** (the ability of them to see me).

- **The low identifiability in CMC will most likely lead to a decrease in conformity** – offering the subject greater strategic freedoms for resistance of social pressure.
- **Thus, identifiability is relevant for conformity but not for interpersonal or norm-based influence.**

Reference: Joinson, A. (2007). *Oxford handbook of internet psychology*. Oxford University Press.

Psychological Aspects of Internet Use

The state of the art in research on social influence in CMC



Regarding the third characteristic of CMC, physical isolation, SIDE has not distinguished its effects from identifiability and anonymity empirically, nor has it been a core concern theoretically.

- Spears and Lea (1994) suggested that **isolation leads to heightened private self-awareness. Therefore, it might be relevant for those types of influence that are based on the self: interpersonal influence** (because the personal self is especially relevant for this type of influence) and ***norm-based influence*** (because the social self is especially relevant for this type of influence).

Reference: Joinson, A. (2007). *Oxford handbook of internet psychology*. Oxford University Press.

Social identity model of deindividuation effects (SIDE Model)

Social Identity Model of Deindividuation Effects (SIDE)

The **social identity model of deindividuation effects** (or **SIDE model**) is a theory developed in social psychology and communication studies. SIDE explains the effects of anonymity and identifiability on group behavior. It has become one of several theories of technology that describe social effects of computer-mediated communication.

The SIDE model provides an alternative explanation for effects of anonymity and other "deindividuating" factors that classic deindividuation theory cannot adequately explain. The model suggests that anonymity changes the relative salience of personal vs. social identity, and thereby can have a profound effect on group behavior.

Social identity model of deindividuation effects

(SIDE Model)

SIDE developed as a critique of deindividuation theory.

Deindividuation theory was developed to explain the phenomenon that in crowds, people become capable of acts that rational individuals would not normally endorse. In the crowd, so it would seem, humans become disinhibited and behave anti-normatively.

Early versions of deindividuation theory saw this as a consequence of reduced self-awareness and accountability.

Diener and others later focused more exclusively on loss of self as the core psychological process underlying deindividuation.



Reference: Postmes, T., Spears, R., Sakhel, K., & De Groot, D. (2001). Social influence in computer-mediated communication: The effects of anonymity on group behavior. *Personality and Social Psychology Bulletin*, 27, 1242–1254.

Social identity model of deindividuation effects (SIDE Model)

- ***Anonymity and reduced self-awareness enhanced sensitivity to local norms.*** SIDE proposes that there are no blanket indiscriminate effects of anonymity, but that anonymity effects are influenced by, and can only be understood through, their interaction with the social context.
- Reicher and others argued that ***individuals do not have a unitary sense of self. Social identity theory, for instance, points out that one's sense of self is made up of personal identity and multiple social identities, all of which combine to shape one's personality.***
- ***Social identities are likely to become the basis for self-definition when that social identity is salient,*** such as when making comparisons between “them” and “us.”

One consequence of salience is “depersonalization.” Note that in research on social identity, depersonalization is not the same as deindividuation or a loss of self (cf. the entry on Depersonalization to read up on what it is not).

Social identity model of deindividuation effects (SIDE Model)

In social identity research, the term depersonalization refers to a switch to a group level of self-categorization in which self and others are seen in terms of their group identities.

According to Self-categorization theory, depersonalization makes perceptions of the outgroup more stereotypical.

Self-perceptions also shift: self and other ingroup members become interchangeable, and the individual self-stereotypes in terms of group attributes.

Depersonalization thus transforms individuals into group members who regulate their behavior according to in-group norms. Importantly, and in contrast to deindividuation, the psychological state of depersonalization does not imply a loss of rationality or behavioural disinhibition; rather, the individual behaves rationally and regulates behaviour according to ingroup standards.

Social identity model of deindividuation effects (SIDE Model)

Cognitive SIDE

- ***Group immersion and anonymity have cognitive consequences that affect the relative salience of personal and social identities.*** These factors do not produce a loss of self as proposed by deindividuation theory. Rather, ***anonymity and immersion in the group can enhance the salience of social identity and thereby depersonalize social perceptions of others and the self.***
- ***SIDE argues this occurs principally because (visual) anonymity obscures individual features and interpersonal differences.*** As a result of the decreased visibility of the individual within anonymous groups, the process of depersonalization is accentuated, and ***cognitive efforts to perceive the group as an entity are amplified.***
- Provided that there is some basis to perceive self and others as members of one group, ***anonymity therefore enhances the salience of the shared social identity.***
- The net result is that ***people will tend to perceive self and others in terms of stereotypic group features, and are influenced accordingly.***

Social identity model of deindividuation effects

(SIDE Model) Cognitive SIDE

It is important to note that anonymity does not automatically or mechanically influence the salience of social identities.

SIDE thus describes the cognitive process by which the salience of social identity is affected by the absence or presence of individuating information. It is important to note that this process can only operate to the extent that some sense of groupness exists from the outset.

- ***If individuals interact anonymously in the absence of any specific social identity or group boundaries, anonymity would have the reverse effect of accentuating one's isolation*** from the group or by further obscuring group boundaries Juxtaposing the two possibilities,
- ***anonymity in the group either has the effect of amplifying a shared social identity that***, however rudimentary, is already in place,
- ***or it can amplify the individual independence which exists in contexts in which no shared identity is available.***

Reference: Postmes, T., Spears, R., Sakhol, K., & De Groot, D. (2001). Social influence in computer-mediated communication: The effects of anonymity on group behavior. *Personality and Social Psychology Bulletin*, 27, 1242–1254.

Psychological Aspects of Internet Use

Norm-based influence



Spears et al. (1990) were the first to address the impact of anonymity in CMC on norm-based influence.

- The results supported the predictions derived from SIDE: **participants showed more attitude change towards the group norm in anonymous compared to non-anonymous CMC.**

This basic finding (i.e., higher levels of anonymity lead to more norm-based influence when social identity is salient) has been replicated several times using different manipulations of anonymity, various forms of CMC, and different measures of social influence (for overviews see Postmes et al. 1998; Spears et al. 2001, 2002).

Reference: Joinson, A. (2007). *Oxford handbook of internet psychology*. Oxford University Press.

Psychological Aspects of Internet Use

Norm-based influence



- Postmes et al. (2001), for example, used the same paradigm as Spears et al. (1990) in a social welfare context. In line with their predictions, **participants in anonymous CMC more often came to a decision in line with the activated norm and used more words that were related to this norm** (compared to participants in non-anonymous CMC).
- In a second study, the norm was only activated in half of the group members. **Again more attitude change towards the group norm and more communication content consistent with this norm was found in the anonymous condition for both participants** who had received a norm-activating treatment and also for those who did not receive this treatment.

These findings demonstrate that group members in anonymous CMC adhere more strongly to the norm of an interacting group by means of their communication content and their attitudes, independent of whether they personally know about the norm before the discussion or not.

Reference: Joinson, A. (2007). *Oxford handbook of internet psychology*. Oxford University Press.

Psychological Aspects of Internet Use

Norm-based influence

The underlying process



Postmes et al. (2001) found evidence for the processes that SIDE proposes underlie the impact of anonymity on norm-based influence (see also Lea et al. 2001): **anonymity increased the salience of the social categorization and that in turn lead to more norm-based influence.**

- In their studies, **the impact of anonymity on norm adherence was indeed mediated by social identification with the ad hoc group** (i.e., an indicator of social identity salience).
- This can be contrasted with private self-awareness, which does not appear to impact on norm-based influence. For example, private self-awareness could not be shown to explain influence effects in either comparisons of anonymous vs. identified CMC (Postmes et al. 2001) or in comparisons of ftf versus CMC discussions (Matheson and Zanna 1989).

Reference: Joinson, A. (2007). *Oxford handbook of internet psychology*. Oxford University Press.

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Norm-based influence

The underlying process



In sum,

Anonymity and the Salience of social identity seem to be the most important factors for norm-based influence in CMC, consistent with predictions of the SIDE model.

Physical isolation leading to heightened private self-awareness does not seem to be an important factor for norm-based influence in CMC.

Reference: Joinson, A. (2007). Oxford handbook of internet psychology. Oxford University Press.

Psychological Aspects of Internet Use

Norm-based influence

Preconditions for norm-based influence



The importance of the a-priori existence of an unambiguous group norm has been demonstrated by Sassenberg and Boos (2003; see also Waldzus and Schubert 2000).

- In their studies, which also used an attitude change paradigm, **more social influence was only found in anonymous CMC** (compared to non-anonymous CMC and ftf communication) **when social identity was salient and participants were informed about the norm attached to the social category providing the basis for this social identity.**
- **When no norm was provided, anonymity did not impact on social influence** (compared to non-anonymous CMC) or even lead to less social influence (compared to ftf communication), despite social identity being salient.
- In sum, **anonymity only increases social influence in CMC when the group norm is known** (at least to a substantial part of the group) and the respective social identity is salient. Both are prerequisites for norm-based influence.

Reference: Joinson, A. (2007). *Oxford handbook of internet psychology*. Oxford University Press.

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Norm-based influence

Preconditions for norm-based influence



The extent of norm-based influence in CMC and the impact of anonymity on this type of influence not only depends on the existence of a group norm, but also on the type of group. Social identity theory and SIDE focus (as indicated by their names) on groups that are contributing to their members' social identity.

- Prentice et al. (1994) distinguished these so-called common identity groups from common bond groups.
 - **Common identity groups** stick together because group members feel strong ties to the group as a whole, whereas common bond groups are held together because their members have strong interpersonal ties (e.g., as in peer groups). **For members of common identity groups norms are very important because they are part of the self-image and therefore norm-based influence is very likely to occur.**
 - In contrast, for members of **Common bond groups** the group and its norms are not a part of their identity. Hence, norm-based influence is not very likely to occur in these groups.

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Norm-based influence

Preconditions for norm-based influence



Sassenberg (2002) has shown that both types of groups (i.e., Common identity and common bounds groups) exist on the Internet.

- 1. Chats set up to discuss a certain topic** (e.g., a specific software) fit the criteria for **common identity groups** (so-called on-topic chats),
- 2. while chats serving as a forum to get to know other people** fit the criteria for **common bond groups** (so-called off-topic chats).

Reference: Joinson, A. (2007). *Oxford handbook of internet psychology*. Oxford University Press.

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Norm-based influence

Preconditions for norm-based influence



- In **on-topic chats the adherence to group norms** (i.e., the use of similar smileys and acronyms by members of one group) is, as expected, **higher than in off-topic chats**. This difference is due to the higher social identification with on-topic compared to off-topic chats. To get an idea of how these norms might develop online see Graham (2003) and Postmes et al. (2000).
- In line with the idea that norm-based influence is fostered by anonymity in CMC, Postmes and Spears (2000) found that **social influence in anonymous CMC (compared to non-anonymous CMC) was higher in common identity groups**. However, in common bond groups anonymity led to a decrease in social influence.

In sum, **norm-based influence and its increase due to conditions of anonymity is restricted to common identity groups and does not occur in common bond groups**.

Reference: Joinson, A. (2007). *Oxford handbook of internet psychology*. Oxford University Press.

Psychological Aspects of Internet Use

Norm-based influence

Intragroup uniformity and intergroup differentiation



1. The findings summarized so far suggest that **anonymous CMC leads to more agreement** (i.e., similar attitudes of group members) when social identity is salient.
2. Other studies even suggest that **statements indicating agreement by not expressing a deviant opinion and sticking to the topic are driving the norm-based influence in the group process** (e.g., Sassenberg and Postmes 2002).
3. At the same time, however, **anonymity also increases the risk of intergroup conflict**, as Postmes et al. (2002) have shown.
 - a. They found **more norm-based influence within each of the groups in anonymous discussions, but differences in attitudes between the two groups increased more due to anonymous than due to non-anonymous discussion settings.**
 - b. This effect results from **the tendency of groups and their members to differentiate themselves from other groups** (Haslam et al. 1998).
 - c. Hence, anonymity increases the likelihood that members of a group stick to their norm and therefore show stronger agreement within the group during CMC discussions.
 - d. **Disagreement between groups, however, becomes more pronounced in anonymous than in non-anonymous discussions.**

Reference: Joinson, A. (2007). *Oxford handbook of internet psychology*. Oxford University Press.

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Norm-based influence

Intragroup uniformity and intergroup differentiation



- Additional evidence for norm-based influence on a behavioural levels stems from Lea and Spears (1991), **who found stronger norm-based influence in anonymous CMC co-occurred with fewer messages and greater equality in participation**, indicating that less disagreement occurred in these groups.
- Moreover, Postmes and Spears (2002) showed **at the intergroup level that anonymity in CMC can also impact on the social influence target person's attempt to exert influence: when gender stereotypes (i.e., gender norms) are activated males tend to dominate in anonymous communication, but only if the communication is about stereotypic male topics.**
 - Here the males follow the group norms when the gender categorization is especially salient.
 - Hence, they exert social influence by being dominant as a result of norm-based influence (i.e., in line with stereotypically male norms).

Overall, these studies show that norm-based influence resulting from anonymity increases the display to attitudes and behaviour that are in line with group norms. Thus, within-groups assimilation and between-groups differentiation takes place.

Reference: Joinson, A. (2007). *Oxford handbook of internet psychology*. Oxford University Press.

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Norm-based influence

Intragroup uniformity and intergroup differentiation



Axioms

1. Taken together, **anonymous group discussions in CMC** (compared to non-anonymous group discussions) **lead to more norm-based influence when a shared social identity is salient and when group members share the same unambiguous perception of the group norm.**
2. As past research has demonstrated, **this pattern of greater norm-based influence in anonymous CMC is not restricted to attitude change**, but it also occurs for intragroup agreement, discussion content, and communication behaviour.
3. **The effect of anonymity on norm-based influence is mediated by social identity salience** instead of by self-awareness.

In intergroup discussions, however, the stronger norm-based influence in anonymous CMC (compared to non-anonymous CMC) leads to an accentuation of the disagreement between groups. So far, research has not directly addressed the impact of physical isolation on norm-based influence.

Reference: Joinson, A. (2007). *Oxford handbook of internet psychology*. Oxford University Press.