



Virtual Group Dynamics and Social Networks

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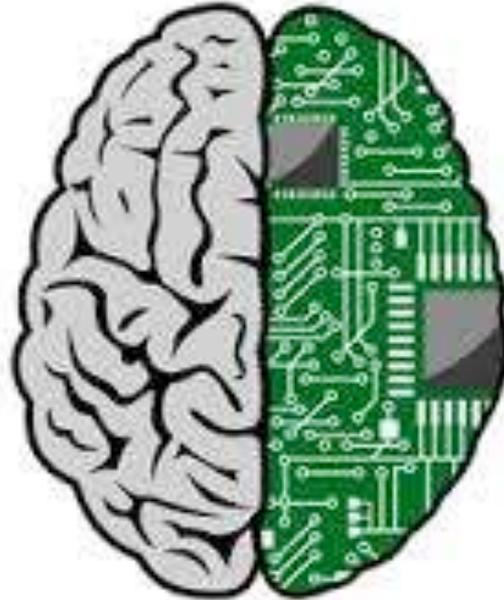
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Psychological Aspects of Internet Use



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

Psychological Aspects of Internet Use

Interpersonal influence



SIDE Predictions

- **Anonymous interaction in CMC will lead to less adherence to group norms when personal identity** (compared to social identity) **of the interaction partners is salient**, because under this condition group members will seek to differentiate themselves as individuals from the collective (cf. Spears et al. 1990).
- In anonymous CMC interaction **partners with a salient personal identity tend to show less interpersonal influence then when personal identity is salient and the others are not anonymous**. This is due to the fact that anonymity increases the salience of personal identity (just as it increases the salience of social identity) and in turn leads the interacting individuals to stick to their personal thoughts and individual needs (Spears and Lea 1992).
- **Anonymous CMC also reduces interpersonal influence when personal identity is salient**, because it is harder to establish and maintain interpersonal bonds in anonymous communication. Thus, the better the interpersonal relation is, the more interpersonal influence can be exerted.

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Interpersonal influence



- Spears et al. (1990) found support for these predictions concerning social influence: **less attitude change towards the group norm was found in anonymous CMC when personal identity was salient both compared to when social identity was salient and also when personal identity was salient in non-anonymous communication** (for similar findings see Sassenberg and Boos [2003]).
- Compared to non-anonymous groups **participants in anonymous CMC insisted more on their personal views, which is indicated by a higher number of remarks, longer remarks and more equal participation within the group** (Lea and Spears 1991).

Overall these results confirm that interpersonal influence under conditions of anonymity is reduced, because individuals are more aware of their personal needs, and this appears to obstruct the ability to exert effective interpersonal influence.

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Interpersonal influence



A factor promoting interpersonal influence in CMC has been demonstrated by studies of the so-called 'foot-in-the-door' phenomenon: interpersonal relations.

- The number of people answering positively to an email request asking for participation in a long questionnaire was much higher when targets were first asked to complete a short questionnaire and the long questionnaire was presented in a second request, than when they were immediately requested to answer the long questionnaire (Guéguen and Jacob 2001, 2002; Guéguen 2002). Hence, the relationship which was established by means of the short questionnaire helped to exert more interpersonal influence.
- In a similar vein, Postmes and Spears (2000) found **less attitude change in newly formed common bond groups** (i.e., groups sticking together, because of interpersonal bonds) **when the group members remained anonymous compared to when they were not anonymous.**

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Psychological Aspects of Internet Use

Physical isolation



The second media characteristic that might impact on interpersonal influence is physical isolation. Even though it is experimentally hard to disentangle from anonymity and identifiability, it can be inferred from the existing research that physical isolation has an impact on the psychological state of participants that is independent of anonymity:

- on the one hand, research has shown that **CMC heightens private self-awareness compared to ftf communication** (Matheson and Zanna 1988, 1989; Joinson 2001; Sassenberg et al. 2005).
- On the other hand, **anonymity and identifiability do not impact on private self-awareness** (Postmes and Spears 1998; Postmes et al. 2001).

Physical isolation could be a prime candidate to account for this increase in private self-awareness

... and we know from other research that such effects on private self-awareness are relevant to the effects of communication media on attitude change.

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Psychological Aspects of Internet Use

Physical isolation



Physical isolation could be a prime candidate to account for this increase in private self-awareness

- **Private self-awareness is known to hinder social influence** (Scheier 1980; Froming and Carver 1981).
- Studies of interpersonal interaction in CMC (compared with ftf interaction) confirm that **private self-awareness plays a role, too**.
- Sassenberg et al. (2005) **found a mediation by situational variations of private self-awareness and a moderating impact of trait private self-awareness**:
 - First, **the impact of the communication medium on interpersonal influence** (less attitude change in CMC than in ftf communication) **was mediated by situational variations of private self-awareness**.
 - Secondly, **interpersonal differences in private self-awareness moderated the impact of the communication medium on interpersonal influence**: Interpersonal influence is only stronger in ftf compared to CMC for individuals high in trait private self-awareness.

Taken together, physical isolation in CMC reduces interpersonal influence by increasing levels of private self-awareness that is situationally induced. Chronic differences in private self-awareness moderate the impact of the communication media on interpersonal influence.

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

Psychological Aspects of Internet Use

Person-communication match



The relevance of individual differences for social influence in CMC is also apparent in research from another tradition. This research leads us back to the impact of anonymity and points simultaneously to the importance of several specific communication characteristics and to the context in which interpersonal influence is exerted.

- In a study on the moderating impact of gender on the influence of single persuasive messages on attitudes Guadagno and Cialdini (2002, Study 1) found that **females show less attitude change from emails than from ftf communication, whereas males changed their attitudes to the same extent in both media.**
- Similar gender differences also occurred for social influence on behaviour. **Male subjects agreed more readily to a request asking them to participate in an online survey when the solicitor (i.e., an individual with a persuasive motive) was female and non-anonymous, whereas females did not show this heightened readiness to non-anonymous mail, regardless of the solicitors' gender (Guéguen and Jacob 2002).**

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Psychological Aspects of Internet Use

Person-communication match



More recent research suggests that not the interindividual differences per se but the match between an individual's attributes and the communication medium and style fosters attitude change. Messages in a communication style matching the target's gender (i.e., 'cooperative' for females and 'independent' for males) do not lead to media differences in attitude change.

- **Males have been found to be influenced more in CMC than in ftf communication, because communication via CMC generally has an independent style (Guadagno and Cialdini 2002, Study 2).**
- **Similarly, Luna et al. (2003) found that websites in a second language with simple messages exert more social influence than those with complex messages.**
- **In contrast, websites in a first language with complex messages elicit more influence than if they have simple messages.**

In other words: **the match between the communication style on the one hand and the target of communication on the other hand is an important precondition for interpersonal influence. Higher levels of interpersonal influence will occur, the more there is a match between the communication style and the target of a message (e.g., high complexity fits high competence).**

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

Psychological determinants of emotional experiences on the Internet *Phantom emotions*

Emotional experiences in cyberspace



Although at first thought this seems to be a simple topic, it is actually rather convoluted and perplexing, because emotion and affect are complicated psychological constructs (Ben-Ze'ev 2000; Russell 2003) and cyberspace is a very complicated concept (Strate et al. 2003). Theories relating to the generation of emotions underline the fundamental role of numerous cognitive-processing mechanisms and the dynamic interaction among these processes in contributing to the production of emotion (O'Rourke and Ortony 1994; Ortony et al. 1988).

- Although we regularly and commonly experience emotions, this construct is apparently among the most complicated to conceptualize – which explains why **more than 150 theories have been proposed in trying to understand the concept** (Strongman 2003).
- One of the basic characteristics common to most of these theories, however, is **the fundamental place they regularly assign to the interaction of person** (e.g., personality, perceptions, appraisals), **on the one hand and environment and culture, on the other**, in understanding emotions (Ben-Ze'ev 2000; Reeve 2005; Strongman 2003)

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Psychological determinants of emotional experiences on the Internet
Phantom emotions

Emotional experiences in cyberspace



Emotions

However, it seems that we can commonly accept the notion that emotion is a multidimensional concept that is known to have four basic components: subjective, which refers to a phenomenological experience; biological, which refers to bodily arousal; purposive, which relates to motivational state toward action; and social, which refers to the communicative aspect (Reeve 2005).

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Emotional experiences in cyberspace



Internet environments, or cyberspace, provide us with an interesting opportunity to observe and re-examine cognitive, social psychological and interpersonal communication models (McKenna and Bargh 2000; Riva 2002), as well as theoretical arguments referring to personality structure and dynamics (Amichai-Hamburger 2002) in the context of emotional experiences, interpersonal and group behaviour.

Personal emotions experienced in Internet-based communication – especially text-based as most Internet communications are based, in principle, on what later will be presented as **phantom sensations**.

That is, although these emotions are subjectively experienced as authentic, wellfounded and even rational, they frequently rely on erroneous information that the interacting parties – self and partner/s – supply simultaneously and actively, apparently out of a need to satisfy psychological needs, whether the motivation for doing so is malicious or innocent.

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

Psychological determinants of emotional experiences on the Internet
Phantom emotions

Emotional experiences in cyberspace



Thus invalidated emotional accounts, of any type, experienced online – and regularly leading to certain behaviours and/or bodily reactions – are regarded as powerful, prime moderators in the attempt to understand, explain and control human phenomena in cyberspace.

- *Internet-based communication channels* connect people. When these people then communicate with one another, the personal experience – in addition to the mere exchange of information – *involves the eliciting of feelings and emotions* (Levine 1998; Mantovani 2001a; McKenna et al. 2002).

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Psychological determinants of emotional experiences on the Internet *Phantom emotions*

Internet-based interpersonal communication



Common Internet-based communication is characterized by several essential features that make it different from any other means of human communication. First, the partners to the communication are invisible to one another (except for the much less frequent use of video communication through a webcam).

- As a result, **common stereotypes and stigmatic attributions** relating to ethnicity, age, disability and the like – all commonly influential, visible personal characteristics – are entirely absent in the complexity of interpersonal **interaction online**, obviously assuming they are unknown to the communicating parties (Spears et al. 2002).
- Consequently, **emotional effects** (i.e., affects, attitudes, behaviours) normally caused and elicited by these attributions and stereotypes (Blair 2002) – including on the Internet when such details are known (Postmes and Spears 2002) – **are absent, too.**

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Internet-based interpersonal communication



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- For instance, **in a virtual situation in which identifiability is absent, accelerated aggressive behaviours might be expected** (Douglas and McGarty 2001), possibly because of the cognitive processes of attribution, unlike a similar interpersonal situation offline.
- Another characteristic, related to the absence of personal physical details, is that **non-verbal communication cues – such as hand movements and gestures, facial expressions (smiles, tears, frowns, etc.) and body lean – do not take part in delivering messages** as they do in common face-to-face communication (e.g., Knapp and Hall 2001). In consequence, **online messages are transmitted and received mainly on the basis of verbal communication**. The significant, essential, often critical role of non-verbal communication cues is missing.

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Psychological determinants of emotional experiences on the Internet *Phantom emotions*

Internet-based interpersonal communication



Second, most Internet communication is based on typed text. This factor has several independent effects:

- **Interpersonal verbal messages do not include voice**, which is another major vehicle providing meta-communication features of human messages through such factors as loudness, intonation, pitch and breaks (e.g., Pickett 1998), as well as recognition of some personal traits, such as gender and age.
- **Messages can easily be saved, retrieved, copied, forwarded, encrypted and backed-up** – features that go beyond more conventional ‘snail mail’, or traditional handwriting communication. This characteristic opens up a wide range of opportunities that might directly affect people’s experiences with interpersonal communication in a manner that they would ordinarily not experience in other modes of communication (Suler 2004a).
- **When a person writes, they tend to express things that might not be expressed at all in other modes of communication or that might be expressed differently** (Pennebaker et al. 2003; Barak and Miron 2005).

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Internet-based interpersonal communication



Second, most Internet communication is based on typed text. This factor has several independent effects:

- Apparently, **this feature also owes to the experience of aloneness in writing, or a sense of complete privacy** (Ben-Ze'ev 2003; Viseu et al. 2004) that produces an as-if feeling of self-talk in stark contrast to actually speaking with a partner.
- Cumulative experimental and clinically oriented research has consistently provided evidence of the **special psychological influence of writing in effecting emotions and consequent behaviours** (see reviews by Esterling et al. 1999; Pennebaker et al. 2003).
- Clinical experience, as well as research, shows that **reading, too, exerts a tremendous emotional effect, one that is perhaps stronger than other channels of communication** (Cupchik et al. 1998).
- The textual relations created between partners in online communication **contribute to augmented interpersonal openness and closeness, despite the physical distance and the mediation of complicated technology** (Suler 2004a).

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Internet-based interpersonal communication



Third, Internet communication allows different degrees of synchronicity between parties. Communication might be entirely synchronous (e.g., chat room), entirely asynchronous (e.g., email), or under the user's control in regard to the degree of synchronicity (as in instant messaging).

- The flexible degree of synchronicity – also termed **elasticity of synchronicity** (Newhagen and Rafaeli 1996) or **temporal fluidity** (Suler 2004a) – **allows better control of immediacy, as well as better reflection**, than does a rigid type of interaction, such as in-person, non-mediated, face-to-face communication.
- This special characteristic is considered **essential in enabling advanced friendship-development and relationship-formation as well as work-collaboration** (Cho et al. 2005), since communicating partners can give attention simultaneously and alternatively to both their online and offline environments.

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Psychological determinants of emotional experiences on the Internet *Phantom emotions*

Internet-based interpersonal communication



Third, Internet communication allows different degrees of synchronicity between parties. Communication might be entirely synchronous (e.g., chat room), entirely asynchronous (e.g., email), or under the user's control in regard to the degree of synchronicity (as in instant messaging).

- The unique ability of online communication to control the level of synchronicity **also enables a special method of human communication – multi-conversing**, which allows people to communicate in parallel with different people on different subjects, sometimes on different communication channels and yet to engage in independent, confidential individual conversations.
- The **multiconversing experience itself is usually a source of stimulation and excitement** (Ben-Ze'ev 2004).
- The **excitement is an addition to the psychological effects of the very dynamic interactivity that is inherent in online communication**, far beyond what people experience in offline contacts (Sundar 2004; Sohn and Lee 2005).

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Psychological determinants of emotional experiences on the Internet *Phantom emotions*

Internet-based interpersonal communication



Fourth, Internet communication is in a way richer than face-to-face communication in that it can employ various add-ons to simple language, such as still pictures, animation and multimedia, as well as supply links to numerous websites (a capability termed hypertextuality). Such features not only contribute to the design and attraction of communication but also make it more efficient in terms of operating a multisensual channel of communication for the more effective delivery of messages and information.

- In addition, **the common use of emoticons** (i.e., small textual or graphic signs, such as a 'smiley', that users add to their textual messages) **compensates, at least to some degree, for the lack of non-verbal cues and can enrich the colourfulness of communication** (Walther and D'Addario 2001).
- Similarly, **by using more advanced design technology, avatars** (i.e., individually selected graphic representations of users) **may be used to establish – or influence – perceptions related to mood, gender and credibility** (Nowak and Rauh 2005),
- as well as to **enhance the communication of emotions** (Kamada et al. 2005).

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Phantom emotions***

Internet-based interpersonal communication



The special communication features cited above – though perhaps mainly the factors of anonymity, lack of eye contact and the mode of writing – create the psychological phenomenon known as the ‘online disinhibition effect’ (Joinson 1998, 1999, 2001, 2003; Suler 1996–2005, 2004b).

This effect occurs when individuals tend to behave in ways they would not act in face-to-face interaction. As is clear from the term, ‘online disinhibition’ occurs because typical personal inhibitions diminish when communicating in cyberspace, thereby creating two phenomena:

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Psychological determinants of emotional experiences on the Internet *Phantom emotions*

Internet-based interpersonal communication



The 'online disinhibition effect' occurs because typical personal inhibitions diminish when communicating in cyberspace, thereby creating two phenomena:

1. People reveal personal information about themselves that they would not regularly disclose, in terms of the nature of the content, depth of exposure and time required to disclose it.
 - a. Tidwell and Walther (2002) **argued that accelerated intimacy and disclosure in computer mediated communication, in contrast to face-to-face communication, was a direct result of and perhaps compensation for, the lack of non-verbal communication cues that make people feel closer to one another**, as suggested by the Uncertainty Reduction Theory (Berger and Calabrese 1975).
 - b. Tidwell and Walther (2002), too, referred to **online disinhibition by stating that 'the absence of nonverbal cues, as well as editing capabilities, identity cues and temporal characteristics may prompt CMC users to engage in selective self-presentation and partner idealization, enacting exchanges more intimate than those of FtF counterparts'** (pp. 319–320).
 - c. This personal opening-up is characterized by the disclosure of a wide range of intimate contents and feelings as Internet surfers have experienced to a great extent (Joinson 2003).

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Psychological determinants of emotional experiences on the Internet
Phantom emotions

Internet-based interpersonal communication



The 'online disinhibition effect' occurs because typical personal inhibitions diminish when communicating in cyberspace, thereby creating two phenomena:

2. The second phenomenon, which is related to the previous one, is that **many people tend to behave in the way of acting out when online.**
 - a. Offline, this behaviour is typically characteristic of problematic children: their reactions are impulsive and they exhibit disruptive, annoying and anti-social behaviours (Suler and Phillips 2000; Joinson 2003; Thompson 2003).
 - b. On the Internet, because communication is text-based, such actions are considered destructive and harassing, though in different ways from offline communication (Ybarra and Mitchell 2004; Barak 2005).

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

Psychological determinants of emotional experiences on the Internet
Phantom emotions

Effects of presence and ambiguity



The special characteristics of Internet communication described above make cyberspace a unique environment, at least insofar as interpersonal communication is concerned. In addition, a person who stays in this environment experiences immersion.

That is, this person's senses become quite isolated or disconnected from the offline environment (often called the 'real world') and are completely (or at least predominantly) submerged in the wide-scope of information flowing out from the computer.

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Psychological determinants of emotional experiences on the Internet *Phantom emotions*

Effects of presence and ambiguity



It is an experience equated with the psychological state of presence (IJsselsteijn et al. 2001), a concept that has regularly been investigated in regard to human sensations in a Virtual Reality (VR) situation.

In the context of text-based virtual environments, presence can be described as a feeling of getting lost or wrapped up in the representations of the text – of being involved, absorbed, engaged, or engrossed in or by them . . . Conceptualized as flow, presence refers to a merging of action and awareness, during which a person loses self-consciousness and a sense of time, focusing on the present and blocking out the past and the future . . . Presence may also be said to entail an unselfconscious transparency in which a participant enters a virtual world, looking through rather than at the text that represents it. (Jacobson 2001: 654)

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Psychological determinants of emotional experiences on the Internet *Phantom emotions*

Effects of presence and ambiguity



- This subjective experience, which is clearly reflected through physiological and behavioural measures (Insko 2003), creates a **sense of 'being there'** (IJsselsteijn and Riva 2003).
- Not surprisingly, **the personal state of 'being there' is clearly associated with the concept of empathy**; that is, **the ability to experience the 'as if' condition** (and emotional state) of another.
- Indeed, an **individual's empathic tendency was found to moderate personal experiences of presence** (Nicovich et al. 2005).

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

Psychological determinants of emotional experiences on the Internet *Phantom emotions*

Effects of presence and ambiguity



- Furthermore, this ‘as if’, or virtual, experience of presence induces dramatic cognitive, affective and motivational effects in the participating individual (Gaggioli et al. 2003)
- and it **apparently affects modes of thought, as well** (Granic and Lamey 2000).
- Furthermore, as Grigorovici (2003) has shown, **emotional arousal, information processing and cognitive awareness while experiencing presence in an immersive virtual environment have significant effects on gullibility**, which subsequently increases one’s vulnerability to persuasion. **Experiences of presence on the one hand and emotions on the other, it is argued, are conceptually orthogonal to each other** (Robillard et al. 2003); that is, the two states are considered distinct constructs.

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Psychological determinants of emotional experiences on the Internet *Phantom emotions*

Effects of presence and ambiguity



It seems that the complex construct of presence, including its antecedents and consequences, is far from having been thoroughly investigated and thus remains only partially understood, especially in regard to emotional effects (Alcañiz et al. 2003). It is clear, however, that 'presence' significantly reflects on one's subjective experiences in cyberspace.

- As mentioned by Jacobson (2001), **the construct of presence is closely related to the concept of 'flow'** (Csikszentmihalyi 1975, 1982).
- **In the VR environment, including cyberspace on the Web, people's minds flow, as it were, in the virtual space**, a mental condition in which they tend to forget their mind states and problems and, instead, integrate themselves with keyboard and monitor into cyberspace (Chen et al. 2000; Chen 2006).

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

Psychological determinants of emotional experiences on the Internet *Phantom emotions*

Effects of presence and ambiguity



As shown by Chen et al. (2000), **Web users experience a fading away of their physical world and live through the present issues they are debating and the words and sentences they are typing and reading.**

- Web users who experience flow feel as though there is no separate ‘me’, but a merging of human and machine occurring. **During flow episodes, there is the loss of a sense of time and hours feel like minutes, mostly of enjoyable moments.**
- This view is closely related to Strate’s (2003) concept of ‘**cybertime**’, in which **VR elicits a subjective sense of illusory virtual time.**
- Although, as noted, clear relationships between presence and flow and emotional experiences in cyberspace are still to be discovered, **it is clear that personal, powerful experiences of presence and flow are typical of users of computermediated communication and considerably influence their physiological, affective, cognitive and behavioural reactions (Chen 2006).**

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

Psychological determinants of emotional experiences on the Internet Phantom emotions

Effects of presence and ambiguity



In this situation, an individual often attempts to clarify absent or unclear details in their environment by projecting from their own personal repertoire (Fenichel 2004; Suler 1996–2005).

- Suler (1996–2005), described a psychological analysis of a user of email communication that dealt with the person's non-replying to email. Calling this a '**black hole phenomenon**', he suggested that multiple psychological processes come into play in generating personal dynamics in this ambiguous situation.
- Gabbard (2001) referred to powerful sexual desires induced by what he termed '**e-rotic transference**' in communicating with unknown, ambiguous partners. In this context, *transference refers to an unconscious process of projecting onto others in the present environment feelings and attitudes – from hate and hostility to love and affection – that possibly were originally linked with significant figures in one's early life.*

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Psychological determinants of emotional experiences on the Internet *Phantom emotions*

Effects of presence and ambiguity



- Civin (2000) analysed **romantic relationships initiated online as a result of individuals' projections** onto one another that basically reflected needs for relatedness.
- Weinberg (2002) analysed **transference and countertransference processes in online group** (email list) dynamics that exist between group participants and moderator.
- Walker et al. (2003) reported on an **experiment that exemplified the existence of personotechnology transference**. Using participants' attributional ratings, they were able to **show evaluative and emotional references that could explain pathological behaviours, such as phobia and addiction**.

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Effects of presence and ambiguity



This relational process, which in some ways is similar, though not necessarily identical, to the psychoanalytic concept of projection is perhaps psychodynamic in nature in that it involves the complicated operation of mental mechanisms and a broad range of origins, such as basic instincts, personality needs and values, memories and associations, wishes and daydreams, habituated responses and the various possible conflicts among them (Turkle 2004).

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- Indeed, **the process of projection entails the use of a person's personal dynamics of personality for perceptions, attributions and interpretations of others, on the one hand and the use of 'objects', on the other.** Although objects might include anything in one's virtual (or real) environment, a person likely projects her or his own dynamics onto other people.
- Civin (2000), **applying psychoanalytic views, showed how intergender relationships formed through email were reinforced and accelerated by mutual projections.**
- Mantovani (2001a) and Ben-Ze'ev (2004) emphasized that **cyber-attraction involved the idealization of virtual partners.**
- Levine (2000) refers to **ambiguous, unclear, incomplete and missing personal information in cyberspace encounters as a possible catalyst of online attraction.**

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Psychological determinants of emotional experiences on the Internet *Phantom emotions*

Effects of presence and ambiguity



Ambiguity is a central characteristic of an online communication environment.

- Mantovani (2002) referred to **three aspects** that contributed to the **ambiguous nature of cyberspace**:
 - **user's self-presentation**, involving the fabrication of any appearance at will;
 - **the social context**, which refers to the lack of visible social cues and the reliance on an assumptive social environment;
 - **estimation of the reality of the situation**, which is related to the subjective perception of the virtual reality of what is individually experienced in electronic environments.

These factors **assign a major role to an individual's cognitive processes, referred to by Mantovani as 'the ubiquity of mediation' (2002: 319), by which he stresses the overwhelming and critical human experience in cyberspace over mere technology.**

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

Psychological determinants of emotional experiences on the Internet
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Effects of presence and ambiguity



Ambiguity, thus, is inherent in computer-mediated communication, resulting in dynamic personal processes that stem from the very subjectively perceived nature of the situation.

- Cyberspace ambiguity lays the grounds for what psychoanalysis considers optimal for generating highly active psychodynamic processes, such as projection and transference (Bordin 1955), which, in turn, elicit a person's strong emotions.
- Actually, advocates of psychoanalysis view cyberspace as a special environment in which natural human dynamic mechanisms go into action in a predictable way (Suler 1996–2005; Bird 2003; Turkle 2004; Zizek 2004; Whitty and Carr 2006).

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Effects of presence and ambiguity



From a psychotherapeutic perspective, the ambiguous virtual environment provides useful psychological grounds for effective transference and countertransference processes (Suler 2000, 2004a); these add a significant, independent dimension – and advantage – to the use of the Internet over both the mere exchange of therapy-relevant information (e.g., Baur 2000) and the application of psychotherapeutic treatment techniques (e.g., Yellowlees 2002; Tate and Zabinski 2004).

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

Psychological determinants of emotional experiences on the Internet *Phantom emotions*

Effects of presence and ambiguity



- Gaggioli et al. (2003b) proposed the use of avatars in group therapy conducted in a virtual environment, as the avatars would reflect patients' perceived selves and interact with other patients' projected, socially meaningful avatars. The specific choice of avatars, according to this conception, might have significant therapeutic meaning.
- Ookita and Tokuda (2001), who supplied an empirical evaluation of an online counselling group based on the participants' 'projective agents', on which they projected their personality characteristics.
- Suler (1996–2005) listed and described a number of uses of avatars in an online virtual environment, each characterized by some distinctive 'personality', for possible productive use in social interactions in cyberspace.

Several psychological theories account for the basic motivation to complement missing or vague information in the ambiguous virtual environment characterizing cyberspace.

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Effects of presence and ambiguity



Several psychological theories account for the basic motivation to complement missing or vague information in the ambiguous virtual environment characterizing cyberspace.

- One model ascribes a major motivational role to the **instinctive need for cognitive orientation**, which refers to the generation of meaning; **this includes components of beliefs about self, norms, goals and environment, that are manifested in behavioural intent and planned behaviour** (Kreitler 1976; Kreitler and Kreitler 1990). This model has much relevance in the context of cyberspace, as it argues that individuals – based on inherent, instinctive needs – strive for explanations to reduce the strain caused by a lack of cognitive orientation.
- Consistent with this conception, some studies have found a significant relationship between, on the one hand, **the design and navigation of information websites, as well as Web-based communication platforms and, on the other, user satisfaction and performance** (e.g., Galimberti et al. 2001; Gamberini and Valentini 2001).
- These models can explain, for example, van Oostendorp's and van Nimwegen's (1998) finding that **variables related to the design and navigability of online newspapers affect users' performance and satisfaction in reading them.**

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

Psychological determinants of emotional experiences on the Internet *Phantom emotions*

Effects of presence and ambiguity



Several psychological theories account for the basic motivation to complement missing or vague information in the ambiguous virtual environment characterizing cyberspace.

- Similar findings support the argument that **a lack of cognitive orientation is related to personal experiences of inconvenience, which in turn causes behaviours that might subsequently reduce tension.**
- Another relevant model that pertains to Internet users' motivation to reduce vagueness relates to the **cognitive need for closure** (e.g., Kruglanski and Webster 1996). According to this view, **individuals act on a level congruent with their personal need for closure when seeking information consistent with their prior personal knowledge.**
- Amichai-Hamburger et al. (2004) **showed how the need for closure, in addition to a website's level of interactivity, influenced participants' Internet-surfing behaviour.**

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

Psychological determinants of emotional experiences on the Internet *Phantom emotions*

Effects of presence and ambiguity



Another model that could be adopted to explain individuals' motivation to close gaps and seek clarification in the ambiguity of cyberspace relates to the personality drive to avoid cognitive dissonance (Festinger 1957; Harmon-Jones 2001). According to this conception, people who communicate in cyberspace or use online tools for browsing the net and obtaining information tend to distort information or change their attitudes and/or behaviours to maintain cognitive consistency.

- Czerwinski and Larson (2003) argued that **when designing online applications, website planners should consider this consistency factor in order to achieve optimal user performance and satisfaction.**

The drive to avoid cognitive dissonance might be related to another theoretical approach, one that reflects the motivation, need, or drive to close gaps in the elevated ambiguity of cyberspace environment – the uncertainty reduction theory.

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

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Effects of presence and ambiguity



- According to this viewpoint (Berger and Calabrese 1975; Berger and Gudykunst 1991), **people actively engaged in seeking information about others – by collecting data, conversing, interrogating and using their own judgements – want to reduce uncertainty about other persons.**
- All these activities take place because, as the theory assumes, **uncertainty is an unpleasant state for the individual; hence, they take actions to avoid it.**
- Related to the uncertainty reduction theory is the more **comprehensive field of behavioural and emotional reactions in uncertain situations** (e.g., Brashers 2001).
- According to Brashers, **'uncertainty exists when details of situations are ambiguous, complex, unpredictable, or probabilistic; when information is unavailable or inconsistent; and when people feel insecure in their own state of knowledge or the state of knowledge in general'** (2001: 478).
- Based on the **cognitive appraisal view of emotion and much research in a variety of areas in behaving under uncertain circumstances, positive (e.g., hope), negative (e.g., anxiety), neutral (e.g., indifference) and combined reactions might occur under these circumstances** – all based on the different perceptions, attributions and appraisals of the situation that different people might hold. People, then, may manage uncertainty to reduce and avoid negative or enhance and maintain positive experiences.

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

Psychological determinants of emotional experiences on the Internet
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Effects of presence and ambiguity



Cyberspace thus presents a classic environment for filling in gaps through and by virtue of one's personal psychological repertoire. This is where imagination and imagery are played out.

Imagination entails the general cognitive capacity of human beings to fantasize about the nature of others, both people and environments or objects, through ideas, narratives, concepts, explanations, assumptions and beliefs (Thomas 2003).

Imagery refers to the visual representation of imagined objects – namely, assigning them forms (Thomas 1999).

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

Psychological determinants of emotional experiences on the Internet *Phantom emotions*

Effects of presence and ambiguity



Thus, imagination and imagery, as two cognitive capacities, bring into play an individual's psychological drives through inherently automatic, unintentional, unwitting and usually unknowing processes. In the context of online communication, in which ambiguity prevails, the role of imagination in generating emotions in cyberspace is even greater than in actual-space.

- The **factual information** we have about an online partner is usually more **limited** than our knowledge of an offline partner and our imagination must fill in the gap. (Ben-Ze'ev 2004: 80)
- In **experiencing virtual communication in cyberspace through the dynamic operation of the mechanisms and processes of inherent motivations, imagination and imagery, individuals relatively quickly transform communication into relationships.** That is, they convert an exchange of messages into interpersonal contact, which is accompanied by a broad range of emotions (Galimberti et al. 2001; Mantovani 2001a; McKenna and Green 2002; Riva 2002; Sassenberg 2002).

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

Psychological determinants of emotional experiences on the Internet
Phantom emotions

The nature of online emotions



When individuals engage in the common type of virtual relationship, the autonomic operation of the motivational processes on the one hand and imagination and imagery processes on the other cause them to become usually highly immersed in and, therefore, fascinated, preoccupied and captivated by the experience of flow and presence.

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

Psychological determinants of emotional experiences on the Internet *Phantom emotions*

The nature of online emotions



- As a result, especially **in interpersonal interactions** (in contrast to Web browsing as such), **people tend to develop certain cognitions: they strongly believe in the validity of their observations and deductions, including their attribution of traits to others** (Markey and Wells 2002; Rouse and Hass 2003);
- They **feel various degrees of attraction to others** (Williamson et al. 2003);
- They **develop assessments of the intentions and attitudes of these others** (Light and Wakeman 2001);
- They **form different levels of trust in other Internet users** (Joinson, 2007);
- They **build up trust in online advice** (Joinson, 2007);
- and They develop **perceptions, expectations, attributions and beliefs that affect their attitudes toward virtual online partners.**
- In addition, these individuals also develop specific attitudes in regard to risk, such as evaluations pertaining to **the various degrees of risk of the virtual situation they are experiencing** (Zimmer and Hunter 2003)
- or **estimations of the degree of danger of situations** in which children are involved (Livingstone 2003; Quigley and Blashki 2003).

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

Psychological determinants of emotional experiences on the Internet *Phantom emotions*

The nature of online emotions



It is important to note that people who conceive, emotionally react and behave in reaction to various virtual, basically invalidated and unchecked stimuli under uncertain ambiguous circumstances do not do so because of naivety, stupidity, or negligence: on the contrary, their actions are natural and normal for any human being in such a social environment.

- That is, **social cognition is as active online as it is offline in determining various aspects of human functioning** (Rafaeli et al. 2005).
- **Personal conviction**, which goes hand in hand with imagined scenarios and imageries, with gullibility, as well as with the disinhibition of personal content and behaviours that are normally inhibited, **operates quickly and powerfully to develop authentically experienced emotions** (Ben-Ze'ev 2003, 2004; McKenna and Seidman 2005).
- Such emotions include, for example, **sincere empathy toward others** (Preece 1999; Preece and Ghazati 2001), **hate** (Lee and Leets 2002; Levin 2002), **love** (Cornwell and Lundgren 2001; Whitty 2003a, 2003b; Ben-Ze'ev 2004) and **aggression** (Cunneen and Stubbs 2000).

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

Psychological determinants of emotional experiences on the Internet *Phantom emotions*

The nature of online emotions



It should be kept in mind, however, that the emotional experiences are generated, or inflamed, by – in many cases – false, arbitrary, biased, exaggerated, manipulated, misleading, or invalid information that is created by online partners or by self-imagination.

- Evidently, such experiences are also influenced by stigmatic impressions (Wildermuth 2004), being helped or being offered help (Blair et al. 2005), response time (Tyler and Tang 2003), the revelation of deception (Birchmeier et al. 2005), judgements of content and style (Savicki et al. 2003), perception of gender-role (Dorer 2002), being ignored (Williams et al. 2000), the purposive nature of the interactive messages (Lee 2005a) and stereotypes and expectations (Epley and Kruger 2005).
- These are normal social cognitive processes, similar in nature to people's offline experiences (Riva and Galimberty 1997, 1998, 2001; Riva 2001b, 2002; LaRose et al. 2001a; Hofer 2004; Eastin 2005; Rafaeli et al. 2005).

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

Psychological determinants of emotional experiences on the Internet *Phantom emotions*

The nature of online emotions



Thus, in the absence of credible resources – as is typical in cyberspace, especially between strangers – perceived and imagined data fill the role of facts in many instances. Imagined and believed ‘facts’ become, relatively easily in cyberspace, something that is personally considered true, thereby exchanging ‘seeing is believing’ with ‘believing is believing’.

- Because of the **psychological processes responsible for their generation, emotions based on wishful thinking and deprived needs and expectations, influenced by misinformation or disinformation**, together with the massive catalyzing effect of online disinhibition, are personally experienced as though completely well-founded. **And, indeed, on the individual’s subjective level of experience, these emotions are in no way different from emotions based on actual, genuine relationships** (Döring 2002a; Sassenberg 2002).

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

Psychological determinants of emotional experiences on the Internet
Phantom emotions

Phantom Emotions



The result of the psychological phenomena under the natural tendency, based on personal needs and wishes, to fantasize and so close gaps in subjectively important information in ambiguous situations on the one hand and the common use of a made-up persona to represent one's identity in virtual environments, on the other – unavoidably creates 'phantom emotions'.

This term is chosen to connote the phenomenon in question because it is conceptually parallel to the psychophysiological occurrence of phantom sensations experienced by individuals, such as feeling pain in a body organ that is missing, which is a typical and wellknown sensation for amputees.

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

Psychological determinants of emotional experiences on the Internet *Phantom emotions*

Phantom Emotions



- The point is that **an amputee's authentic subjective feeling of an absent limb is palpably experienced even though the valid, external information is false** (Fraser 2002; Wade 2003), both physically (it is absent) and psychologically (its absence is recognized).
- Similar to amputees' supposed feelings, **phantom sensations also occur in people who lack a tooth** (Tassinari et al. 2002), **an eye** (Soros et al. 2003), or **smelling sensors** (Grouios 2002).
- The term '**phantom recall**' was adopted (Brainerd et al. 2003) **to designate metaphorically a certain type of vividly experienced, illusory memory; with similar logic, the concept of 'phantom' is adopted here.**

Thus, like the case of phantom sensations or phantom recall, an individual online genuinely experiences an emotion – be it attraction or repulsion, lust, love, hate, or jealousy – although these emotional sensations are based, in principle, on false objective foundations.

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