

CHAPTER 20

Phantom emotions

Psychological determinants of emotional experiences on the Internet

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Truth is a necessary phantom.

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Introduction: old psychological concepts in an emerging social environment

This chapter refers to 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'Rorke and Ortony 1994; Ortony *et al.* 1988). Special emphasis is frequently given to the appraisal of meaning processes (Smith and Kirby 2000) which, for example, call for an active,

perhaps conscious involvement in manufacturing emotion. On the other hand, approaches such as Prinz's (2004) argue that cognitive involvement is not imperative, as emotion can be caused by perceptions rather than higher level concepts. This latter view thus leaves room for an exogenous generation of emotions, which leads to Prinz's conceptualization of 'gut reactions'. Generally, however, the digestion and cultivation of external information by the senses in interaction with input from one's internal framework are considered to elicit a subjective mental experience. This general approach – in addition to the introduction less than two decades ago of the concept of Emotional Intelligence (Mayer and Salovey 1997), which called for a reconceptualization of the relationship between reason and emotion – made the understanding of emotional reactions even more complex. It is interesting to note that 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) – a point of central importance to the current discussion. 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).

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. The argument advanced in this chapter is that personal emotions experienced in Internet-based communication – especially text-based as most Internet communications are, in particular (but not only) between strangers – are based, in principle, on what later will be presented as *phantom sensations*. That is, although these emotions are subjectively experienced as authentic, well-founded 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. 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). This is no different from any other mode of communication between human beings, as the emotional dimension is considered to be inseparable from the interpersonal experience. Although much research, as well as personal introspection, has led researchers to understand the dynamics of the creation, development and flux of emotions in the 'real world', as noted earlier, much less is known and understood about this subject in the context of cyberspace. The reasons for this lack of knowledge have to do with the relatively new state of the Internet as an accepted, widespread communication vehicle, as well as with the paucity of scientific psychological investigations in this area to date. However, the subject has attracted a growing number of researchers in recent years and we seem to know significantly more now than a decade ago (Johns *et al.* 2004). That said, this body of knowledge, relative to other areas in social sciences, is still in a preliminary stage, as much of this information is based on speculations, non-objective data, unreplicated research and biased self-observations.

The conceptual proposition advanced in this chapter refers to Internet-based communication in general; however, it might be more relevant and more salient when employing this means of communication between strangers. Cyberspace – different from any other social environment – has made meetings between strangers more commonplace, even if virtual (Bargh and McKenna 2004). A variety of online communication tools, from personal homepages and blogs to email, chat rooms and forums, enable contact between people in a way that is affordable, convenient, efficient and relatively private and safe. Indeed, these virtual interactions have become almost standard among people in modern society (Bargh and McKenna 2004), constituting a customary usage among workers in an organization, as well as among family members, friends and students. Online interactions with *known* partners – for formal business as well as for casual interactions – complement face-to-face meetings: their utility might lie in their offering an additional channel of message delivery, often with unique and significant psychological value (Chan *et al.* 2004). However, the broad, rapid expansion of the use of online communication among

people who are, in principle, strangers to one another has created a new, perhaps revolutionary, notion and perspective of interpersonal relationships. For example, according to the Pew Internet Project (2005), more than 33 million adult Americans regularly use virtual chat rooms. If we add to this figure the millions of teenagers, as well as the untold number of users of other online communication tools that are frequently employed to communicate with complete strangers (e.g., instant messaging, forums) and despite the fact that a proportion of these people use online means to communicate with people they are acquainted with, it is clear that a new, quite different social environment has emerged (Calvert 2002). The question of how relationships are established in cyberspace and what characterizes them has now attracted researchers to investigate a wide range of populations, online environments and psycho-social aspects (e.g., Chan *et al.* 2004; McKenna and Seidman 2005). Much effort has been invested in developing online social interaction technologies to allow those with more means and opportunities to communicate conveniently (Whittaker 2004). However, the dynamics of the affective dimension – one of the basic components of what comprises emotion (Reeve 2005) – in Internet-based interactions has largely remained untouched as a subject of investigation.

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). This situation creates two independent characteristics for online communication: one is that physical information is totally missing; this absence of the visible has a direct effect on the communicating parties that is related to important personal details, such as skin colour, weight, height and general looks, all of which are known to affect interpersonal perceptions (Kenny 1994). In online interaction, these details are practically

non-existent and, therefore, are not a direct part of an individual's awareness. 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. 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.

Second, most Internet communication is based on *typed text* (Pew Internet Project 2003). 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). For instance, unlike common interpersonal communication, an episode or a gesture from the past, if logged, can easily be revived in online communication and re-experienced at a later time for an authentic (positive or negative) present experience. Such experiences can easily be shared with others for possible additional excitement.

- ♦ 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). This is perhaps due to the ability to plan, edit and organize written text better than spoken words, as well as to engage in personal reflection. 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).
- ♦ There is absolutely *no eye contact* between the partners when communicating online. It should be noted, though, that the absence of eye contact is a different entity and has different effects from invisibility, as visibility does not automatically mean the existence of eye contact. Communicating by written correspondence, on the other hand, necessarily entails a total absence of eye contact between people who communicate. As eye contact directly refers to personal behaviours and feelings that have to do with comfortableness, self-disclosure, intimacy, openness, honesty and deception

(Kleinke 1986; Webbink 1986), this factor is of significant value in human communication and the elicitation of emotions. Lack of eye contact in online communication, therefore, presumably has essential affective and behavioural impacts on individuals communicating with each other electronically. It should be noted that emerging trends in integrating online voice communication (VoIP) and video communication (through webcam) over the net may have an impact on users' experience. These effects, however, which have hardly been investigated to date, are apparently uncommon in comparison with text-based online 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. 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. Users of chat and instant messaging exploit this capability to engage simultaneously with several partners, who may or may not know of the existence of the other conversations. The multi-conversing 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). Online service providers, too – be they salespersons in online shops or counsellors who provide online therapy and support – take advantage of this ability to multi-converse, by communicating simultaneously and privately with more than one customer/client (Barak 2004; Suler 2004a) in order to promote business and better exploit time.

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 multi-sensual 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).

Although interpersonal communication on the Internet – based on numerous tools, languages, cultures, subcultures and the special characteristics described above – is convenient, rich, colourful and exciting, it also seems to have the potential to produce massive miscommunication. This abuse of communication might include any of several forms of communication disturbances: offensive verbal conduct, known as flaming; listening without making your presence known, known as lurking; delivering a message to someone who would not otherwise choose to receive it, known as spamming or bombing; and identity deception, known as spoofing. However – as thoughtfully analysed and postulated by Riva (2001a) – these disturbances could be viewed as

a 'pared-down' communication network that actually operates according to and concurs with several psychologically based models, thus obeying certain social rules. Nonetheless, 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: first, 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 (see Chapter 16, this volume). Attempting to explain this phenomenon, 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), which will be referred to later in the chapter. 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). 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). 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. 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). 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).

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, as in a movie, a person who stays in this environment – especially in a social interactive area – 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. 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)

This subjective experience, which is clearly reflected through physiological and behavioural measures (Insko 2003), creates a sense of 'being there' (IJsselsteijn and Riva 2003). It is as though one is mentally present in an environment – an actual, physically real environment – other than one's own.

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). 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. *Empirically*, however – for apparently casual interactions and procedures that are in need of further exploration, as is currently accepted among researchers (Bouchard 2004; Slater 2004) – they correlate. 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). 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 computer-mediated communication and considerably influence their physiological, affective, cognitive and behavioural reactions (Chen 2006). For example, to make the principle of presence and flow more realistic in terms of Web users' actual activities, we can refer to a typical, yet paradoxical experience that a person encounters in cyberspace: this is what Ben-Ze'ev (2005) termed 'detachment'. This describes a person who – despite being detached because of distance, relatively lean communication, anonymity, common deception, discontinuity of contact and marginal physical investment – still feels intimately close and attached to another person. Although 'our emotional system is not yet structured to deal with such opposing features' (2005: 134), this unique phenomenon, experienced by most Internet users, is characteristic of the effects of presence and flow in the cyberspace/VR environment.

Moreover, because of the common and quite usual lack of known or clear information about the identity or descriptive characteristics of one's partner in online communication (with the exception of communication between acquaintances), or 'reduced cues' in the interpersonal situation (Walther 1996) – an element related to invisibility and anonymity – and because of the ambiguity of the whole experience, cyberspace leaves much room for individual dynamics to fill in the gaps (Mantovani 2002). 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), for example, 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. In another example, 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. Similarly, Civin (2000) analysed romantic relationships initiated online as a result of individuals' projections onto one another that basically reflected needs for relatedness. Consistent with this view, 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 person-technology transference. Using participants' attributional ratings, they were able to show evaluative and emotional references that could explain pathological behaviours, such as phobia and addiction. 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). 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. As mentioned, 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. In the same vein, Levine (2000) refers to ambiguous, unclear, incomplete and missing personal information in cyberspace encounters as a possible catalyst of online attraction.

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; and *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. In all, 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. 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). A non-psychoanalytical view of ambiguity in cyberspace is Walther's (1996) *hyperpersonal* model of interpersonal computer-mediated communication, which refers to the inflated perception and idealization processes of an online partner. Recent research (Nowak *et al.* 2005; Yao and Flanagan 2006) empirically supports Walther's hyperpersonal approach.

It should be noted that transference and projective processes that entail the operation of numerous cognitive mechanisms relating to cyberspace ambiguity also serve as typical processes characterizing online counselling – a specific online interaction in which two communicating partners are usually unfamiliar with each other. These processes normally enhance the therapeutic encounter and provide therapists with different approaches – be they psychodynamic, cognitive, narrative, or existential – and significant materials with which to work in the therapeutic encounter (Barak 2004; Rochlen *et al.* 2004). Actually, from a psychoanalytic-psychodynamic point of view, cyberspace is considered an ideal therapeutic environment, as

its ambiguity allows a patient's desired projections and transference processes (Suler 2000; Gabbard 2001; Fenichel *et al.* 2002). In other words, from this 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). For example, 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. A related example is a proposal made by 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. 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, quite a few 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. 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. In this context, 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 (see also Chapter 13 in this volume).

Yet 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. Accordingly, 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. 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. That is, people may selectively use communication to manipulate uncertainty to suit their personal needs.

Because of either one of the psychological drives and motives just described and under the mental circumstances under the state of ambiguity and uncertainty, it is argued here that an individual strives to put things in place, to make order, to create consistency and harmony, to satisfy curiosity and to feel oriented and reassured in accordance with their personal perceptions, expectations, beliefs, values and other factors relevant to the theoretical motivational model adopted. In other words, the contention is that a person will actively attribute content to objects and make cyberspace a more individually experienced, convenient environment. In cyberspace, stimuli are usually vague, foggy and unclear; it happens, therefore, that close-to-transparent, personal motivations sometimes come into play in order to maintain psychological balance. 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). 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). Forming relationships in cyberspace creates a social environment. The maintaining of social interactions on the Internet – whether in a dual relationship or with multiple partners – is characterized by many interpersonal attitudes and behaviours typical of offline social relations. Unique social aspects (e.g., flaming), however, have been identified, too (e.g., Joinson 2003), which makes this environment both special and emerging in the context of the social sciences. Indeed, consistently and overwhelmingly, research has found and numerous anecdotal reports have documented – perhaps against common sense or intuitive thinking – that social interactions in cyberspace elicit strong affects, despite (and perhaps because of) the virtual nature of the environment as though one is experiencing actual, Real World occurrences (Ben-Ze'ev 2004; Fenichel 2004).

The nature of online emotions

When communication is basically virtual, based on exchanges of typed messages, frequently

between unidentifiable partners and mediated by complicated technology, the interpersonal relationships formed are essentially based on information that, in principle, lacks any external validation. Rather, they rely mainly on data inherent in the communication style – for example use of humour, wittiness, spelling mistakes – and content. That is, the information about and the perception of online partners is commonly based not on actual knowledge, hard facts, or verified details, but on information supplied by a partner either directly by communicating messages or indirectly by retrieving existing online information (e.g., personal details typed in the 'User Details' space in Internet chat profiles or personal information of a blogger). Although relationship-building based on discourse is feasible and actually quite prevalent in current times, it obviously is limited to virtual contacts; its maturing into a more advanced, offline, stable and committed relationship would require additional, less purposeful and subjective and more objective (e.g., physical) information (Baker 2005).

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*. 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 (see Chapter 4, this volume); they build up trust in online advice (see Chapter 22, this volume); 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). Such attitudes influence their decisions and reactions vis-à-vis strangers. 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).

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). 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). That is, emotional arousal of any sort stemming from incidence encountered in cyberspace with virtual partners is as meaningful and experiential as those with actual, real world partners. This is as relevant and applicable to single, passing incidents as to online relationships developed over time. The essential, central role of the cognitive and personality dynamics systems in generating emotions is overwhelming, regardless of the correctness or reality of objects. Griffiths (2004), highlighting the illusory and personal dynamic-dependent nature of affects generated in online, text-based communication, wrote:

Words that are originated from within ourselves and received by the computer without contest or contempt may produce the feelings that tell us we are being accommodated. Is this denial of reality or is it the individual's unique reality upon which he or she has managed to create a tool for expression and containment? Relating in this way, it could enable the reclamation of projected parts of 'self' by way of introjections and therefore serve to help the individual with whole relatedness.

(Griffiths 2004: 157)

Thus, the powerful psychological dynamic operating within individuals – reflecting both inner mechanisms and personal processes and content and not necessarily reality – is presumably responsible to a large degree for the various personal emotions experienced in cyberspace. Moreover, as sensual perceptions and cognitive mechanisms are responsible for the subjective

processing of external information, the manipulation of these external sources could significantly affect personal experiences. Consequently, online emotions are not only elicited, in principle, by externally invalid stimuli, but they are also unstable and prone to be manoeuvred as a result of the intentions of others.

Impersonation, deception and impression formation

There is a complementary component to the powerful, basically internal circumstances mentioned so far: the psychological existence of a *partner* (or partners) in the cyberspace relationship. In cyberspace, people may choose their own 'identity'. Because of the lack of visibility and identification on the one hand and the absence (or exhausting) of ways of checking and verification on the other, users may create their own identity, fabricating a name, age, gender, origin/ethnicity, appearance, location and so on, in order to optimize their self-presentation (Walther 1996). Technically, identity construction on the Internet – whether through publishing a personal website or blog, communicating by instant messaging, conversing in a chat room, or participating in a forum – is simple and perceived as relatively (compared to offline identity-construction) un-risky to the identity creator (Donath 1999; Wallace 1999; Döring 2002b). The major risk an impersonator faces is the strong reaction of others if or when the impersonation is revealed (Donath 1999; Joinson and Dietz-Uhler 2002; Birchmeier *et al.* 2005). Thus, Internet users may effortlessly construct a *persona* with which they prefer others to observe and perceive them. Obviously, one might devise either a permanent fabricated persona or multiple identities from which to present oneself in any given situation or even more than one identity simultaneously (Joinson and Dietz-Uhler 2002). Identity-management in cyberspace, then, can be exercised and exhibited along several dimensions more or less in one's control and awareness (Suler 2002). This persona might be created for malicious intentions, such as paedophilic bait for children (Quayle and Taylor 2001, 2003) or other types of sexual exploitation (Barak 2005), for psychopathological reasons

(Munchausen by proxy; Feldman 2000), or for more innocent reasons, such as children hiding their real age (Harman *et al.* 2005) or attempting to gain greater appreciation and attraction in an online courtship. In this last incident, the attempt could lead from just flirting (Levine 1998; Cornwell and Lundgren 2001; Ben-Ze'ev 2004) to actual seduction (Mantovani 2001b) as has been observed in various online environments, including lesbian chat rooms (Poster 2002). Another example of the manipulation of online identity is to mask gender through 'gender bending' or gender concealment, an approach often used by women to avoid feelings of inferiority or harassment by men (Jazwinski 2001; Barak 2005). Concealment, incidentally, frequently stimulates guessing a partner's actual gender (Savicki *et al.* 2003), with varying degrees of success (Paasonen 2002). Not surprisingly and consistent with the current view, impression-formation managed through computer-mediated communication was found to be more influential and intensive than if attempted through face-to-face communication (Hancock and Dunham 2001). An extended understanding and examination of this area, however, is still in the making (see a recent proposed model by Carlson *et al.* [2004]). In many instances, the ease with which an online identity may be fabricated generates fear and anger among naive Internet users (Donath 1999), who suspect criminal conduct by those they perceive as online identity thieves and hackers (Kreuter 2003; Voiskounsky and Smyslova 2003; Turgeman-Goldschmidt 2005). For regular users, however, the creation of a persona for a number of purposes, such as gender switching that does not lead to harm, is considered legitimate. It may even be considered psychologically useful as a developmental task in identity experimentation (Suler 1996–2005; Roberts and Parks 2001). Indeed, the use of a persona is expected and even considered normal in cyberspace, where manipulation, impersonation and insincerity are not only possible but in common practice (Joinson 2005).

It should be stressed that constructing a persona – in cyberspace or in general – is not always a conscious or deliberate choice. People often unconsciously act in ways that are not natural for them, but targeted toward achieving a certain

goal, usually that of gaining appreciation and high appraisal from others, offline (Schlenker 2003) as well as online (Suler 1996–2005), through a complicated process of self-perception and impression-management (Sherman 2001). An example of this, though some may consider it a constructive manipulation of personal features, is the concealing of a disability in order for a person to be judged as an individual rather than as disabled (Cromby and Standon 1999; Bowker and Tuffin 2002). As Seymour and Lupton put it:

Online communication exposes people with disabilities to the world of strangers. The computer opens the door to a world of new ideas and values. It heightens the possibility that disabled people will come into contact with people who do not share their view of the world and that the communication will take place in a context that is not dominated by their 'tragedy'.

(Seymour and Lupton 2004: 300)

Moreover, impression-management online does not always reflect a person's intentions and desires; it may also refer to 'virtual mirroring'. That is, a person often reacts to the mirroring of herself or himself as expressed through partners' communications in the 'telecopresence' environment, thus creating a 'digital self' (Zhao 2005). In this way, an even more complicated interaction is created between self-presentation and self-formation and reflected in a persona.

Such behavioural conduct, in reflecting the fluidity and multiplicity of identities, might manifest a postmodern, constructivist view of emerging personality, a fragmented self and multifaceted interpersonal relations (Turkle 1995; Maczewski 2002), which the Internet makes more convenient to achieve. It is a well-known fact among users of online dating websites, for instance – albeit this behaviour pattern characterizes offline dating, too – that people exaggerate, beautify and ennoble self-presentations in order to impress others and, consequently, enhance their chances to gain attention, be contacted and maintain a virtual relationship (Baker 2005). Actually, flirting online typically involves the salient use of impression-formation, which is more easily enabled in cyberspace (Whitty 2004). As another example, it is well documented that

children who interact in online groups present themselves selectively and differently, depending on the nature of the group with which they are interacting (Calvert *et al.* 2003), in order to feel accepted and appreciated. Valkenburg *et al.* (2005) found that approximately 50% of a sample of adolescents pretended to be older than their real age in Internet communications, while approximately 10% presented themselves as the opposite gender and 13% played a fantasized figure. These researchers also concluded that the reasons for faked identities were self-exploration (to explore how others react), social compensation (to compensate for shyness) and social facilitation (to facilitate relationship-formation). Moreover, young Internet users, in developing their personal offline identities, identify with specific Internet subcultures that, in turn, influence their online identity in their attempts to belong and accept local norms (Wilson and Atkinson 2005). For immigrants, too, identity-concealing, on the one hand and identifying with the same online affiliation group, on the other, reflect an additional influence on virtual identity-formation as Mitra (2005) recently showed for Indian immigrants in the United States. Online consumers, too, tend to fabricate identity; their behaviour could be explained on several theoretical grounds (Lwin and Williams 2003), but supposedly is due to the desire to avoid commercial spamming later on. Many users of chat rooms tend to lie about themselves either to impress (men) or as a safeguard (women) (Whitty 2002). The need to mask personal identity may be considered from a psychoanalytic viewpoint, too. Online romantic relationships have been analysed from this angle (Seiden 2001) as the construction of a common narrative, based on mutual impulses and narcissistic needs. Here, self-definition expresses self-object for the purpose of loving and being loved, which behaviours are intensified through the ambiguity and illusionary nature of the environment. It should be noted, however, that the formation of an impression is not always invalid or misleading; Vazire and Gosling (2004) found that personal identities created on a personal website were, as perceived by visitors, fairly similar to the actual personalities of the site owners. Obviously, this finding does not mean that websites always candidly

reflect their owners' true character, only that an online persona might or might not be manipulated as its owner wishes.

Thus, in the virtual environment, in which validation, confirmation and vindication are almost impossible and motivations for identity concealment are plentiful, persona – the made-up, selective, biased self-presentation of a person – is assumed to constitute a major source of information for impression formation. This source of information has a significant added value beyond the style and pattern of behaviour revealed through textual interactions, as reviewed previously. When online, therefore, a person perceives another person as the latter is reflected in that person's frequently artificial, invalid persona and reacts to this image accordingly. As was pointed out, it is a common experience among Internet users, one consistently documented in empirical research (see Barnes 2003a, b) that when online, individuals regularly manipulate their persona, consciously or unconsciously, maliciously or innocently, directly or indirectly and they do so variably according to the online environment and communication channel. Moreover, as Utz (2005) found, different types of identity manipulations – category deception, attractiveness deception and identity concealment – affect differentially and cause perceptions relating to the deceivers' motivation to deceive and purpose of deception.

Almost inevitably, then, many people in cyberspace perceive and refer to others in the manner in which these others manipulate them or elicit their responses (Merkle and Richardson 2000) through the powerful influence and easy, though sophisticated, manipulation of written language (Zhou *et al.* 2004) in interaction with the perceiver's personal psychological load. Deliberate manipulations, targeting a variety of goals, cause trust and openness to intimacy to become major issues in online communication (Clark 1998; Ben-Ze'ev 2003), apparently more than in an offline relationship, where 'seeing is believing' has an overriding effect. Thus the emotions of individuals relate, in principle, to cognitively created figures that these individuals believe reflect the partners with whom they are communicating and interacting. Consequently, they usually behave accordingly. It is ironic to note, however, that a preliminary survey shows

that people admit to lying more in telephone conversations and face-to-face encounters than in emails, though this may be due to the archiving feature of email (New Scientist Online 2004; see also Chapter 19, this volume). This finding is consistent, however, with Hardey's (2002) argument, based on analyses of more than 400 dating-website users, that online communication with virtual partners assists in building trust for later offline relationships.

Phantom emotions

The result of the two psychological phenomena described above – 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 well-known sensation for amputees. 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. Moreover, not only is the external information inaccurate (or entirely false), but the personal emotions are elicited (or triggered) by illusionary objects momentarily believed to be

authentic and real. Using Russell's (2003) terms in conceptualizing emotion, this means that the *attributional processes* become central and play a major role in creating an emotional episode.

The argument advanced here is that the submerging effects of presence, the inherent psychological processes that individuals go through in such situations owing to various motivational factors and the common behaviour of Internet surfers in managing a fabricated (or deliberately modified) persona, allied with the virtual, ambiguous nature of cyberspace and human communication in this environment, all combine to elicit emotions that, though actually experienced, are determined, in principle, on false grounds, of which the individual is usually unaware. People in cyberspace who authentically feel an attraction to a communication partner, particularly a stranger, go through a phantom sensation phenomenon frequently as soon as a few moments after virtually meeting the partner. However, unlike 'love at first sight', which in a minimal way refers to relatively objective or genuine data (e.g., looks, skin colour, non-verbal communication cues), however preliminary, that elicit this emotion (Soble 1990; Forrest 2004), affective reactions in cyberspace rely, in principle, mostly – sometimes entirely – on rather virtual information. There are other fundamental differences, however, between the occurrence of 'love at first sight' in face-to-face relationships and falling in love with a virtual partner in cyberspace. As Ben-Ze'ev put it:

It should be noted that although beauty has a powerful impact at first sight, the weight of this impact decreases as times goes by and once we know other characteristics of the person. Likewise, wittiness has a powerful impact at first chat, but its impact may be reduced once we know other characteristics of the person. When wittiness is perceived to be superficial and more profound characteristics, such as kindness and wisdom, are found to be wanting, the weight of the positive initial impact of wittiness may vanish. [Moreover] In love at first sight, the high value accorded to the other's external appearance is projected onto [that person's] characteristics. In love at first chat, the high value accorded to the other's writing abilities is projected onto other characteristics, including external appearance. Both are instances of real love that is based on scant

information and on imagination that fills the missing gaps.

(Ben-Ze'ev 2004: 177)

That is, as in 'love at first sight' – where a spillover effect causes a cognitive bias in attributing positive and attractive characteristics to a person rated for his or her appearance, documented in psychology research for over half a century as a 'halo effect' (Asch 1946) – virtual interpersonal contact, which is characterized by the unique psychological circumstances described above, also produces a halo effect. Physical attraction, for instance, is replaced by wittiness or 'textual attraction'. However, unlike cognitions elicited offline – that is, with greater inner psychological powers – emotional reactions to an online partner are produced to a major degree by (as proposed here) the way these emotions satisfy personal needs and expectations. In emphasizing cognitive processes, then, the halo effect in virtual interpersonal relationships reflects – apparently differently from the parallel effect in a face-to-face relationship – and refers to a broad spectrum of possible emotions, not only love. These attributions stem from one's personality structure, personal dynamics and current psychological state.

The process embodied in the halo effect could possibly explain a variety of online phenomena, not only those related to interpersonal relationships. For example, the phenomenon of phantom emotions could explain positive cognitive bias (e.g., unrealistic optimism) found when Internet users judge events experienced online when compared with 'an average person' (Campbell *et al.* in press). In this case, overestimation of one's personal coping ability and the desirability and controllability of events might reflect a phantom emotion in that the virtual online event (e.g., being contacted by friend; being robbed of personal ID) produced personal emotions that primarily reflected wishful thinking and beliefs rather than real probabilities. Another example is that of unrealistic perceptions of online information credibility (Metzger *et al.* 2003). Here, too, users' needs and wishful thinking, on the one hand and the seemingly appealing online information, on the other, could explain the phantom emotion responsible for a positive perception bias. This conception

may also be applied to explain Rouse and Haas's (2003) finding that users of a chat room develop textual relationships with online strangers in correlation with the personality traits they attribute to these others. The current framework could also be used to account for teenagers' perceptions of the risks and benefits of personal disclosure of information (Youn 2005); phantom emotions – influenced by attractive disclosure benefits – affect their behaviour and attitude toward the protection of privacy online.

Thus, a broad spectrum of emotions, well known to Internet communication users, is subject to the psychological determination process conceptualized and termed here as phantom emotion. By explanations stemming from this model, it is argued that rapidly developing online love and sexual attraction (Levine 2000; Whitty 2003a; Ben-Ze'ev 2004), liking and closeness in online communities (McKenna *et al.* 2002), extensive altruism and mutual help in online support groups (Chapter 10, this volume), on the one hand and accelerated hate and aggression (Lee and Leets 2002), bullying and harassment (Barak 2005) and negative manipulations and insults (Suler and Phillips 2000), on the other hand, all share a phantom sensation basis. That is, these emotionally based reactions are not generated or induced by real, personally experimented and verifiable factors; rather, they are primarily the result of the fantasized experiences typically characterizing cyberspace.

A phantom emotion is so prevalent and so genuinely felt in cyberspace that many people, perhaps even most Internet users who experience virtual communication, do not notice the difference between the virtual and a substantiated emotion (i.e., an emotion based on valid information and real-life experiences). The emotional experience in cyberspace is subjectively identical to the vivid, authentic feeling of itching, pain, or tickling that an amputee feels in an absent limb. Falling in love with, feeling attracted to, being jealous of, or despising or resenting a virtual partner might be baseless in terms of rational thinking and factual data. The subjective emotion, however, is as intensively, authentically and overwhelmingly experienced as is, say, 'true love' (Ben-Ze'ev 2004) or the rage experienced in typical online flame wars (Thompson 2003; Alonzo and Aiken 2004;

Lee 2005b). What makes these emotions special – phantom – is neither their nature nor their experienced authenticity, but the subjectively biased basis by which they were created.

This phenomenon of 'virtual emotion' actually represents the kind of intensified or double-edged emotional mythology experienced by Pygmalion and his creation, Galatea (Ovid 18 BC). Not only does the sculptor have needs and wishes and therefore modifies his creation accordingly; the sculpture, too, has needs and wishes to be related to in a certain way and so it influences the sculptor's attention and feelings accordingly. This extra dynamic of mutual expectations and subsequent manipulations is magnified in cyberspace – in terms of the intensity of emotions and the speed with which they develop – because of the online disinhibition effect (Suler 2004b) and the elevated expression of 'inner self' (McKenna and Seidman 2005). Consequently, these unique circumstances provide grounds for the powerful, accelerated emotions experienced by individuals in the virtual environment. Since people do not all behave identically in any given environment, their personal differences interact in cyberspace with the reactivity of emotional sensations and with a wide range of behavioural responses (see Chapter 13, this volume).

Similarly, emotional processes are possibly related to and perhaps moderated by, personality dispositions as was shown by Alonzo and Aiken (2004), Lee (2005b) and Thompson (2003) for flaming behaviour, for example. Phantom emotions, however, are prevalent and they overwhelmingly reflect the unique dynamics characterizing cyberspace and the interpersonal relationships and behaviours in the virtual environment. Moreover, because of the foggy atmosphere characterizing cyberspace and its inhabitants, phantom emotions tend to be preserved and empowered, since no external boundaries, control, or feedback is in fact present. Created and maintained online, phantom emotions tend to become perpetuated and even to escalate to the level that best fits personal desires. The construction of experience is possible, then, in terms not only of fantasizing through thoughts but also of complementing these thoughts with authentic, self-fulfilling feelings. Perhaps only full personal awareness, along with strong self-control and self-discipline, can assist individuals to maintain

an integrative life with their Real World (Suler 1996–2005) and avoid possible compulsive behaviours online – ‘Internet addiction’ (Suler 1999; LaRose *et al.* 2003) under its powerful psychological circumstances.

Implications

The current conceptualization of phantom emotions has several important theoretical, research and practical implications. First, this view can shed light on processes that determine – directly or in interaction with other factors – a variety of online behaviours and thus lay advanced theoretical grounds for a better understanding of experiences in cyberspace and for predicting an individual’s experiences. By introducing the concept of phantom emotions, a deeper, more accurate understanding of people’s behaviour in cyberspace might occur. Thus, adding this rather important psychological factor into a model that aspires to explain and predict online experiences and behaviours necessitates appending variables and measures that will specifically target phantom emotions as a mediator. The explanatory value of this conception is still to be investigated: however, it seems that the present framework is applicable to a variety of online social interaction situations.

It is postulated here that phantom emotions could prove to be of great value in explaining interpersonal group behaviour in virtual communities, where group processes, flaming, coalitions and interpersonal attraction typically take place (McKenna and Bargh 1998; McKenna and Green 2002; Lee 2005a, b; McKenna and Siedman 2005). In contrast to the SIDE model’s viewpoint that stresses the role of group salience as a major source of behaviour online (see Chapter 17), the current approach assigns a heavier role to *personal awareness* rather to group awareness (as recently was empirically supported by Yao and Flanagan 2006); on the other hand, phantom emotions might also explain personal sentiments and affects typical of Internet cultures (King 2001; Forster 2004) that produce a broad spectrum of attitudes and behaviours pertaining to commitment, a sense of community, belongingness and group trust. In this regard, it is proposed that personal variables relating to the concept of phantom emotion (e.g., personal

cognitions) be included as a major explanatory factor in addition to the variables that commonly had been used until now. Phantom emotions might be also an important mediator in conceptualizing online work collaboration, in which ongoing negotiations, interpersonal liking and disliking, collaboration and misunderstandings are common (e.g., Hathorn and Ingram 2002). In this context, it might be of significant importance to add a focus on interpersonal perceptions, expectations and attributions, as well as personal wishes, as determinants of phantom emotions, since all these components might significantly contribute to interpersonal (and group) behaviours in this rather specific context. In addition, phantom emotions could be considered an important factor in designing, managing and studying e-learning, for which group cooperation and interpersonal relationships are important for effective learning (Kubo *et al.* 2002; Kreijns *et al.* 2003). Understanding the nature of learners’ psychological dynamics (including needs, wishes and perceptions, all related to the virtual emotive dimension), rather than system-related variables, might prove effective in investigating pedagogical issues in online learning, including its processes and outcomes.

Phantom emotions, as noted earlier, might be of essential value in investigating online dating and romance because of the central role of mutual, but frequently unfounded, attraction in cyberspace (Merkle and Richardson 2000; Cornwell and Lundgren 2001; Seiden 2001; Döring 2002a; Whitty 2003a, b; Ben-Ze’ev 2004, 2005; Baker 2005) and may also shed light on online infidelity (Young *et al.* 2000; Aviram and Amichai-Hamburger 2005). In the area of romantic relationships, the suggestion is to give special weight to variables related to phantom emotions, as the latter seem to be of prime value in determining interpersonal attraction and the maintenance of relationships. Related to online relationship-formation, phantom emotions might be a crucial mediator in the study of cybersex owing to the well-documented phenomenon of obsession with this activity (e.g. Levine 1998; Cooper *et al.* 2000; Mantovani 2001b; Young 2001; Barak and Fisher 2002; Cooper *et al.* 2002; Griffin-Shelley 2003). In this regard, a powerful, perhaps pathological need for pleasure and

gratification projected onto virtual partners might provide a theoretical framework for explaining this abnormal behaviour and subsequently treating it. Such a new framework might introduce a change in the focus of quite a few approaches. In the same way, the concept of phantom emotions is of great importance for Internet-based counselling and therapy: the possibility of harnessing the development of these emotions in the context of the client–therapist exchange offers an effective therapeutic process related to transference, thus contributing to the establishment of therapeutic alliance and impact (Cook and Doyle 2002; Barak and Bloch 2006; Barak, 2007). Integrating the concept of phantom emotions into such research attempts could enhance understanding of processes that are essential for establishing online therapeutic contact. The concept could thus become a successful vehicle for moderating therapeutic change (Hsiung 2002; Barak 2004; Rochlen *et al.* 2004a), perhaps interacting with the influence of the level of emotionality on online therapy in general (Rochlen *et al.* 2004b).

Phantom emotions might become a central concept in developing and examining advanced online assessments, too: the differential personal experiencing of phantom emotions in online situational tests may be indicative of a subject's psychological needs and wishes, thus reflecting personality-relevant factors (Barak and Buchanan 2004). Phantom emotions might also be exploited as an important factor for studying online shopping and marketing, which are obviously affected by user's emotions (Mummalaneni 2005), for possible effects on online shopping behaviour (Dholakia and Chiang 2003), rather than concentrating on system and practical factors. Phantom emotions may possibly be identified as a central moderating variable in studying the addiction to and effects of online games, especially by those users who develop a powerful immersion in virtual presence (Griffiths and Wood 2000; Williams and Skoric 2005); this variable may not only contribute to understanding important psychological processes in this regard but also help in developing prevention programs. The concept of phantom emotions could be of significant value in the study of still other behaviours on the Internet that involve interpersonal relationships and personal emotions.

In turn, the present view might contribute to extending an understanding of prevailing concepts of love, attraction, hate and anger in offline environments. In a broader sense, the current conceptualization could be integrated into theoretical attempts to apply social models of cyberspace (e.g., McKenna and Bargh 1999; Rafaeli *et al.* 2005).

Introducing the idea of the phantom basis of online emotions makes it advisable, if not necessary, for researchers to employ perceptual and other cognitive measurements in attempting to give a more valid explanation of human experiences in cyberspace. This is being advised in order to emphasize the crucial nature of the *psychological* factor to an understanding of online behaviours – a factor commonly missed by communication researchers (and those who arrive from related disciplines, such as media studies and journalism, computer sciences, or information systems). An important example in this regard was provided by LaRose *et al.* (2001b) when investigating the alleged link between Internet use and depression. These researchers found that self-efficacy and expectations of stress had significant moderating effects in predicting depressive moods, thus adding a meaningful input into the understanding of prior research in this important area, which has intensively occupied numerous researchers and writers. Consistent with the present view, too, psychological research might have to focus more closely on intra-psychic experiences – rather than solely on overt behaviours or externally observed environmental factors – in order to deepen understanding of the phenomena in question. It might be interesting to pursue psychophysiological brain research in a similar manner to the investigation of the experience of presence in virtual reality (Insko 2003); and, consistent with recent findings concerning brain activity as reflecting emotional (i.e., empathy; Singer *et al.* 2004), cognitive (i.e., placebo effects; Wager *et al.* 2004) and social (Pelphrey *et al.* 2004) phenomena, also to investigate the appearance and correlates of online phantom emotions in brain activity. In another direction, it might prove worthwhile to adopt the current view in conceptualizing and studying online trust in the commercial realm. In this context, it might prove useful to include inner-user psychological processes – consistent with

the current conception – to understand, explain and predict users' trust and disclosure on commercial sites and online shopping. This view could add a significant contribution to modifying users' behaviours, much beyond such traditional variables as demographics, personal traits, or culture (see Chapter 13). Similarly and in a broader sense, the current approach may contribute significantly to the study of interpersonal trust in cyberspace (Chapter 4, this volume), in online advice and online information (Chapter 22, this volume) and in online negotiations (Naquin and Paulson 2003), as well as other types of online interpersonal behaviours as recently proposed and explored by Forgas, East and Chan (2007).

The present view has significant implications for various aspects of managing and exploiting online environments and online communication channels. Although existing education and prevention programmes highlight the effects of anonymity, invisibility, impersonation and fabrication on the Internet (Dombrowski *et al.* 2004), they refrain from including the important, perhaps dominant, factors that relate to users' *inner processes*, especially the prevailing effect of phantom emotions, as characterizing and significantly affecting online communication and interpersonal contacts. Similarly, psycho-educational programs published on the Internet contain pieces of relevant information and cautions, but they exclude the major impact of emotions – that is, of phantom emotions – that are generated by misleading and frequently malicious information and messages (e.g., GetNetWise at <http://www.getnetwise.org>; SafeKids.Com at <http://www.safekids.com>; and NetSmartz at <http://www.netsmartz.org>). The current approach, however, argues that inner emotional processes, their determinants and a user's self-awareness of them are central to the self-regulation of online behaviour. Similarly, more attention may have to be given to phantom emotions in relation to therapeutic issues when treating problematic Internet use – i.e., 'Internet addiction' (Leung 2004), compulsive online sex consumption (Delmonico *et al.* 2002), or compulsive online gambling (Griffiths and Cooper 2003). It seems that current theoretical views of these areas (e.g., Morahan-Martin 2005) could gain construct validity by introducing the phantom emotion factor into their models.

This would mean placing greater emphasis on the user's internal awareness and control of cognitive processes relating to unfounded fantasies, as well as perhaps to related psychodynamic processes, in order to help alter problematic behaviours rather than concentrating on stimulus–response behavioural approaches, which might miss crucial components.

Further research may shed more light on the empirical status of these implications and postulates. Acceptance of the proposed conception will contribute to the discipline of psychology by advancing understanding of emerging behaviours in what might be considered a new era for psychology (Barak 1999; Sassenberg *et al.* 2003). The current conception also concurs with Bargh and McKenna's (2004) notion – parallel to the elevated self-expression and extended unclarity typical of online communication – that 'one's own desires and goals regarding the people with whom one interacts has been found to make a dramatic difference in the assumptions and attributions one makes within that informational void' (2004: 586). In other words, when *a person's own mind* plays a central role in constructing his or her cognitions, self-produced emotions are invited and, subsequently, prevail.

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