

## Self-disclosure, Privacy and the Internet

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In this chapter, we examine the extant research literature on self-disclosure and the Internet, in particular by focussing on disclosure in Computer-Mediated Communication (CMC) and to web-based forms – both to surveys and in e-commerce applications. We also consider the links between privacy and self-disclosure, and the unique challenges (and opportunities) that the Internet poses for the protection of privacy. Finally, we propose three critical issues that unite the ways in which we can best understand the links between privacy, self-disclosure and new technology: trust and vulnerability, costs and benefits and control over personal information.

Central to the chapter is the premise that self-disclosure online is a paradox: while visual anonymity and increased distance might heighten disclosure in one context (e.g. in person-to-person interactions or in online research), they do not seem to have the same effect when people are asked for personal information from commercial websites, usually because of a combination of privacy concerns, lack of trust and concern about how personal information will be used (Hoffman, Novak and Peralta, 1999; Metzger, 2004). Therefore, we propose that the wider context in which self-disclosure is given, or required, must be considered in order to develop a more defined picture of online behaviour across situations.

## What is Self-Disclosure?

Self-disclosure is the telling of the previously unknown so that it becomes shared knowledge, the “process of making the self known to others” (Jourard and Lasakow, 1958, p. 91). This shared knowledge might exist between pairs of people, within groups, or between an individual and an organisation. It has a variety of purposes, in part dependent on the context in which disclosure occurs. For instance, with dyads, particularly romantic relationships, it serves to increase mutual understanding (Laurenceau, Barrett and Pietromonaco, 1998), and builds trust by making the discloser increasingly vulnerable (emotionally or otherwise) to the other person (Rubin, 1975). Since self-disclosure is often reciprocated, within a dyad disclosure, it often serves to strengthen the ties that bind people in romantic or friendship-based relationships (Jourard, 1971).

Disclosure within groups can serve to enhance the bonds of trust between group members, but it can also serve to legitimize group membership and strengthen group identity. For instance, the admission of a negative identity (e.g. ‘I am an alcoholic’) within a shared identity group serves to both increase trust by revealing a stigmatized identity, as well as acting as a membership card for a particular group (Galegher, Sproull and Kiesler, 1998). Personal growth may be an outcome of honest self-disclosure (Jourard, 1971), and in a study reported by Pennebaker, Kiecolt-Glaser and Glaser (1988), participants assigned to a trauma-writing condition (where they wrote about a traumatic and upsetting experience for four days) showed immune system benefits, compared to a non-trauma writing group. Disclosure in this form has also been associated with reduced visits to medical centres and psychological benefits in the form of improved affective states (Smyth, 1998). For people using the Internet

to talk about their problems (or to publish weblogs), their activities may well have unforeseen, positive, health and psychological benefits.

Finally, disclosure between an individual and an organisation can serve authentication purposes – for instance, to establish identity, allow authentication of a claim to identity and to enable an organisation to recognise you in the future in order to personalize its offerings to you. Organisations might also ask for personal information for marketing purposes – for instance, when registering to access a website or joining an online community. Of course, organisations, in the form of researchers, might also ask for personal information in the name of academic research.

New technology, and in particular the Internet, might well change the demands upon people to disclose personal information, as well as the possible implications of such disclosure. For instance, disclosing personal information to another person online might not involve the increased vulnerability that usually follows self-disclosure of personal information offline (Ben-Ze'ev, 2003). Organisations might also demand more information in the name of authentication (although this need not always be personal information). The linking of databases, and ubiquity of data-collection devices, also makes it more likely that personal information is treated as a 'commodity' (Garfinkel, 2000) rather than as something 'owned' by an individual.

### Measuring self-disclosure

Within person-to-person and person to group interactions, self-disclosure has tended to be studied using either content analysis or self-report. In the case of content analysis, the issue of what constitutes self-disclosure, and how it is scored, is

particularly important. For example, one option would be to count the number of instances within a conversation in which a person discloses information about themselves. However, there are a number of problems with this approach. First, it is not always clear what constitutes an act of self-disclosure – for instance, to express an opinion may well be classified in some contexts, but not in others. Second, self-disclosure can often only be properly understood in terms of the ongoing interaction – for instance, does one count answers to a specific question (e.g. ‘how old are you’) as self-disclosure, or only spontaneous occurrences of disclosure (see Antaki, Barnes and Leudar, 2005 for a recent discussion of this issue). Moreover, given the dynamics of reciprocity, it may not even be possible to count occurrences of spontaneous disclosure as independent of the conversational dynamic. For these reasons, it is usual to treat discussions between people as a single unit of analysis (Kenny and Judd, 1988).

Finally, not all self-disclosure is equal – disclosing your season of birth is not the same as disclosing your age, which is not the same as disclosing your sexual fantasies. One option is to use a three-layer categorization scheme proposed by Altman and Taylor (1973) to guide the content analysis of depth. Altman and Taylor suggest that disclosure can be categorized into either peripheral, intermediate, and core layers. The peripheral layer is concerned with biographic data (e.g. age), the intermediate layer with attitudes, values, and opinions and the core layer with personal beliefs, needs, fears, and values. Joinson (2001b) instead use a 7-point Likert scale with which two scorers allocated the degree to which an utterance ‘revealed vulnerability’. However, Antaki *et al.* (2005) argue that the act of disclosure needs to take into account the interactional context rather than simply be scored on a checklist. For instance, the phrase “I’m the worlds worst cook” could be disclosure, a plea for

help or self-deprecation. Without the content, argue Antaki *et al.*, it is not possible to be certain.

Alternatively, lists of topics can be used to score intimacy – although again there are a number of problems with their application in practise to communication research (see Tidwell and Walther, 2002, footnotes).

Self-report measures of disclosure have been used successfully, for instance to compare levels of disclosure in face-to-face (FtF) and online relationships, or to link marital satisfaction with disclosure within the relationship. For instance, Parks and Floyd (1996) asked their participants to report the level of self-disclosure in their Internet relationships using self-report (e.g. “I usually tell this person exactly how I feel” and low scores on “I would never tell this person anything intimate or personal about myself”). However, the same problems – a lack of context – arise for such self-report measures too.

Measures of dispositional self-disclosure can also be used. For instance, within the International Personality Item Pool (‘IPIP’) the RD3 subscale of items ‘similar to the Temperament and Character Inventory (TCI)’ has 10 items such as “Am open about myself to others” (positive coding) and, “Reveal little about myself” (negative coding) to measure general self-disclosure. However, it is not currently clear how such personality type measures might interact with different media, or indeed with people’s behaviour within a specific interaction.

Self-disclosure outside of person-to-person and group interactions can also be measured in a number of different ways. One system is to count the number of words typed into text boxes in response to a personal or sensitive question, and to rate those responses by their intimacy or depth (e.g. Moon, 2000; Joinson, 2001b). Joinson (2005) also describes the use of non-response as a measure of self-disclosure in

studies. There are two main ways in which non-response can be operationalized in survey methodology and e-commerce. The first is non-response – either submitting a default selection, or where there is no default option, submitting no response. A second is to add an option that allows participants to select ‘I prefer not to answer’ (Buchanan, Joinson and Ali, 2002; Knapp and Kirk, 2003). The use of ‘I prefer not to answer’ as a response option to a sensitive question is methodologically similar to the provision of a ‘no opinion’ response in attitudinal surveys. While it has been argued that the provision of ‘no opinion’ choices may increase satisficing in attitude surveys (Holbrook, Green, and Krosnick, 2003), there is little reason to assume that a similar process would operate in the use of ‘I prefer not to answer’ responses to sensitive personal questions. Indeed, Joinson, Woodley and Reips (in press) report that the provision of ‘I prefer not to answer’ options in a salary question may improve data quality by reducing the number of non-responses or default selections. In our own research (in preparation) we established that people are more likely to use an ‘I prefer not to say’ option when faced with a sensitive rather than non-sensitive question, and that priming participants for online privacy significantly increases the use of ‘I prefer not say’ as an option to sensitive questions.

Finally, self-disclosure can be measured using statistical techniques (e.g. the randomised response technique; Musch, Broder and Klauer, 2001). In the randomised response technique, participants are asked to answer a sensitive question either truthfully or with a pre-specified answer, depending on the result of a random event such as a coin toss. So, for instance, the question might be, “do you lie to your partner about anything important?” Participants are asked to toss a coin, and if it is heads, they tell the truth, if it is tails they say ‘yes’ regardless of the truthful answer. Using statistical probabilities, a population estimate for a behaviour can be found, without

knowing if any one individual told the truth or simply followed the instructions for ‘tails’.

### Self-disclosure and the Internet

A rapidly increasing body of experimental and anecdotal evidence suggests that CMC and general Internet-based behaviour can be characterised as containing high levels of self-disclosure. For instance, Rheingold (1993) claims that new, meaningful relationships can be formed in cyberspace because of, not despite, its limitations. He further argues that “the medium will, by its nature ... be a place where people often end up revealing themselves far more intimately than they would be inclined to do without the intermediation of screens and pseudonyms”. Similarly, Wallace (1999) argues that “The tendency to disclose more to a computer ... is an important ingredient of what seems to be happening on the Internet” (p. 151). Self-disclosure has been studied in a number of different settings using computers. For instance, Parks and Floyd (1996) studied the relationships formed by Internet users. They found that people report disclosing significantly more in their Internet relationships compared to their real life relationships. Similarly, in their study of ‘coming out on the Internet’, McKenna and Bargh (1998) argue that participation in on-line newsgroups gives people the benefit of “disclosing a long secret part of one’s self” (p. 682). Chesney (2004), in a small scale study of online diaries, reported high levels of disclosure of sensitive information, with half of his participants claiming to never withhold information from their diaries.

In the series of studies reported by Joinson (2001a), the level of self-disclosure was measured using content analysis of transcripts of FtF and synchronous CMC discussions (study one), and in conditions of visual anonymity and video links during

CMC (study two). In keeping with the predicted effect, self-disclosure was significantly higher when participants discussed using a CMC system as opposed to FtF.

In the second study, incorporating a video link while the participants discussed using the CMC program led to levels of self-disclosure similar to the FtF levels, while the comparison condition (no video link) led to significantly higher levels of self-disclosure.

These two studies together provide empirical confirmation that visually anonymous CMC tends to lead to higher levels of self-disclosure. The results of these studies also suggest that high levels of self-disclosure can effectively be designed out of an Internet interaction (e.g. through the use of a video link or accountability cues (Joinson, 2001a, study 3), as well as encouraged.

Further empirical confirmation of increased self-disclosure during CMC comes from the work of Tidwell and Walther (2002). They proposed that heightened self-disclosure during CMC may be due to people's motivation to reduce uncertainty. According to Uncertainty Reduction Theory (URT; Berger and Calabrese, 1975), people are motivated to reduce uncertainty in an interaction to increase predictability. In FtF interaction, uncertainty can be reduced through both verbal and non-verbal communication and cues. Tidwell and Walther hypothesise that during CMC, uncertainty reducing behaviours are text-based only, including increased levels of self-disclosure and question asking. To test this, Tidwell and Walther recruited 158 students to discuss in opposite sex pairs with an unknown partner using a CMC system or FtF. The subsequent conversations were content analysed for disclosure using the breadth and depth indices developed by Altman and Taylor (1973; see above for a description).



Tidwell and Walther found that those in the CMC condition displayed higher levels of both question asking and self-disclosure compared the FtF condition. The questions asked by CMC discussants were also more probing and intimate than those asked by those talking FtF, while both the questions and disclosure by FtF interactants tended to be more peripheral than those in the CMC condition. Tidwell and Walther conclude that the limitations of CMC encourage people to adapt their uncertainty reducing behaviours – they skip the usual asking of peripheral questions and minor disclosure, and instead opt for more direct, intimate questioning and self-disclosure.

Surveys and research administered via the Internet, rather than using paper methodologies, have also been associated with reductions in socially desirable responding (Frick, Bächtiger and Reips, 2001; Joinson, 1999), higher levels of self-disclosure (Weisband and Kiesler, 1996) and an increased willingness to answer sensitive questions (see Tourangeau, 2004).

In a similar vein, survey methodology techniques that tend to reduce human involvement in question administration also increase responses to sensitive personal questions. For instance, compared to other research methods, when data collection is conducted via computer-aided self-interviews (where participants type their answers on to a laptop) people report more health related problems (Epstein, Barker and Kroutil, 2001), more HIV risk behaviours (Des Jarlais, Paone, Milliken, Turner, Miller, Gribble, Shi, Hagan, and Friedman, 1999), more drug use (Lessler, Caspar, Penne and Barker, 2000), and men report less sexual partners, and women more (Tourangeau and Smith, 1996). Medical patients tend to report more symptoms and undesirable behaviours when interviewed by computer rather than FtF (Greist, Klein and VanCura, 1973). Clients at a STD clinic report more sexual partners, more previous visits and more symptoms to a computer than to a doctor (Robinson and

West, 1992). Ferriter (1993) found that pre-clinical psychiatric interviews conducted using CMC compared to FtF yielded more honest, candid answers. Similarly, automated or computerized telephone interviews, compared to other forms of telephone interviewing, lead to higher levels of reporting of sensitive information (see Lau, Tsui and Wang, 2003; Tourangeau, 2004).

Conversely, methods that increase the social presence of the surveyor (e.g. by using photographs of the researcher) have been predicted to lead to a reduced willingness to answer sensitive questions (Tourangeau, Couper and Steiger, 2003), although the findings of Tourangeau *et al.* were equivocal. However, Sproull, Subramani, Kiesler, Walker, and Waters (1996) found that participants “present themselves in a more positive light to the talking-face displays” (p. 116) than to text-only interfaces. Joinson, Woodley and Reips (in press) report that although personalizing the research experience leads to higher response rates to a self-administered survey, it also reduces self-disclosure.

Within the Human-Computer Interaction (HCI) literature, the assumption seems to be that people will avoid disclosing information to commercial web services (Metzger, 2004) due to their privacy concerns (Jupiter Research, 2002). An online survey stated that the three biggest consumer concerns in the area of on-line personal information security were: companies trading personal data without permission, the consequences of insecure transactions, and theft of personal data (Harris Interactive, 2002). For example, Hoffman *et al.* (1999) report that almost 95% of Internet users declined to provide personal information when requested to by a web-site, and over 40% provided false demographic information when requested. Quittner (1997) reports that 41% of survey respondents would rather exit a Web page than reveal personal information. Clearly then, open self-disclosure is not a universal experience on the

Internet: for commercial organisations, consumers are often less than forthcoming, usually because of a combination of privacy concerns, lack of trust and concern about how personal information will be used (Hoffman *et al.*, 1999; Metzger, 2004). For instance, Olivero (2001) studied the willingness to disclose information about the self to a commercial organisation, and manipulated the level of trustworthiness of the organisation, whether a financial reward was offered for disclosure and the level of intrusiveness of the questions. She found that the level of trust was associated with participants' willingness to disclose to highly intrusive questions, but that an awareness of data mining / privacy concerns moderated this effect of trust. Andrade, Kaltcheva and Weitz (2002) conducted a similar study by examining three approaches to encourage self-disclosure of personal information online – the completeness of a privacy policy, the reputation of a company, and the offer of a reward. They found that the completeness of privacy policy and reputation of the company reduce the level of concern over self-disclosure while the offer of a reward heightens concern.

However, there are a number of 'counter surveys' and empirical evidence suggesting that there is a significant discrepancy between privacy principles and privacy practices. Very few individuals actually take any action to protect their personal information, even when doing so involves limited costs (Berendt, Gunther and Spiekerman, 2005; Jenson, Potts and Jenson, 2005) i.e. there is a dichotomy between stated attitudes and actual behaviours of people in terms of their protection of personal information.

### Models of self-disclosure online

Explanations for high levels of self-disclosure in person-to-person CMC have tended to focus on the psychological effects of anonymity: "This anonymity allows

the persecuted, the controversial, and the simply embarrassed to seek information--and disseminate it--while maintaining their privacy and reputations in both cyberspace and the material world” (Sobel, 2000, p.1522).

Theoretically, it has been argued that anonymity in CMC works by, replicating a ‘strangers on the train’ experience (Bargh, McKenna and Fitzsimons, 2002), promoting private self-awareness and reducing accountability concerns (Joinson, 2001a), creating a need for uncertainty reduction (Tidwell and Walther, 2002) or a combination of the media and the process of interaction itself (Walther, 1996).

Similarly, explanations for increased self-disclosure to online surveys and web forms have also tended to stress anonymity (Joinson, 1999), alongside the reduced social presence (and judgement) of the researcher (Tourangeau, 2004), reduced vulnerability (Moon, 1998) and increased privacy of the research environment (Tourangeau, 2004). Once privacy is reduced, or social presence increased, self-disclosure tends to be reduced (Joinson, Woodley and Reips, in press).

However, explanations for people’s unwillingness to disclose personal information to e-commerce services invariably stress people’s privacy concerns (e.g. Hoffman *et al.* 1999), in particular issues surrounding the level and type of information collected, and people’s lack of knowledge about how it may be used in the future, or control over that use (Metzger, 2004).

These differing approaches to understanding disclosure and non-disclosure of personal information illustrate the paradox of self-disclosure on the Internet we introduced at the start of this chapter. On the one hand, the Internet provides an environment in which people can express themselves with relative immunity via pseudonyms. But, often to access these services and sites, they need to disclose high levels of personal information during the registration process.

Within the privacy literature, this paradox is relatively easy to solve – the provision of information about the self is treated quite separately from the use of privacy or pseudonymity to express one’s inner desires. However, it is rare for CMC self-disclosure research to explicitly consider privacy, in particular the multi-factor approaches to privacy discussed in the socio-legal literature.

Within e-commerce, there are further paradoxes which may be solved by looking at both the literature on interactional person-to-person disclosure and the privacy literature concurrently. For instance, there are occasions when you need to disclose a lot of personal information (e.g. purchasing online), but other factors (e.g. lack of social presence) make such privacy concerns less pressing. The answer to this paradox is that it is the author to whom one is disclosing that is critical – if one trusts the recipient of the personal information, then one can act with relative freedom in the pseudonymous world such disclosure purchases. Only by considering the wider context can such seemingly paradoxical impacts of new technology on personal disclosure be fully understood.

This interpretation also strongly suggests that any explanation of self-disclosure online that relies solely on media effects (i.e. visual anonymity) is mistaken. Disclosure, while often ‘given away’ is also something that is carefully considered within the context of an ongoing interaction and wider context – regardless of whether that interaction is interpersonal or human-computer. We would suggest that a wider theoretical scope is needed – not only is it important to consider the particular context of an interaction, but also how the person accessed that environment in the first place. For instance, while the use of pseudonyms may enable expressive freedom on a discussion board, we would also ask how access was gained to the board, what registration process was in place, what records of postings are kept

remotely and locally and so on? Without this knowledge, one is forced to assume that people somehow dropped into an online environment out of the sky, rather than as a motivated act (see Joinson, 2003).

While concern about the privacy implications of new technology are nothing new (e.g. UK Home Office, 1972), the development and linking of databases with biometrics, and the tension between the need for identification, protection of privacy and full participation in the e-society (Raab, Bellamy, Taylor, Dutton and Peltu, 1996) makes an understanding of the relations between privacy and the disclosure and use of personal information critical. In the next section of this chapter, we consider what privacy is, how the Internet and new technologies threaten privacy, and the implications of privacy for understanding self-disclosure within an interaction.

### What is Privacy?

There have been many of attempts at definitions of privacy. In a legal context, privacy is largely synonymous with a 'right to be let alone'. However, others have argued that privacy is only the right to prevent the disclosure of personal information. Within psychological literature both Westin's and Altman's theories figure prominently in the major reviews of privacy in the 1970s (e.g. Westin, 1967; Altman, 1975). Since then, many researchers have referred to the difficulties involved in trying to produce a definition (e.g. Burgoon et al., 1989) and despite various attempts to create a synthesis of existing literature (e.g. Parent, 1983; Schoeman, 1984) a unified and simple account of privacy has yet to emerge.

The highly complex nature of privacy has resulted in an alternative way of defining it - through its various dimensions. Burgoon et al., (1989) distinguish four dimensions of privacy and define it using these dimensions as "the ability to control

and limit physical, interactional, psychological and informational access to the self or one's group" (Burgoon et al., 1989, p.132). Each dimension distinguished by Burgoon et al., is briefly described below with some examples.

### *1. The Physical Dimension*

Physical privacy is the degree to which a person is physically accessible to others. This dimension is grounded within the human biological need for personal space. Examples of violations to physical privacy include: surveillance, entry into personal space and physical contact.

### *2. The Interactional Dimension*

Interactional (or Social /Communicational) privacy is an individual's ability and effort to control social contacts (Altman, 1975). Burgoon (1989) summarises the elements of this dimension as control of the participants of, the frequency of, the length of, and the content of an interaction. Non-verbal examples of violations to social privacy include close conversational distance and public displays of affection. Verbal examples include violations of conversational norms (e.g. commenting on mood or appearance) and initiating unwanted conversation.

### *3. The Psychological Dimension*

Psychological privacy concerns the ability of human beings to control cognitive and affective inputs and outputs, to form values, and the right to determine with whom and under what circumstances thoughts will be shared or intimate information revealed. As such, psychological privacy can either develop or limit human growth. Examples of violations to psychological privacy include psychological assaults through name-calling and persuasion.

### *4. The Informational Dimension*

Informational privacy relates to an individual's right to determine how, when, and to what extent information about the self will be released to another person (Westin, 1967) or to an organisation. According, Burgoon et al., (1989), this dimension is closely related to *psychological privacy* however, the control differs from the individual self-disclosure associated with psychological privacy because it is partly governed by law/custom and as it often extends beyond personal control. Examples of violations to informational privacy include going through another person's mail and sharing personal information with others.

DeCew (1997) also reflects the multidimensional nature of privacy in her definition. However DeCew distinguishes only three dimensions:

1. *The Informational Dimension*

Informational privacy includes personal information for example, personal lifestyle, finances, medical history, and academic achievement. It may be viewed by an individual as information not to be divulged and to be guarded by any recipients of that information. The protection of informational privacy shields individuals from intrusions as the well as fear of threats of intrusions and it also affords individuals control in deciding who has access to the information and for what purposes.

2. *The Accessibility Dimension*

Accessibility privacy overlaps with *informational* privacy in cases where acquisition or attempted acquisition of information involves gaining access to an individual. However, it also extends to cases where physical access is at stake.



### 3. *The Expressive Dimension*

Expressive privacy “protects a realm for expressing ones self-identity or personhood through speech or activity. It protects the ability to decide to continue or to modify ones behaviour when the activity in question helps define oneself as a person, shielded from interference, pressure and coercion from government or from other individuals” (DeCew, 1997, p77). In this way, expressive privacy restricts external social control over choices about lifestyle, and improves internal control over self-expression and the ability to build interpersonal relationships.

Using these multidimensional approaches to define privacy results in some overlap of the features between each dimension. For example, within Burgoon’s dimensions some features of informational privacy overlap with psychological privacy, and some features of social privacy overlap with physical privacy. Within DeCew’s dimensions there is some overlap between accessibility and informational privacy, and expressive privacy is conceptually linked with both of these dimensions. In addition, there is also some overlap between Burgoon’s and DeCew’s dimensions. For example, the informational dimension appears in both definitions and Burgoon’s physical and social dimensions appear to map onto DeCew’s accessibility and expressive dimensions respectively.

Of direct relevance to this chapter are the dimensions of informational and expressive privacy. Central to these dimensions are the desire to keep personal information out of the hands of others, or in other words *privacy concern* (Westin, 1967), and the ability to connect with others without interference. In a systematic discussion of the different notions of privacy, Introna and Pouloudi (1999) developed

a framework of principles that explored the interrelations of interests and values for various stakeholders where privacy concerns have risen. In this context, concern for privacy is a subjective measure—one that varies from individual to individual based on that person's own perceptions and values. In other words, different people have different levels of concern about their own privacy.

One scheme for categorising the different levels of privacy concerns is the Westin privacy segmentation (Harris and Associates Inc. and Westin, 1998). The Harris Poll is a privacy survey conducted by telephone across the United States among approximately 1,000 people. This survey has been conducted regularly since 1995 and divides respondents into one of three categories depending on their answers to three statements. The three categories of respondents are:

1. *The Privacy Fundamentalists,*

Privacy fundamentalists view privacy as an especially high value which they feel very strongly about. They tend to feel that they have lost a lot of their privacy and are strongly resistant to any further erosion of it. Currently about a quarter (35%) of all adults are privacy fundamentalists (Computerworld, May 16, 2005).

2. *The Privacy Pragmatists*

Privacy pragmatists also have strong feelings about privacy. They are very concerned to protect themselves from the misuse of their personal information by other people and organisations. They weigh the value to them and society of providing personal information and they are often willing to allow people to have access to, and to use, their personal information - where they understand the reasons for its use, can see the benefits for so doing and when they believe care is taken to prevent the misuse of this information. Currently around

approximately 55% of all adults are privacy pragmatists (Computerworld, May 16, 2005).

### *3. The Privacy Unconcerned*

The privacy unconcerned have no real concerns about privacy or about how other people and organisations are using information about them.

Approximately 10% of all adults are privacy unconcerned (Computerworld, May 16, 2005).

However, although levels of privacy concern might differ between people, the requirement for some degree of privacy as a pre-requisite for intimacy may be universal (Fried, 1970). New technology, and in particular the Internet, pose unrivalled possibilities for intimate behaviour at the same time as maintaining privacy (Ben-Ze'ev, 2003). However, they also pose unrivalled threats to people's privacy as will be described below.

### Privacy and the Internet

There are numerous cases of the clash between privacy and new technology – how these technologies allow intrusions into private, enclosed spaces, eroding the distinction between public and private space and therefore compromising the very idea of private space. For example, at the end of last year, a body scanning machine was introduced in an airport in the UK. This x-ray machine produces “naked” images of passengers enabling any hidden weapons or explosives to be discovered. However, this introduction of this technology raised concerns about privacy both among travellers and aviation authorities (The Sunday Times, November 7, 2004).

The concept of privacy has also been applied to the Internet (e.g. Cranor, 1999). The increased use of computers and of the Internet now fills many parts of people's lives including: online shopping, the sharing of documents and various forms of online communication. It is this increased use of the Internet which raises concerns about privacy, in particular, those described above under informational privacy. There are concerns that the Internet seems to erode privacy (Rust , Kannan and Peng, 2002) and that offline privacy concerns are magnified online (Privacy Knowledge Base, 2005). Indeed, the subject of online privacy has been appearing in newspaper articles regularly over the last few years (e.g. see The Times, 3 December, 2001; The Guardian, April 26, 2004).

Personal information is fast becoming one of the most important ethical issues of our information age (Milberg , Burke and Smith, 1995): personal information has become a basic commodity and users' online actions are no longer simply actions but rather, data that can be owned and used by others. Advances in technology and the increased use of the Internet have changed the ways in which information is gathered and used. A wide variety of information data is now collected with increasing frequency and in different contexts, making individuals become ever more transparent. The costs of obtaining and analysing this are also decreasing with the advances in technology. However, the value of the users' information which is collected is increasing. "At no time have privacy issues taken on greater significance than in recent years, as technological developments have led to the emergence of an 'information society' capable of gathering, storing and disseminating increasing amounts of data about individuals" (Schatz Byford, 1996, p.1).

There are a number of specific threats to online privacy. For example, the impact of 'ubiquitous' computing (Weiser, 1988) means that we leave data footprints

in many areas of our lives that were previously considered 'offline'. The extremely rapid development of computing power, in terms of greater processing speed, increased storage capacity, wider communication connectivity and lower machine size all impact on privacy (Sparck-Jones, 2003). These rapid advances mean that information can be efficiently and cheaply collected, stored and exchanged - even data which may be deemed sensitive by the individuals concerned. Information that is drawn from the physical world is harboured in electronic databases, which give these records permanence malleability and transportability that has become the trademark of technology. As such, massive databases and Internet records of information about individual financial and credit history, medical records, purchases and so on exist.

Sparck-Jones (2003) labels a number of specific properties of the information collected which have consequences for privacy: *Permanence* - once recorded, information rarely disappears. As such, fine-grained, searchable, persistent data exists on individuals and there are sophisticated, cheap, data-mining devices can also be used to analyse this information; *Volume* - the ease with which information is now recorded using technology results in huge data sets. Furthermore, storage is cheap, therefore large volumes of information sets can exist indefinitely; *Invisibility* - all information collected seems to exist within an opaque system and so any information collected may not be 'visible' to whom it relates. Even if information collected is available to a person they may not be able to interpret it due to the use of incomprehensible coding; *Neutrality* - the ease with which information can be collected means that any qualifying information may be lost. So information may be absorbed regardless of its metadata. i.e. there are no distinctions between intimate, sensitive information and non-sensitive information; *Accessibility* - there are a number of tools for accessing information meaning that any information collected can

possibly be read by any number of people. The ease with which information can be copied, transferred, integrated and multiplied electronically further increases this accessibility; *Assembly* - there are many effective tools for searching for and assembling and reorganising information from many quite separate sources; *Remoteness* - information collected is usually both physically and logically away from the users to whom it refers. However, this information can be accessed and used by people who the user does not know.

Each of the above features affects privacy and their effect in combination is even greater. Although massive data collection and storage is possible in many environments, the online privacy problem is further exacerbated by the very structure of the Internet and its additional feature of *connectivity*. The Internet allows for interactive two-way communication and is woven into people's lives in a more intimate way than some other media as it connects people with places and people with people. Accordingly it poses unique information privacy threats that differ from issues previously addressed by research (e.g. Smith, Milberg and Burke, 1996) therefore, making information collection, sharing and so on even easier.

There are also *benefits* to the technological advances described, such as personalised services, convenience and efficiency. In this way, the collection of personal information can be considered a 'double edged sword' (Malhotra, Kim and Agarwal, 2004). Users can trade off providing valuable information about them to take advantage of benefits. For example, providing personal details and credit card information in order to have the convenience of completing an online transaction. Jupiter Research (2002) have found evidence that even privacy concerned individuals are willing to trade-off privacy for convenience or to bargain the release of very personal information in exchange of relatively small rewards. However, consumer

concern over disclosing personal information is growing as they realised that data about their internet behaviours is being collected without their knowledge and agreement. These privacy concerns can ultimately reduce the personalisation benefits that companies can deliver to consumers. The question is whether the benefits of the advances in technology and the use of the Internet are diminished by endangering privacy.

### Linking models of privacy and CMC

In introducing this chapter, we noted that privacy and self-disclosure are a paradox. Privacy is a prerequisite for disclosure (after all, if there is nothing private, there is nothing to disclose). And yet, the process of disclosure serves to reduce privacy. The Internet may, in some instances, serve to solve this paradox – disclosure and intimacy can be achieved without concurrent increases in vulnerability or losses of privacy (see Ben-Ze'ev, 2003). But, this introduces a further paradox – the Internet, and new media in general, have tended to erode privacy through, amongst others, the processes we outline above. Often the impression of privacy is a mirage – high levels of personal information are held by a number of gatekeepers – whether it be through the process of registration, caches and logs kept on various servers or even locally based records. It therefore becomes critical to understand the role of these gatekeepers to understand fully disclosure of personal information online. We propose that as well as looking at the micro-level impacts of the media environment on disclosure, one also needs to look at the macro-level – the wider context in which the micro-level behaviour is enacted.

## Trust and disclosure

Trust is a critical issue in both FtF and online disclosure of personal information. By disclosing information, we are making ourselves vulnerable – one reason it is often easier to disclose to strangers than to close friends and family (Rubin, 1975). This applies equally to disclosure to web-based forms – for instance, Moon (1998) found that people are more willing to disclose personal information to geographically distant servers – presumably because the vulnerability of doing so is reduced. In e-commerce, the issue of trust is also critical – people will generally not disclose personal information to a web-service that they do not trust (Hoffman *et al.* 1999).

However, many attempts to establish trust between people and within groups rely on methods that increase the ‘media richness’ of the interaction – for instance, by introducing video, audio or photographs (see Olsen, Zheng, Bos, Olson, and Veinott, 2002; Riegelsberger, Sasse and McCarthy, this volume). Quite apart from the substantial problems with media richness approaches to understanding online behaviour (see Walther, 1996), introducing cues that are supposed to improve trust may well serve to reduce privacy in an interpersonal context.

However, in some instances trust will be critical. For instance, if you register to a discussion board, dating site or other web-based service, you will commonly be required to disclose to the owner of the site your real name, age, location / ZIP or Postal Code, and e-mail address. It is not uncommon to also be asked questions about salary, occupation, marital status and other marketing related queries. In the cases of discussion boards and dating sites, this disclosure of personal information purchases access to a pseudonymous interactive environment in which participants can seek help, be intimate or just play with little concern for the repercussions in their offline



lives. In this situation, expressive privacy has been obtained through the loss of informational privacy to a third party. Critically, we would argue that it is this separation between the location of the expressive environment, and the third party, that is important. Obviously too, one would also expect that for this bargain to work, the third party must be trustworthy.

For trust to be established, it is not always necessary for privacy to be reduced. For instance, reputation systems (as used on eBay, the auction site) allow trust to be established through the use of peer-ratings of pseudonyms (Utz, 2004). But, however trust is established, it is clearly critical to understanding online behaviour, and is likely to become more important as we leave our personal data at the door of pseudonymous environments.

### Cost and benefits

In the example above, access to an environment in which expressive privacy is enabled has been effectively purchased with personal information. This commodification of personal information is nothing new – witness the growth in ‘loyalty’ cards – but what is interesting is that one form of privacy is lost to gain another form.

Within person-to-person interaction, self-disclosure can also be understood in terms of costs and benefits. As Antaki *et al.* (2005) note, disclosure needs to be ‘brought off’ – it does not occur without repercussions for both interactants. By disclosing personal information, the cost to a person is increased vulnerability and a loss of privacy. However, in many cases, the benefits – a building of trust, rapport, and reciprocation – will outweigh the costs. However, this is not to say that disclosure is not without risks. For instance, a teenager agonising about whether to confess to a

romantic crush is likely to be acutely aware that disclosure to the object of their desire is a potentially risky business that will lead to either a joyful reciprocation of feelings, or rejection. The Internet may well adjust the balance of such risks in favour of the risk taker – a study conducted by Joinson (2004) found that as the risk of rejection increased, so people were more likely to ask a potential partner on a date by e-mail rather than FtF.

In terms of e-commerce, there are also clear cost-benefit issues regarding privacy and disclosure. For instance, imagine the same teenager has successfully arranged their date, and they now wish to purchase prophylactics. They have two options: the first, to pay in their local town with cash, is reasonably high in privacy – there is no data trail, and unless the server behind the counter knows them, they have high information privacy. The alternative is to use a credit card to purchase the desired products online, and to have them delivered at their home address in a plain envelope. In this second case, the level of information privacy is low – they will need to disclose their name, address and credit card details, but expressive or social privacy is high. The method chosen will illustrate the relative costs and benefits our fictional teenager attaches to information and expressive/social privacy.

For example, Andrade et al. (2002) adopt a social exchange framework to study consumers' willingness to disclose personal information, although their results suggest that considering people's decision making within this framework alone does not explain the results of the study. For instance, while manipulations that seemed to reduce the cost of personal disclosure (e.g. privacy policy) did indeed have the desired effect, the offer of a reward worked to reduce disclosure. Thus, while the costs and benefits of online disclosure are important, they are not a sufficient explanation of disclosure behaviour.

## Control

A further wider context issue that we believe is important to understanding self-disclosure online is control – that is, control over what information is collected, how, and with whom information is shared.

Information is often collected online with or without the user's knowledge or consent. From a technical standpoint, some types of information are easier to obtain than others. Information can be gathered unobtrusively, which requires little cooperation on the part of the person supplying the information. For example, information may be collected by means of cookies and other software designed to track users' movements over the Internet. Other types of information are less accessible, forcing companies to rely on more intrusive means to obtain important data. This typically involves asking people to engage in some type of self-disclosure.

Individual control over personal information is more difficult than ever before. And personal information privacy is fast becoming one of the most important policy issues facing the Internet (O'Neill, 2001)

Even when personal information is voluntarily provided privacy may still be compromised due to the inability of an individual to control the use of the information. For example, privacy may be comprised on two dimensions (Culnan and Armstrong, 1999):

1. *environmental control* - an individual's privacy may be compromised if unauthorised access is gained to personal information as a result of a security breach or an absence of appropriate internal controls
2. *control over secondary use of information* - computerised information may be readily duplicated and shared, there is the risk of secondary use, that is

information provided for one purpose may be used for unrelated purposes without the individuals knowledge or consent. Secondary use includes sharing personal information with others who were not a party to the original disclosure.

The secondary use of information and the fact that information may be logged and preserved for future access mean that threats to privacy on the Internet can be immediate as well as future threats.

Most people do not know what information is stored about them or who has access to it. However, there is now a growing awareness, as well as resentment, of the routine practice of collecting and analysing personal information (Nissenbaum, 1998). This is partly due to reports in newspapers and on online news sites. For example “extent of UK snooping revealed” which reported that “officials in the UK are routinely demanding huge quantities of information about what people do online and who they call, say privacy experts” (BBC news, May 16, 2003). Also “Top UK sites ‘fail privacy test’” which reported that “98% do not give enough information about the text files which track user movements, or provide a single-click opt-out option” (BBC news, December 11, 2003). A February 2002 Harris Interactive Survey (Harris Interactive, 2002) stated that the three biggest consumer concerns in the area of on-line personal information security were: companies trading personal data without permission, the consequences of insecure transactions, and theft of personal data.

Within the context of person-to-person interaction, clearly control is also a critical issue. Walther (1996) argues that hyperpersonal social interaction online occurs, at least in part, because of the increased control afforded by synchronous, visually anonymous CMC. For instance, we can control what information we choose

to disclose, in what manner, and how we disclose it. By removing control from CMC (for instance, by introducing video), we also remove control, and thus compromise privacy.

### Conclusions

Self-disclosure is one of the few widely replicated and noted media effects of online interaction. However, despite the evidence that self-disclosure occurs in a number of different contexts online, including CMC, web-logs and submission of web forms, most approaches to understanding the phenomenon confine themselves to considering the impact of a single factor – anonymity. We argue that by focussing solely on this micro-level media effect, the wider context in which disclosure is given, or required, is ignored – and that ignoring this context limits how we can conceptualise online behaviour. By considering the wider context, and in particular its implications for privacy, it is possible to develop a more nuanced picture of online behaviour across situations.

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