WHAT ARE WE DOING? MICROBLOGGING, THE ORDINARY PRIVATE, AND THE PRIMACY OF THE PRESENT

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ABSTRACT

Purpose

This paper aims to better understand the cultural-philosophical significance of microblogging.

In this way it seeks to inform evaluations of this new medium and of the culture and society it

co-shapes and in which it is rooted.

Approach

Engaging in philosophical reflection inspired by philosophy of technology, political

philosophy, and cultural history, this paper identifies and discusses some structural features of

microblogging such as Twitter.

Findings

This paper discusses the following structural features of microblogging as a medium: an

emphasis on activity, the rule of opinion, emphasis on the ordinary and on the self, blurring of

the private/public distinction, the primacy of the present, and the paradox of distance and

proximity. The discussion also suggests that microblogging remediates 'older' media such as

letters, e-mails, texting, diaries, and newspaper writings. Finally, the paper explores some

strategies to cope with the new medium, including 'hacking' it in order to widen the spectrum

of possibilities it offers.

Impact/Social implications

The paper assists users and policy makers to reflect on how new media such as microblogging

might change the way we live and think. It helps them to better understand the medium and to

evaluate its use.

Originality

Although there are data available now on the use of Twitter and other microblogging

technologies, there has been very little philosophical reflection on the phenomenon. This

paper begins to bridge this gap and makes novel connections between ideas from different

academic fields.

KEYWORDS

microblogging, Twitter, ethics, philosophy, media, technology

INTRODUCTION

Microblogging allows people to publish short text messages (sometimes a photo, a video, or

an audio fragment) in order to update their status ('what are you doing?'), share information,

ask questions, or communicate between two or more persons. Although it can be used for

many (other) purposes, status updates – updating one's own status and reading the status

updates of others – is still one of the main uses.

Microblogging is a relatively recent phenomenon. Twitter, the most well-known application, was made available in 2006. However, there are already some data available on its use. A study by the *Pew Internet Project* shows that 11 percent of American adult Internet users are using Twitter and similar services (Lenhart and Fox, 2009, p. 1). Unsurprisingly, users are younger (but not generally teenagers, the median age is 31) and are more mobile in their communication and consumption of information than the average Internet user (Lenhart and Fox, 2009, p. 3). Another study found that the main user intentions on Twitter are 'Daily Chatter', 'Conversations', 'Sharing Information', and 'Sharing News'. The first category, 'Daily Chatter', is the most common use of Twitter: people talk about daily routine, say what they are doing (Java *et al.*, 2007, p. 7).

As more data become available about Twitter use, a wider range of uses is revealed (see for example Krishnamurthy *et al.*, 2008; Honeycutt and Herring, 2009; Heverin & Zach, 2010; Grace et al., 2010). There also have been efforts to explain Twitter use. For example, recently Chen has studied the relationship between active Twitter use and gratification of a need to connect with others (Chen, 2011).

However, what appears to be lacking so far are reflections on the wider social and ethical implications of microblogging. This requires that empirical research about use and user intentions is supplemented with explorations of broader, *non-intended* consequences of the medium, and that scientific explanation is supplemented with *interpretations* of the medium (hermeneutics).

This paper begins to bridge this gap by trying to understand the cultural-philosophical

significance of microblogging. Such reflections can inform evaluations of this new medium

and of the culture and society it co-shapes and in which it is rooted. In this way, we might

better be able to cope with its wider social and ethical implications.

Drawing on insights from philosophy of technology, political philosophy, and cultural history,

this paper identifies and discusses some structural features of microblogging. The paper

extends its scope to other on-line media and mobile technologies when this assists the

analysis. In the course of the discussion, it is also shown that microblogging remediates

'older' media such as letters, e-mails, texting, diaries, and journalistic writings. Finally, the

paper explores some strategies to cope with the new medium.

The following section clarifies the approach and theoretical background.

APPROACH: THE MEDIUM, THE MESSAGE, AND THE OTHER MEDIA

Contemporary philosophy of technology shows that media and technologies are not mere

instruments that can be entirely separated from culture, society, and values. They change what

we do, how we live, how we organize living together, what we value, and who we are. They

mediate our relation to the world: they change the way we interpret the world and they change

the way we act (see for example Verbeek, 2005). In 1964 McLuhan famously argued that 'the

medium is the message' (McLuhan, 1964, p. 9), by which he meant that not the content of the

message but the characteristics of the medium are important if we want to study the influence

of media on humans and society. New technology changes our perception and our world.

McLuhan gives the example of the railway, which created new cities and new kinds of labour

and leisure time (McLuhan, 1964, p. 8). As far as perception goes, he understood this influence mainly in terms of the concept of extension: we extend our consciousness, we live in what he later called 'a global village'. Less known is his argument that this extension brings with it moral responsibility:

In the electric age, when our central nervous system is technologically extended to involve us in the whole of mankind and to incorporate the whole of mankind in us, we necessarily participate, in depth, in the consequences of our every action. It is no longer possible to adopt the aloof and dissociated role of the literate Westerner.

(McLuhan, 1964, p. 4).

Thus, if we study a medium such as microblogging, we must do this with a view to attend to the wider implications for our ways of living and our ways of relating to one another. For example, we may ask what the medium does to friendship relations. Moreover, we should accept that, to the extent that the medium globalizes our perception, it brings with it moral responsibility and the demand for engagement. If the Internet is the ultimate extension and globalizing technology, which extends our consciousness and perception to encompass humanity and the globe, then being on-line appeals to our moral responsibility. Information overload is not only an information management problem but also a moral burden since the Internet provides us with information about the consequences of what we do and allows us to act globally. Efforts to understand the influence of micro-blogging must be viewed within that broader perspective and the need for ethical reflection on technology.

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¹ This is an argument about the globalisation of perception by people who have access to new information technology. A global digital village as a global 'digital community' does not exist: both in developed countries and in developing countries there is still a gap between people who have access to new information technology and people who are excluded from these media and technologies (see for instance Tambulasi 2009).

This paper will start with interpreting the wider cultural and social significance of microblogging by identifying some structural features of microblogging as a medium. For this purpose, it is useful to understand what media do in relation to other media. McLuhan understood that 'the "content" of any medium is always another medium' (McLuhan 1964, p. 8). He already pointed to what Bolter and Grusin call 'remediation': a medium 'responds to, redeploys, competes with, and reforms other media' (Bolter and Grusin 1999, p. 55). For instance, photography remediated painting, film remediated the novel and theatre, television remediated film and radio, the World Wide Web and computer games remediate film, etcetera. Thus, the cultural significance of a new medium depends – among other things – on how it rivals and refashions older media. The concept of remediation calls attention to relations *between* media (rather than between media and message) and helps us to avoid the assumption that the new medium is entirely new, completely divorced from other media. The following discussion will show that microblogging remediates 'older' media such as letters, e-mails, texting, diaries, journalistic writings, and so on.

Finally, to understand that technology has a significant influence on society and culture should not lead to fatalism. Contrary to what many 20th century philosophers of technology such as Heidegger and Jaspers tended to assume (Verbeek 2005), technological development and the development of new media are not autonomous forces that leave us entirely powerless 'in the hands of the machine' or of the medium. We can have various strategies to cope with what a medium does to us. Moreover, we need not be imprisoned in a polarized for/against discussion about the technology. The paper will show that this is also true for microblogging and its mobile and on-line cousins.

STRUCTURAL FEATURES OF MICROBLOGGING

Activity versus reflection

While embedded in multi-media environments, micro-blogging is often text-based. Therefore,

it can be interpreted as a remediation of letter writing. However, there are several crucial

differences with the older medium. Obvious differences such as the speed of communication

and the length of the message are not neutral in relation to the message; they change the

message in important ways. In the past, letters that were passed on to a broader audience (not

necessarily by the author) would often contain reflections. Consider philosophical letters such

as Seneca's Epistulae morales ad Lucilium, which were letters written to instruct Lucilius on

Stoicism. Lucilius may not have existed. Sometimes the letters were intended to a broader

audience: consider Voltaire's Lettres philosophiques (1734). And of course one may consider

the communicative power of Paul's letters to the Romans, the Corithians, the Galatians, the

Philippians, the Thessalonians, and Philemon. Like microblogs, these letters and their authors

received a lot of 'followers'. However, they were also highly reflective. Microblogs, by

contrast, do not encourage reflection since the medium does not provide the time and space

required for reflective thinking and writing. Instead, the stress is on activity: what you are

doing.

Of course microbloggers may offer reflective thoughts or engage in discussion. But the point

here is that it does not encourage doing so. Moreover, the use of hashtags to track

conversations or the embedding of links books is not the same as reflection by means of

traditional writing: the medium influences the way we think.

Self and the primacy of the present

Surely, not every letter in the past was as reflective as philosophical or religious letters. There were also other types of letters that found their way to a wider audience. But even if they were, for instance, love letters, they were more reflective. Consider the letters in the tradition of Romanticism. Romanticism shares with micro-blogging its emphasis on the self and authorship. What matters in this tradition is not so much the object of what one is writing about but the subject. It answered the question not 'What are you doing?' but 'What are you feeling?'. What matters is the feelings of the author, not his or her view of the world. Letters such as these fit in a pattern of at best self-realisation and at worst self-indulgence, but what matters to the Romantics is that personal struggle and tragedy.

Microblogging shares this feature to some extent, not only because in a *tweet* one can describe one's *mood*, but also since the medium as such is highly self-centred and author-centred: the question is: What are *you* doing? This does not, of course, imply that microblogging messages need to be selfish; the medium puts the self at the centre but does not determine that self's relation to the world and to others. However, just as the microblogging medium does not encourage to reflect on one's actions but only asks us to describe them, it does not encourage reflecting on one's feelings. What matters is one's *status*; the present is all-important.

This contrasts with writings of the Romantics and their contemporary heirs, who use writing as a tool for (showing) personal development over a period of time. The writer or main character of the novel reflects on his or her feelings and these feelings and reflections build a path of self-constitution or (often) self-destruction. Such stories of personal struggle, tragedy, development, and destruction are only possible in a medium that allows for the time and space of writing-thinking. Thus, while the personal life and people's Romantic self-understanding of

that life has not fundamentally changed since the end of the 18th century (individual self-development and feeling are still held to be very important), microblogging as a medium encourages a fragmentary, discrete, momentary perspective on what one is doing and what one is feeling.

Opinion and non-communities

Surely, a microblog might concern matters that go beyond the self such as politics. Consider for example the use of Twitter in the 2009 Iran elections and in more recent political events: some people used it to organise their opposition to the government. More generally, microblogs may contain a normative message: then it does not only concern what one is doing but also what one or 'we' *should* be doing. But if that is the case, there is still an important difference with other written media.

Consider journalistic writing as a medium. Although there are smaller differences between media like television, radio, newspaper articles, Internet, and so on, journalism shares with micro-blogging a focus on the present and attention for activity: it answers the question 'What is going on?'. While this generally discourages reflection – including normative reflection – there is usually only one way in which the normative can nevertheless appear in journalistic writing: in the form of opinion. Microblogs can take the form of short opinion blogs: an online one-liner as compared to off-line one-liners (for instance by politicians, political commentators, and activists).

Often opinions are common or popular opinions (Greek: *doxa*). *Doxa* was held by Plato to be the opposite of knowledge. Philosophers sometimes use the term to indicate what the task of

normative philosophy should be: to be critical of common, accepted opinion. Thinking is supposed to go beyond what is taken for granted in society, what is self-evident. But this is not encouraged by microblogging. Even if a one-liner were to voice and opinion that is not widely held, it tends to remain a counter-opinion. Philosophical discussion, by contrast, requires that one scrutinizes one's opinion – whether or not that opinion is generally accepted— and discusses it with real or virtual dialogue partners. Although sites such as

Twitter might be used for this purpose, the time and space constraints of the medium do not

Generally micro-blogging is not directed to anyone in particular anyway. When it is, people tend to use the '@' sign followed by the addressee (the sign is also used for other purposes but this is one use of it). When it is used in this way, microblogging remediates instant messaging, texting, and e-mail. But even e-mail writing (itself a remediation of letter writing, sometimes named 'snail mail') allows for more reflection, more development, and more discussion.

Like opinion articles, micro-blogging remediates and at the same time changes the community-building aspect of letter writing. Text mediums always involve two types of activities and actors: on the one hand, there are the writers and publishers, on the other hand there are the readers. (In microblogging, as in letter writing, writers and publishers are often the same.) When the same readers always read the same authors (and when the writers always write for the same readers), different kind of relations may develop between the two activities and the two kinds of actors.

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promote this kind of reflection.

In Renaissance humanism and in Christianity, these relations would give shape to a community of writers-readers who discuss and reflect, an intellectual elite who are connected by means of the word. This was facilitated by the medium: letters allow for the development of literary, intellectual friendship. Much less intense relations are those between users of e-mail, between authors and readers of novels, between 'friends' who communicate at on-line social networking sites, or between writers and readers in micro-blogging. Micro-blogging knows the practice of 'following': one can choose to always receive the messages of one author. Those who receive the messages are called 'followers'. This might build what on the Internet is often called 'communities' but what in no way resembles a humanist or Christian community of intellectual dialogue, or an Aristotelian community of virtue and moral

The point here is not to argue that these are *better* forms of community but that the medium influences the message, that micro-blogging as a medium tends to restrict the range of options we have when it comes to shape our relations with one another and to building communal forms of living. Moreover, there is no *determinism*: media promote or discourage certain messages, but they can always be used differently (see below).

The ordinary

friendship.

Contemporary journalism also shares with micro-blogging attention for the 'ordinary'. In modern culture, and since 19th century realism in particular, art and literature have turned toward the ordinary life, moving away from religious themes and other themes subjects considered to be appropriate for mass communication. In the medium of writing one can see this shift when one considers two famous auto-biographies: Augustine's *Confessions* (written

at the end of the 4th century) and Jean-Jacques Rousseau's Les Confessions (1782). Whereas

the first confessions are written as a praise of God, the second concern 'Jean-Jacques', that is,

the individual Jean-Jacques Rousseau and his ordinary life. The 19th century novel and realist

art further develops this interest in ordinary life. And of course we must not forget the

medium which micro-blogging remediates perhaps most intensely: the diary.

A diary has many of the features discussed so far: like journalistic writings, it is generally a

report, like on-line blogs it concerns discrete moments in time, it is about the life of an

ordinary person (not a saint, a king, or a god), it is auto-biographical and self-centred, and in

this capacity it allows for answers to the question 'What have I been doing?' (the 'objective'

aspect) and 'What have I been feeling' (the 'subjective' aspect)? But contrary to micro-

blogging and in line with what 19th century philosophy and Romanticism requires, it allows

more room for the past (notice the past tense in the questions) and thus goes beyond the

present and possibly explores the future and its dimensions allow for reflection and self-

reflection.

Finally, micro-blogging does not encourage making distinctions between what is important

and what is not important. The rise of the ordinary means not only that 'ordinary' subjects are

present in most messages but also that even if there is important content, the medium presents

all messages in such a way that it is more difficult to distinguish between ordinary and

important. On-line media such as microblogging do not only challenge our capacities for

information management, they also discourage the development of our capacity for making

value distinctions.

The private made public

How important is the personal life of 'ordinary' persons? Let me return to the diary. While it might be highly reflective, the diary shares with microblogging a focus on the private life of the person. This fits within the Romantic and ordinary-life pattern, but micro-blogging adds to this a significant new dimension: one's private life is considered to be a message that must be mass-communicated. It is hard to over-estimate the significance of this turn.

Surely, this feature is not new: autobiographies from Rousseau onwards have had that aspect. For instance, Rousseau tells his readers in *Les Confessions* about his pleasure when he was spanked by Mademoiselle Lambercier (Rousseau, 1782, Livre 1). But generally one would say more about one's private thoughts and feelings in a diary than in an autobiography. While there is, in contrast to Rousseau's claim in the beginning of his book, no 'true to nature' report of one's life – both mediums offer a means to interpret and constitute one's self and one's life – a diary is generally regarded as something that one keeps private.

Sometimes diaries have been published, sometimes by the author, sometimes by others. But while the rise of the ordinary life has been going on for a while (mainly roaming in the realm of fiction, see again my comments on the novel), only relatively recently the private life of (ordinary) individuals is considered a proper subject of mass media such as newspapers, television, and various on-line platforms and mobile communication media. Even text messages of mobile phones, while sharing many of the features mentioned above, do not generally cross the line from private to public (in contrast to audio messages in mobile communication, which often contaminate the public space)². In many ways, microblogs – as

² There are exceptions. Sometimes text messages are made public on television or on electronic message boards in public spaces such as airports.

remediations of letters, autobiographies, diaries, and texting – are the culmination of the turn towards the ordinary private.

The rise of the private must be understood within the broader societal development that can be interpreted with Hannah Arendt as the blurring of the line between the private and the public. In her work *The Human Condition* (1958) she contrasts modern society with the strict distinction she thinks there was in ancient Greece between the private sphere of the household (the *oikos*) and the public sphere were free men would discuss politics (Arendt, 1958, p. 22-78). Whether or not this is an adequate picture of ancient Greece, it clarifies what is happening today: in on-line and off-line mass media, the public sphere has merged with the private sphere. It is not so much that people value privacy less and therefore *tweet* about it and follow others who tweet about their private life; it is at least as much the other way around: the medium has also changed the message. More than social network sites, microblogging platforms promote the exposition of the private life in the public sphere, which becomes indistinguishable from the sphere of the household or indeed the global village (to use McLuhan's term again), with all its gossip and other *twitter* and chatter. This might change our values: we might care less about privacy.

The paradox of distance and proximity

This relation between medium and message applies to distance as well. Consider the following paradox of distance and proximity. Microblogging shares with all mobile and online media the claim to 'connect people', to bring people closer to one another. The idea is not only that even if my spouse, friend or family member is physically located in a distant place, I can communicate with him or her (maintenance of the relation), but also that by using the

technology I can start new relations and intensify existing ones. To some extent this claim is justified: the medium connects people who are distant in space. However, at the same time these media, by making *possible* that one lives at a distance, promotes (physical) distance rather than proximity. The paradox is that while presented as a solution to the problem of distance in the global village, it is at the same time its very *condition*. People live far apart partly because the technology renders it possible to do so. If those of us who live apart from their friends or even partners could not 'stay in touch' by using various communication technologies, they would probably not choose to live apart in the first place³. To the extent that microblogging and other mobile technology connect people, they at the same time maintain the distance they claim to bridge. Like other technologies such as air traffic and virtual money, microblogging tries to reconnect what it separates.

Conclusion

To conclude, the medium microblogging is not a 'neutral' medium, but promotes the importance of activity as opposed to reflection, the communication of opinion as opposed to critical discussion, the self as the theme of communication, the importance of the ordinary, the primacy of the present as opposed to historical perspectives, the blurring of the distinction between public and private, and the distance between people it increasingly connects. In having that influence, it seems to challenge some important features of intellectual and political life in modernity. Therefore, evaluating microblogging as a phenomenon needs to be connected to more systematic efforts to evaluate the broader cultural changes it is embedded in and which it co-shapes.

³ A similar claim can be made about the relation between modern transport technology and living patterns: without contemporary means of transport, there would be much less commuting. These means of transport are not just solutions to the problem of distance; they also help to create it.

Note that of course media are never 'pure': microblogging can be, and has been, extended with all kinds of tools and it does not exist in isolation from other media and other technologies. To the extent that these other media do not promote the features identified above, defenders of 'traditional' modern culture need not worry too much. For instance, one might microblog *and* read books. However, if I am right about the structural features of microblogging and if we take seriously McLuhan's point about the influence of the medium, then such uses are not encouraged by microblogging *as a medium*.

CONCLUSION

Inspired by McLuhan's philosophy of media and technology, this paper has offered a philosophical reflection on the wider cultural-philosophical influence of microblogging as a medium. Using Bolter and Grusin's concept 'remediation', Arendt's work on the human condition, and benefiting from a general cultural-historical perspective, it has identified some significant structural features of microblogging as a medium: an emphasis on activity, the rule of opinion, emphasis on the ordinary and on the self, blurring of the private/public distinction, the primacy of the present, and the paradox of distance and proximity. As a medium, microblogging shares some of these features with other new media and mobile technologies such as texting and social network sites. It has also been suggested that microblogging remediates 'older' media: letters, e-mails, texting, diaries, journalistic writings, and so on. The discussion has indicated similarities and differences.

This emphasis on what the medium does to our lives and to our thinking does not mean that we are helpless with regard to its influence; we can use the medium in a different way. In fact,

many people do so. Let me explore a range of 'coping strategies' that are used and can be used in the future.

Intended use. We may use microblogging in the way it is meant to be used, that is, as a tool to update activity and mood status, to communicate, and to inform. This is usually the first stage any technology goes through once it is accepted: it is used for what it is designed to do.

Non-use. We might not use microblogging for ethical or other reasons. Here there are two sub-options: stopping after having used it and never start using it in the first place. Looking at other on-line and mobile technologies, the first sub-option is unlikely to be taken: as remarked above, users of microblogging platforms tend to use many media (often at the same time), they live with many windows open without feeling the need to close down windows that are used infrequently. They are simultaneously engaged in various on-line and off-line media. If microblogging is used less frequently, the influence of the particular medium might be limited. But it is an option. The other sub-option is never start using it. Often new technologies have to face resistance from people who are against the technology. But there might also be simply a lack of interest.

Unintended use: hacking the medium. We may use the technology but not in the way it is intended by the designers. This can be called 'hacking the medium'. This is not meant literally; it is a media strategy and part of technological and cultural innovation. A mild form of this kind of 'hacking' is the current use of the '@' sign, which turns the medium (temporarily) into a different one, closer to texting or instant messaging. One might also consider using microblogging for other purposes than originally intended by the designers. For instance, microblogging has been used for commercial purposes. A different kind of

'hacking' is to use it for intellectual discussion or philosophical reflection. This is already

done in academia, for instance. One may also 'hack the medium' for political purposes, as has

happened in recent revolutions and protests (for example in Tunisia, Egypt, and Iran). Rather

than changing the medium directly, this kind of hacking changes the medium by changing the

message – exactly the opposite of the 'medium changes message' direction of influence. And

of course both kind of strategies can be combined: changing the medium and changing the

message.

The latter strategies widen our usual palette of options. Often discussions about technology

are polarized: either one is for or one is against the technology. The 'hacking' option adds a

third way to the possibilities we have as users of technology: to become co-designers of the

technology-culture at hand.

To conclude, the paper has not only reflected on the structural features of microblogging as a

medium; it has also explored some strategies to cope with the new medium, including

'hacking' it in order to widen the spectrum of possibilities it offers. In this way, this paper

provides one point of departure for philosophical and other reflections on microblogging, in

particular ethical reflection. As humans we do not only want to communicate what we are

doing; we also want to know if and why we should do it at all.

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REFERENCES

Arendt, H. (1958), *The Human Condition*, University of Chicago Press, Chicago.

Bolter, J. and Grusin, R. (1999), *Remediation: Understanding New Media*, MIT Press, Cambridge, MA.

Chen, G.M. (2011), "Tweet this: A Uses and Gratifications Perspective on How Active Twiter Use Gratifies a Need to Connect with Others", *Computers in Human Behavior* 27: 755-762.

Grace, J.H., Zhao, D. and D. Boyd (2010), "Microblogging: What and How Can We Learn From It?", Chi 2010 Workshop, Atlanta, GA, USA, April 10-15.

Heverin, T. and Zach, L. (2010), "Microblogging for Crisis Communication', in *Proceedings* of the 7th International ISCRAM Conference, Seatle, USA, May 2010.

Honeycutt, C. and Herring, S.C. (2009), "Beyond Microblogging: Conversation and Collaboration via Twitter", paper presented at the 42nd Hawaii International Conference on System Sciences, 2009, Hawaii, available at

http://ella.slis.indiana.edu/~herring/honeycutt.herring.2009.pdf (accessed 3 June 2009)

Java, A., Finin, T., Song, X., and B. Tseng (2007), "Why We Twitter: Understanding Microblogging Usage and Communities", available at http://delivery.acm.org/10.1145/1350000/1348556/p56-

java.pdf?key1=1348556&key2=7444204421&coll=GUIDE&dl=GUIDE&CFID=37695304&CFTOKEN=49971675 (accessed 3 June 2009)

Krishnamurthy, B., Gill, P. and M. Arlitt (2008), "A Few Chirps About Twitter", available at http://www.research.att.com/~bala/papers/twit.pdf (accessed 3 June 2009)

Lenhart, A. and Fox, S. (2009), "Pew Internet Project Data Memo", available at:

http://www.pewinternet.org/~/media//Files/Reports/2009/PIP%20Twitter%20Memo%20FIN

AL.pdf (accessed 3 June 2009).

McLuhan, M. (1964), *Understanding Media: The Extensions of Man*, McGraw-Hill Book Company, New York.

Rousseau, J.-J. (1782), Les Confessions, Gallimard, Paris, 1973.

Tambulasi, R.I.C. (2009), "Pushed to the Abyss of Exclusion: ICT and Social Exclusion in Developing Countries", *Journal of Information, Communication, and Ethics in Society* 7(2/3): 119-127.

Verbeek, P.-P. (2005), What Things Do: Philosophical Reflections on Technology, Agency, and Design, Pennsylvania State University Press, Penn.

Voltaire. (1734), Lettres philosophiques, ed. G. Stenger, Flammarion, Paris, 2006.