Research article

Conviviality of Internet social networks: An exploratory study of Internet campaigns in Iran

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Abstract

In this study, we focus on the relationship between Internet social networks and societal change by examining case studies of the impact of Internet-based campaigns in Iran. Ivan Illich's theory of 'Conviviality of Tools' enables an analysis of the conviviality of the Internet. Subsequently, this conceptual lens is used to examine empirical data from two Internet-based campaigns. The paper contributes theoretical and practical implications regarding conviviality of Internet social networks and the accomplishment of conviviality in society. Our findings show that Internet conviviality cannot be treated as an independent variable with deterministic outcomes on society, but as a technology that is shaped by ongoing economic and political forces. The Iranian Internet social networks are not universally accessible, frequently induce fragmented, nonsensical, and enraged discussion and its potential as a tool of liberation is tempered by the Iranian government adaption of systems of surveillance and censorship. We argue that the findings of this study have some general implications of value to researchers studying computerisation movements and Internet social networks in other countries.

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Introduction

Online communities are a type of social network that brings together geographically distributed individuals around a common interest and are the focus of the online community computerisation movement (CM) (Iacono and Kling, 2001). The notion of a CM was first defined by Kling and Iacono (1988) as a particular kind of social movement whose distinguishing feature, emphasised by advocates, is a focus on computer-based systems as instruments to bring about a preferred social order (Elliott and Kraemer, 2008: 6). The utopian visions of CM activists emphasise the potential of the Internet to enable the 'death of distance': public spaces to promote participation and to enhance democracy (Toffler, 1991; Rheingold, 1993, 2002; Hague and Loader, 1999; Kamarck and Nye, 1999). Kahn and Kellner (2004) posit that the Zapatista movement and the 1999 'Battle in Seattle' represent key examples of how the Internet can distribute information, coordinate and motivate membership of globally distributed pressure groups. These public spaces may take the form of websites, proprietary applications such as Facebook and Twitter; blogs, wikis, listservs, chat rooms, or political forums that

encourage public discourse and deliberation. In a review article, DiMaggio *et al.* (2001) conclude that the nature of the impact of the Internet will vary depending upon how economic actors, government regulation, and users collectively organise the evolving Internet technology (p. 310). However, surprisingly little empirically based and theoretically informed micro-analysis has been published in Information Systems that explores how these 'surrounding processes' may affect the impact of Internet social networks. This paper aims to improve our practical and theoretical understanding of the relationship between CM, Internet social networks, and societal change by examining specific experiences within a local context.

Iran was chosen as a location that represents a fundamental case where only limited prior research has been undertaken and the regime restricts expression of political opposition. Therefore, individuals and groups exploit the Internet by using weblogs and other forms of Internet-based interaction to express dissent and expand the realm of public free speech (Hofheinz, 2005; Alavi, 2006; Loewenstein, 2008). Ivan Illich's (1973) theory of

'Conviviality of Tools' is drawn upon to examine the extent to which the Internet is a convivial tool. For Illich, convivial tools are a central feature of a convivial society. Conviviality is understood as 'autonomous and creative intercourse among persons and the intercourse of persons with their environment' and represents in essence individual freedom realised in personal interdependence. We argue that the Internet presents potential for systems and technologies of conviviality. The confluence of social arrangements and the evolving forms and functions of the Internet-based technologies offer potential for the accomplishment of conviviality. Iran is a highly pertinent place to focus on the emergence of conviviality because of the changing nature of social arrangements that are embodied in the traditions of Islam relative to the secular and cultural practices of the modern west that are competing for assimilation in contemporary Iranian society. The twin pressures of western modernity and traditions of Islam frame the social structures of events as well as presence and access to Internet-based systems. Little is understood empirically on how Internet conviviality may impact society more generally and the forces which may facilitate or impede the accomplishment of conviviality. Thus, this study addresses the following question: How does the Internet contribute to the accomplishment of conviviality in Iran?

The paper is organised as follows. In the next two sections, we describe Illich's theory of conviviality and the relevant background to the inquiry. Following a presentation of the research approach, we draw on empirical case study evidence based on two Internet-based campaigns that enable the analysis of the accomplishment of conviviality. Finally, the last section presents the conclusions.

The CM and the conviviality of the Internet

Convivial tools are those which give each person who uses them the greatest opportunity to enrich the environment with the fruit of his or her own vision. Industrial tools deny this possibility to those who use them and they allow their designers to determine the meaning and expectations of others. Most tools today cannot be used in a convivial fashion. (Illich, 1973: 21)

We chose the work of Ivan Illich as the theoretical basis for our inquiry, specifically his writings on Conviviality as expressed in *Tools for Conviviality* (Illich, 1973). The book provides an explanation of the concept of Conviviality, which Illich argues is the standard against which technology should be measured.

Illich's work has had considerable influence over information systems research and practice. Orlikowski and Iacono (2001) point out that Illich's insights on Conviviality underpin the argument by Kling and Dutton (1982) and Kling and Scacchi (1982) for a change in emphasis away from the technical artifact (i.e. computers and software) which had previously dominated information systems design and implementation. King et al. (2007) show that Illich's writings had a particular influence on Rob Kling in the formulation of his seminal 'package' view of technology in which the enabling infrastructure involved in technological change must be considered. The view of

information systems design and development through the 'lens' of conviviality inspires a reconceptualisation of the technical artifact as only one element in a 'web of computing' required to apply the technical artifact to socio-economic activity. The web of computing includes training, staff, organisational arrangements, policies, and incentives to enable the effective management and use of new technologies. The influence of Illich's insights on conviviality of technology continues into contemporary information systems research and practice (e.g. Ehn, 1990; Wastell et al., 2004) and Kling's seminal work in social informatics and CM (Kling and Iacono, 1988). CM represents a particular kind of social movement advocating focus on computer-based systems to bring about a preferred social order. CMs mobilise bias for continued investment, legitimate expenditure and set expectations about what computing should be used for and how access should be organised. There is often a gap between this vision and the way technology is realistically used by organisations and society (Elliott and Kraemer, 2008). CMs can be characterised as consisting of three components that interact and shape each other (Iacono and Kling, 2001): technological frames, public discourse, and organisational and societal practice and use. Technological frames are built up in public discourse about computer-based systems in mass media and journals, for example, that influence how technology is used.

We draw on CM and Illich's work here for two main reasons. First, the accomplishment of conviviality offers an appropriate conceptualisation of the extent to which technology supports the claims of CM regarding democratisation and features suited to civil society which constrain particular groups' abilities to control the flow and content of information, knowledge and ideological or symbolic representations. Second, Illich's work has been used effectively in related prior studies of the Internet and social reform, most notably in Indonesia (Lim, 2003).

Illich became prominent in the 1970s with a series of polemical books on major institutions of the industrialised world. They explored the functioning and impact of education, energy, transport and economic development, medicine and work. In *Tools for Conviviality*, Illich (1973) argues that for hundreds of years, machines worked for men, realising the vision that machines can replace slaves. For Illich, people need tools to work with, rather than tools that work with them. They need technology to make the most of the energy and imagination each has, rather than producing more well-programmed energy slaves. The concept of conviviality, which we draw upon is set out in the following quotation. Illich writes:

I choose the term conviviality to designate the opposite of industrial productivity. I intend it to mean autonomous and creative intercourse among persons with their environment ... I consider conviviality to be individual freedom realised in personal interdependence and, as such, an intrinsic ethical value. (Illich, 1973: 10–11)

For Illich, convivial tools are a central feature of the accomplishment of a convivial society. Tools include all rationally designed devices, be they artifacts or rules, codes

or operators. For Illich, school curricula or marriage laws are no less purposely shaped social devices than road networks. The accomplishment of conviviality in society would be the result of social arrangements that guarantee for each member the most ample and free access to the tools of the community and limit this freedom only in favour of another member's equal freedom. The politics of a convivial society would aim principally to exclude the design of tools that are obstacles to the exercise of personal freedom. This should permit 'the evolution of a life style and of a political system which give priority to the protection, the maximum use, and the enjoyment of the one resource that is almost equally distributed among all people: personal energy under personal control' (Illich, 1973: 11–12). Illich outlines the characteristics that define convivial tools. He stresses that the criteria are to be considered as guidelines to the continuous process by which a society's members defend their liberty, and not as a set of prescriptions which can be mechanically applied. The four criteria are:

1. Users, rather than the designers of the technology, must have the power to shape it according to their tastes, desires and needs.
2. Convivial tools must promote communities and encourage and maximise communication among the members of the society.
3. Convivial tools must make the most of the energy of individuals, and maximise and encourage creativity and imagination of users.
4. Users of convivial tools must not be mere consumers, but also producers and contributors to the technology.

According to these criteria, Illich presents the telephone as a good example of a convivial tool. He writes:

The telephone lets anybody say what he wants to the person of his choice; he can conduct business, express love, or pick a quarrel. It is impossible for bureaucrats to define what people say to each other on the telephone, even though they attempt to interfere with the privacy of their exchanges. (Illich, 1973: 22)

Is the Internet a convivial tool? Let us consider the evolution of the Internet in relation to the characteristics of conviviality alongside a brief examination of some of the utopian CM activists' technological frames, associated public discourse and societal effects of the Internet. Central to this CM is the position that the Internet enables the 'death of distance', easy remote collaboration, free instant access to information from anywhere at anytime and thus enables democracy. Considering the first two conviviality criteria, there is little evidence that the designers of ARPANET anticipated an evolution into today's Internet. Castells (2001) explains how the Internet architecture, method of communication and protocols were subsequently recreated and shaped by its users who participate in the continued redefinition and shaping from its original design. Products and services supported by the Internet could enable conviviality such as peer production (e.g. Wikipedia), the co-producing 'prosumer' (e.g. YouTube) and expansion of open source products and services (e.g.

Linux) (Tapscott and Williams, 2008). Tapscott and Williams (2008) describe the myriad potential for multi-media user generated content, for example, in podcasts and blogs. Discussion forums and virtual worlds such as Secondlife offer potential for socialisation, meetings, and lectures. Kahn and Kellner (2004) and Rheingold (2002) argue that speedy and cheap access to these various Internet facilities promotes 'virtual community' and citizen activism connecting diverse groups across time and distance. For example, group blogs such as Metafilter (<http://www.metafilter.com>) and Indymedia (<http://www.indymedia.com>) enable activists to comment on news and pass on information both locally and globally.

Regarding the latter two conviviality criteria, utopian CM activists point to the erosion of the dependent relationship between those who 'control' and 'consume' Internet content and resultant promotion of creativity and imagination when users personalise Internet intake, access free or open source software and education (e.g. Massachusetts Institute of Technology (MIT)) and create and recreate 'mashup' content (Tapscott and Williams, 2008). Utopian CM activists argue that Internet social networks will facilitate grassroots democracy and when geographic boundaries are diminished 'diasporic utopias' can flourish. Online anonymity allows citizens to communicate more freely, thus promoting a more enlightened exchange of ideas (Toffler, 1991; Rheingold, 1993, 2002; Pavlik, 1994; Hague and Loader, 1999; Kamarck and Nye, 1999). Kahn and Kellner (2004) and Rheingold (1993, 2002) portray the myriad means by which activists use the Internet for campaigning enabling societal change drawing on the examples of Seattle 1999 and 'Google Bombing'. An example of the entry of the CM technological frames into public discourse came in Time magazine's 2007 front cover announcement of 'You' (i.e. users) as 'Person of the Year' in 2007. This particular issue emphasises the contribution of Internet users to Internet development and associated organisational and societal changes this heralds.

In summary, our conceptual framework draws on CM and Illich's (1973) Tools for Conviviality. In later sections, we will apply this framework to enable an evaluation of the conviviality of the Internet in relation to evidence from two online campaigns in Iran. The effectiveness of these campaigns in achieving their goals enables us to conclude on the value of Internet social networks to the accomplishment of a convivial Iranian society.

Background and context

Contemporary Iran is a highly pertinent place to focus on the emergence of conviviality because of the changing nature of social arrangements that are embodied in the traditions of Islam relative to the secular and cultural practices of the modern west that are competing for assimilation in contemporary Iranian society. The twin pressures of western modernity and traditions of Islam frame the social structures of events as well as presence and access to Internet-based systems. After the 1979 revolution in Iran, new models of behaviour and self-presentation were formed based on Islamic teaching. In the first decade after the revolution, interactions with government institutions necessitated a specific traditional model of self-presentation.

Figure 1 Timeline of Internet evolution in Iran.

Men were mostly required to wear dark-coloured clothing, trousers, untucked long-sleeved shirts, and facial stubble. Women also had to appear without any make-up in Hijab¹ (Amir-Ebrahimi, 2009). Many Iranians adopted a non-traditional model of self-presentation in private settings, citizens especially women and youths employed the strategy of adopting multiple models of behaviour in traditional and non-traditional settings. This period of fragmented identity continued when the Internet was 'born' in Iran in January 1993, when Dr. Larijani, Director of the Institute for studies in Theoretical Physics and Mathematics sent Iran's first email to the University of Vienna (Rahimi, 2003). In contrast with countries such as China where the state played a major role in Internet development, Iran's first experience with the Internet occurred within the University system and until the late 1990s most of Iran's domestic Internet connections were based in academia (Rahimi, 2003). However, within only a few years, the community of Internet users spread from experts within academia to the public (Figure 1).

The Iranian government initially promoted use of the Internet to provide an alternative means of scientific and technological advancement during the troubled economic

period that followed the Iraq war. In addition, the government was in favour of technological advancement. One of the main messages of the 1979 revolution was to put the affinity between scientific technology and faith into practice. Furthermore, the Internet offered potential to serve the Islamic state as a forum for online discourse of revolutionary propaganda and to promulgate the Shia² ideology. Several clerics referred to the Internet as a 'gift to spread the word of the prophet' (Rahimi, 2003: 19). Lastly, the non-censorship policy in relation to the Internet affirmed the original ideology of the Islamic revolution as a supporter of modern technology. However, the government's lack of technical expertise and insufficient finances, restrained them from providing any direct assistance to the commercial sector to develop the Internet in Iran. On the other hand, the curiosity of the Iranian public and their demand for a medium that connected them to the outside world created an opportunity for the private sector thus diminishing the state information agencies involvement in the domestic telecommunications market.

Rapid technological advancements in the private sector due to the import of inexpensive computer products from south Asia, the initial promotion of the Internet by

the government, and the high demand expressed by the Iranian public caused Internet use to grow at an extraordinary rate. According to the World Bank (2007), Internet use grew from 1 percent in 2000 to more than 10 percent of the population in 2005. At the time of writing, the use growth curve remains exponential and is one of the fastest growth rates in the world. The growth of the Internet, the rise of 'coffee-nets', and inexpensive voice chats became a convenient way for the public, particularly young people, to converse online, challenge the Islamic government's legitimacy and confront impositions of moral guidelines. Weblogging has experienced a similar extraordinary growth rate to the Internet. The Iranian 'blogosphere' was initiated in September 2001 when Hossein Derakhshan, a young journalist from Iran, set up one of the first blogs in Farsi, and created a simple how-to-blog guide. Since then, the community of bloggers has witnessed a dramatic increase in its population in the last 6 years, and reports suggest that Farsi, together with French, is now the second most frequently used language for keeping on line journals. According to the NITLE Blog Census, there were more than 700,000 blogs written in Farsi in 2006 (Alavi, 2006). Alavi (2006) claims that the astonishing growth rate of the Iranian blogging community relates to the needs no longer met by the print media. She writes: 'it provides a safe space in which people may write freely on a wide variety of topics, from the most serious and urgent to the most frivolous' (Alavi, 2006). Some journalists and writers use this safe space to bypass strict state censorship and to publish their work online. The famous case of a former prostitute's weblog detailing the underworld life of Iranian society demonstrates how Iranians are defying and bypassing the strict moral code imposed by the Islamic state. According to Hofheinz (2005), the Internet has been free of control and censorship for most of its development period in Iran providing an opportunity to anonymously demonstrate dissent, exercise self-expression and expand the realm of what can be said in public.

Research approach

The weblogging community in Iran has received limited systematic empirical scrutiny, and given that this study is conducted in the absence of earlier tried models or related definite concepts and theories, this research adopts the exploratory approach (Stebbins, 2001). Although few scholars have related Illich's theory to the development of the Internet, no other study has measured Internet-related technologies against the standard of conviviality in the context of Iran and this presented us with the task of undertaking our research without a clear theoretical framework. As we had no definite theoretical framework, using this approach allowed us to gather as much information about the topic as possible, postponing the task of cutting away unnecessary data until we obtained a better picture of what is necessary, to find out what is happening, to seek new insights, to ask questions, and to assess phenomena in a new light.

The overall strategy of this research is interpretive, guided by the knowledge of reality as socially constructed by individual human actors. As interpretists, the researchers attempted to understand phenomena through the meanings

people assign to them. This research was largely qualitative in nature consisting of empirical analysis of political activist material on the Internet (Walsham, 1995).

Data collection

Three types of data collection techniques were used in this research:

Review and synthesis of literature: was mainly carried out to examine the current literature on social formation and the social influence of the Internet, identify the gap within this literature and establish a theoretical framework for this research.

*Virtual ethnography*³: This is a relatively new development in the field of ethnography which extends the traditional notions of ethnographic study from the observation of co-located, face-to-face interactions, to physically distributed, technologically mediated interactions in virtual networks and virtual communities.⁴ In computer-mediated settings such as email or weblogging, many of the traditional visual and audio cues are replaced by textual and pictorial ones (Hunt and McHale, 2007; Garcia et al., 2009). This can result in different types of behaviour rarely found in physical settings such as 'flaming' (Papacharissi, 2002) and 'shouting', 'lurking' and 'whispering' (Garcia et al., 2009). In traditional ethnographies, the researcher is immersed in the physical, cultural, and political settings. Such immersion is replaced by different modes in virtual ethnographies but such virtual realities are still part of a greater reality '... there is one social world which contains both traditional and technologically advanced modes of communication and sites of social activities' (Garcia et al., 2009: 54). In our research, we were also greatly helped in our efforts by the first author who is a native Farsi speaker and who was previously totally immersed in the Iranian milieu. He is also familiar with the technology and use of blogging in Iran.

The researchers conducted a virtual ethnographic study of 30 of the most popular Iranian weblogs.⁵ In addition to their popularity, these particular weblogs were selected because they discussed issues highly relevant to this study, such as the Stop Stoning Forever (SSF) campaign and the feminist One Million Signature (1 MS) campaign, both of which are controversial areas that attracted attempts at censorship. An ethnographical study of this small portion of the Iranian virtual society allowed researchers to observe some of the communications and interactions that took place in the period of April–July 2007 on a daily basis. In addition, in order to represent a wider spectrum of view points, the authors also examined some of the weblogs' archival records, weblogs linked to these 30 weblogs, and we also followed the trail left on message boards back to other blogs and quoted from them where appropriate. Generally, if a blogger was found to be interesting he/she was pursued online. Researchers liken this to walking on the street and eavesdropping. This unique approach allowed the authors to gain access to bloggers' opinions, issues, and judgments on different topics. The majority of these weblogs were written in Farsi (Persian), which is one of the reasons why Iranian blogs are largely understudied in developed countries. However, the first author's fluency in

Table 1 Details of emails/telephone interviews

<i>Role</i>	<i>Gender</i>	<i>Nature of communication</i>	<i>Date</i>	<i>Duration</i>
Feminist activist	Female (assumed)	Email	23rd April 2007	Not applicable
Feminist activist	Female (assumed)	Email	14th July 2007	Not applicable
Feminist activist	Female (assumed)	Email	29th July 2007	Not applicable
Blogger 1	Unknown	Email	12th June 2007	Not applicable
Blogger 2	Unknown	Email	1st July 2007	Not applicable
An academic who was involved in the early developments of the Internet in Iran	Male	Email	5th April 2007	Not applicable
Mayoral candidate	Female	Telephone interview	20th July 2007	Approx 40 min
Senior official from the Ministry of ICT, Iran	Male	Telephone interview	11th April 2007	Approx 40 min
Previously jailed blogger (Journalist)	Male	Telephone interview	2nd July 2007	Approx 40 min

Farsi made it possible for these weblogs to be studied, translated, and analysed thoroughly.

Interviews: the researchers conducted nine technologically mediated semi-structured conversations: six by asynchronous email and three through telephone conversations of approximately 40 min each (Table 1). The first aim of these communications was to gain direct access to the bloggers' opinions and judgments on certain topics outside the Internet and to compare them with the data collected from their weblogs to ensure their validity. Some of the interviewed bloggers write blogs with their real names while others choose to remain anonymous. Therefore, some bloggers are conscious of the possible consequences of talking about certain topics. However, their ability to remain anonymous gave us greater confidence that they revealed their true opinion. The second aim of the interviews was to collect pieces of narrative of the history of the advent of the Internet in Iran, in addition to gaining inside access to the methods of censorship used by the Iranian government. Therefore, one interview was conducted with a very senior official in the Ministry of Information and Communication Technology (ICT) in Iran and another was conducted with an individual who was closely involved in the early development of the Internet in Iran. Such access would normally be problematic unless the researcher was familiar with Farsi and Iranian society. In addition, a further interview was conducted with a journalist who had previously been jailed for several years for political blogging. A local mayoral candidate was also interviewed to find out how she utilised the Internet for her campaign, and also to observe her opinion on feminist campaigns. Finally, three feminist campaign members were also interviewed to understand the precise methods of Internet use in aiding and promoting these campaigns. All in all, the interviewees were selected from three categories: Internet victims, Internet users, and Internet resisters. As noted, some of the interviews were conducted over the telephone; others were conducted through emails if the interviewee requested to remain anonymous: some subjects did not want to give away even their gender so sensitive was the nature of communication and severe the consequences of exposure.

As a happy coincidence, email interviews hold several advantages over traditional face-to-face interviews: they allow more time for the interviewee/interviewer to reflect on the questions/responses while their impersonal and anonymous nature allows the interviewee to say things that may remain unspoken face to face (Hunt and McHale, 2007: 1416). The researchers attempted to contact further subjects but were limited by time and potential subjects' unwillingness to talk on the telephone or reveal themselves over email. However, within their limited time frame, the researchers did their utmost to interview as many people as possible from different sides of the fence. At the end of our conversations with all the subjects we were beginning to experience diminishing returns to what we learned: new communications were adding only modestly to new knowledge. Some interviews were tape recorded whereas for others we took notes. The reasons behind using tape recording were explained to all relevant subjects and their permission to record was obtained in advance.

Findings

This section presents the findings from two case studies in which the Internet is currently being utilised as a medium for public dissent and collective political activism in contemporary Iran. In each case the background of the issue, the use of the Internet and the outcome are discussed in detail. Of all Internet campaigns in Iran, the SSF campaign and the feminist 1 MS campaign were chosen because of two major reasons: First, both campaigns are prolific on the Iranian Internet and represent a focal point of attention in most weblogs we visited. Second, the timing of these two campaigns is propitious. Both campaigns were initiated towards the end of 2006, immediately after the IT Ministry in Iran had officially launched a filtering office and limited the public's Internet access to 128 Kbps and we were able to witness the impact of the state's censorship and how the blogging community responded. As the research was conducted in 2007, these two campaigns reached their peak and presented an opportunity to conduct a virtual ethnography, as the data collected were current, not in the past.

Case 1: Feminist One Million Signature campaign

Iranian women have for many years organised and fought for their social and political rights (Osanloo, 2009). Feminist campaigners posit that Iranian law discriminates against women and this campaign, initiated in 2006, aims to collect 'One Million Signatures' through door-to-door canvassing, campaign events and use of the Internet in support of changes to discriminatory laws against women. The campaign aims to provide education on legal issues to the campaigners and affected women, raise public awareness, promote collaboration between related groups and to document experience. Other campaigns were also initiated in association with the 1 MS campaign demanding equal rights for women. These include freeing feminist campaigners from prison, allowing women into football stadiums, and provision of Iranian nationality to children of foreign fathers and Iranian mothers. An interview with a campaign organiser (who wished to remain anonymous) revealed that the Internet is considered the most important campaign tool. The interviewee stated 'the Internet allows us to share information about the campaign, educate and raise women's awareness by providing legal educational material'. Those interested in supporting the campaign can sign the campaign's online petition. In addition, according to the same interviewee: 'the Internet is the easiest way to gain access to a large audience, arrange meetings and seminars, promote dialogue and identify the supporters of the campaign without the harassment of the government'. The campaign raises funding for feminist campaigns using online payment facilities such as PayPal.

This campaign was a popular point of discussion among Iranian bloggers who would often discuss the campaign in detail, state their opinion, and either support or oppose the effort. Supportive bloggers display logos and banners (Figures 2 and 3) of the campaign on their weblogs and write an article in support. The result is an international network visibly supporting or opposing the campaign.

Bloggers often publish photos, videos, and news on the progress of the campaign which are excluded from the state controlled media and banned from publication otherwise by the government. The bloggers are not all supportive and the Internet allows expression of dissent, disdain or anger. For example, blog extracts below show some of the direct responses by bloggers to the 'Open stadiums to Women' campaign:

F*** off

Posted by: f*** off at: 11/04/2006

See you in the stadium

Posted by: zahra at: 11/28/2006

Hi, I am a guy, but I really like to respect all human kind; because before we are men or women, black or white we are all human and all equal. I suggest ...

Posted by: Sami at: 12/09/2006

This is a basic fact that men and women are equal. We are all born equal and definition and interpretations are relative and not definite ...

The equality of men and women is a fact, not a definition,

Figure 2 Campaign logo: The right to pass nationality down.

Figure 3 Campaign logo: Open stadiums to women.

because as human beings we are all equal, irrespective of our genders, religion, colour, ethnicity, etc.

Posted by: at: 02/27/2007

Women should have the same rights as men – anywhere!!

Posted by: Joanne Horsley at: 03/07/2007

Do you think if women enter stadiums all problems would be solved?

Go away and do something more important and don't waste your time on something so shallow and insignificant ...

Posted by: Gholi at: 03/25/2007

I pray to god that all of you get vaginal cancer, so we can live in peace.

Posted by: at: 04/17/2007 Source: Meydaan.org

Outcome of the campaign

One of the Government's first efforts in reaction to these campaigns was in the form of a counter propaganda movement against feminist activists, presenting them as 'the enemy of Hijab, Islam and the Islamic state'. This drew on all the mainstream media, which are operated by the state and the head of the TV and Radio is selected directly by the Supreme Leader. Reactions from bloggers to such propaganda are illustrated in the blog extract below:

<http://aaab.blogspot.com>

Do you watch television? Unbelievably stupid ... It's so moronic ... even If you ignore the worthless subject matter, the poor production and performances ... the worst bit is the absurd propaganda. (Alavi, 2006)

According to Shahrzad News, Minou Aslani, Director of Public Relations for the Basij⁶ Resistance Force, has initiated a 4.5 million signature campaign, protecting Hijab and Islam, as a direct response to the 1 MS campaign. In addition, the government doubled the number of police assigned to its crackdown against women flouting Islamic dress codes. Remarks made by a police official reported by Reuters indicate the authorities' determination to press ahead with the longest clampdown against 'immoral behaviour' in recent years. 'The crackdown on non-Islamic Hijab will continue until the society is clean of any immoralities', a police statement is quoted as saying. Violators can receive lashes, fines or imprisonment, although most usually receive a stern warning by street patrols looking for women with veils that are pushed back to show too much hair or coats which are not long enough or too tight. The head of Iran's airports police is quoted as saying 128 women had been prevented from taking their flights because of 'bad Hijab' (Reuters, 2008). Photos, videos, and news of these attacks are published on weblogs and social networking sites such as YouTube (Figure 4). The extent to which the government 'fighting bad Hijab' was propelled to act as a direct result of the 1 MS Campaign is unclear although it has been enacted on many occasions to justify attacks on feminist activists associated with the campaign.

The campaign by the Basij Resistance Force and similar efforts involving the Iranian police created a reaction on Iranian blogs and instigated several campaigns calling for a 'virtual march' and a petition calling for freedom of feminist activists. Bloggers supported these campaigns by displaying their logos (Figure 5). Iranian blogs were

Figure 4 Attack on bad Hijab: Taken by a mobile phone camera, demonstrates an attack on an Iranian woman because of her unsuitable dress code.

Note: Such images would never be permitted to be published in official newspapers. However, this image was published and discussed by hundreds of bloggers.

Source: <http://irwomen.net>.

absorbed (copied and linked by hypertext) into foreign blogs and subsequently several news channels and human right organisations such as 'Amnesty International', 'Reporters Without Borders', the BBC, and Reuters published appeals requesting the freedom of feminist campaigners. During an interview with a blogger named Zeitoon,⁷ she argued that 'the number of bloggers is not significant in comparison to the country's population, but it is increasing exponentially on a daily basis. As the number of Internet users increases so does the government's fear and anxiety'. According to Zeitoon, the 'fear and anxiety' was related to bloggers' thoughts and ideas achieving greater circulation among the Iranian citizenry. Also, the government is aware of online petitions that have been sent to the United Nations, for example.

The impact of the online campaign can be understood by the reaction it generated. The Iranian Government closed down the main campaign website six times and censored the word 'woman' from all search engines including Google, in an attempt to ensure a decline in the blog readership. The reaction in extracts from blogs is illustrated below.

June 2007 <http://www.bedoonemarz.com>
We all know that most ISPs filter the phrase 'Women'. I mean even in search engines like Google it is not possible to search for this phrase. We think this wrong and illogical and decided to allocate this page for this subject.

June 2007 <http://www.bedoonemarz.com>
This is new one. It seems like officials are becoming more modern [Sarcastic tone]. I congratulate them and feel sorry at the same time.

June 2007 <http://www.bedoonemarz.com>
I can't believe it. This is so stupid. I tried several search engines and they are all the same. Strange!!!
Sepideh

An interview with a highly ranked government official in the ministry of ICT provided a glimpse of the nature of filtering (censorship) of weblogs: 'For example we had to intensify filtering when women's campaigns were progressing, or when the presidential election was heating up ... these sites get filtered exponentially, meaning that after filtering one site; all the sites linking to it and all the links to

Figure 5 Logos exhibited by many bloggers as a sign of protest against the censorship of the phrase 'Women', imprisonment of feminist activists and filtering feminist websites.

the links get filtered'. However, an interview with one of the campaign members gave a different perspective. This interviewee posited that the Government censorship efforts have been ineffective and provided evidence of daily statistics that demonstrate 1100 unique users visiting the campaign site. This figure remained unchanged after the government censorships. Furthermore, according to this same interviewee, most of the visitors access the site through blocked URLs, while others access the site through approximately 100 news sites and weblogs, which have either posted their logos on their sites, or have linked a news item published on Change for Equality. Many weblogs and websites provide a list of proxies or other facilities that can be used to access blocked websites. The blog extract below is typical of those available online:

June 2007 <http://varesh.blogfa.com>
This article titled 'A campaign against violence and backwardness' was published on roozonline.com. Because you cannot view this site from Iran [because it is censored] I have put it on this blog ...
Asieh Amini

Zarafe.com is an example of a site that provides proxy access to some blocked websites and weblogs. It also allows users to access common social networking sites such as Orkut, MySpace etc. Feminist activists also use weblogs to publish their stories from prison, during and after their imprisonment period. A feminist campaigner and also a professional journalist (who wished to remain unidentified), explained how for several weeks after she was arrested, she reported and transferred the events and happenings inside the prison to her visitor friends written on tissue paper that was smuggled out. These reports were then quickly publicised by making them available on weblogs. Thus, the 'cat and mouse' game of Government censorship of weblogs, websites such as BBC Persian, Flickr, Orkut, Myspace, Youtube, Hi5 and many more was largely ineffective due to webloggers sharing technical knowledge to enable users to bypass state censorship.

The government decided to adopt two new approaches to dealing with the Internet activists. First, in 2007 an announcement was made on the Ministry of ICT website ordering all website owners and webloggers to register their websites (on <http://www.samandehi.ir>). The ministry of media warned that any unregistered weblog with an 'unknown' label would be blocked. We observed that blogs displayed anger at this, as they believed the aim of the legislation was to remove their anonymity. However, we observed many bloggers that chose not to register their weblogs and displayed a banner in defiance of this legislation. Second, although it had wide effects beyond just the activists (Figure 6), the Ministry of ICT in Iran prohibited Internet Service Providers from providing high-speed connection and limited the Internet connection speed for private use to only 128Kbps. This severely constrained the activists' ability to engage in instant communication implied by the utopian 'death of distance' technological frame. This was justified by the government as an attempt to stop the public from downloading Western films and videos which may contain 'unsuitable material'. In an

Figure 6 Anti-site registration banner: A banner stating in Farsi: 'I will not register my site' can be seen on many Iranian weblogs.

interview with a blogger and also a professional journalist⁸ (who wished to remain anonymous), he argued convincingly that these types of measures would never succeed. He explained that 'there are a lot of Persian Weblog providers, but if they oblige us to register our Weblogs, we could simply go elsewhere. There are a lot of foreign Weblog providers that can, and do, facilitate Farsi Weblogs'.

Although feminist campaigns have achieved some success, such as increasing minimum age of marriage for girls from 9 to 13 years and obtaining child custody up to the age of 7 years; on the whole the Internet campaigns have been largely unsuccessful. A Tehran mayoral candidate, herself involved in feminist campaigns, argued in an interview that Internet campaigns 'live and die' and mostly have no impact on the Iranian government. Formal changes if achieved may be accompanied by great inertia. She stated: 'talking to the government is like talking to a deaf ear ... one of our campaigns has been very successful, the children with foreign father and Iranian mother campaign. Officials have agreed to issue these children identity cards to allow them to live in the country and obtain education etc. However, intentionally or not, this has not been communicated to registry offices and not even one identity card has been issued'. Regarding the 1 MS Campaign, this interviewee was highly pessimistic, stating: 'the campaign has not even collected 100,000 signatures, never mind 1 Million'.

Case 2: Stop Stoning Forever campaign

The Iranian law is mainly based on the Islamic Sharia law. In the Sharia law, the punishment for a married man or woman who has committed adultery is death by stoning. Therefore, Article 99 of the Constitution states: 'whoever commits adultery with a free will must be punished by stoning'. Articles 100–104 then describe the details of the punishment. However, in December 2002 Ayatollah Shahroudi, Head of the Iranian Judiciary, declared a moratorium on stoning in Iran. Nevertheless, stoning sentences continue to be handed out as no change was made to the Iranian Penal Code to prohibit them.

The SSF campaign started its work in August 2006, when a group of Iranian human rights defenders, mostly women, among them activists, journalists and lawyers, began a campaign to abolish stoning following reports that a man and a woman had been stoned to death on 7th May 2006 despite an official moratorium on such executions

Figure 7 SSF campaign logo.

(Figure 7). Since then, they have identified at least nine women and two men who are under sentence of death by stoning for committing adultery, and lawyers in the group undertook to represent them.

Despite the Iranian Judiciary's denial of the incident, campaign activists have gathered evidence that this stoning, along with few other cases, had indeed occurred, and that several more cases are still pending. The campaign's main argument is based on Articles 6 and 7 of the International Covenant on Civil and Political Rights, which respectively state: 'in countries which have not abolished the death penalty, sentence of death may be imposed only for the most serious crimes' and 'no one shall be subjected to torture or to cruel, inhuman or degrading treatment or punishment'. Government officials have all denied such sentences and because of the government control of public media, such evidence could never be presented publicly. However, using the Internet the campaign's activists have been able to reach a significant audience to provide them with legal education, raise their awareness, and involve them in the campaign. Iranian bloggers also play a role in distributing the news, links, and stories throughout the Iranian blogs which are transferred to foreign blogs, news channels, and other human right campaigns. Bloggers also discuss the Islamic Sharia law and the Iranian constitution on this issue, which results in public awareness and education. Many weblogs, websites, and human right campaigns display the logo of the campaign and provide the link for people to visit the campaign's website and sign the petitions. Weblogs provide their readers with a standard letter in several languages to be signed and posted to government officials to stop these punishments and to make amendments to the Iranian Penal Code. Some bloggers provide their readers with officials' telephone and fax numbers and ask them to contact officials to plead for the release of detainees and to maintain pressure on the government. Others provide details of the execution's place and arrange gatherings to stop them. Some extracts are given below:

18 June 2007 <http://sibitala.blogspot.com/>
What Can You Do? Ring or bombard the Iranian officials with faxes. Here are the phone numbers [...] Spread the news. If you are in Iran and live near Takestan [The town of the upcoming execution], be ready so that if the sentence was not cancelled, you can go to Takestan's Behesht Zahra [Takestan's Cemetery].

19 June 2007 <http://www.meydann.org/>
Urgent Press Release
URGENT ACTION ALERT: You only Have Hours to Oppose the Scheduled Public Stoning of Mokarrameh and Her Partner.

The Stop Stoning Forever Campaign invites all citizens of the world to contact the Iranian officials by phone and/or fax and ask them to stop the public stoning of Mokarrameh Ebrahimini, the 43 year old mother of three children, and her partner, the father of her 11 year old child. Please note that email may not be effective. Also, please note the time difference since the stoning is scheduled for Thursday, June 21, in the morning, Tehran time, which is Wednesday evening and early Thursday morning in the US and Europe. Please act now before it is too late!

19 June 2007 <http://equalitynow.org>
Please send appeals to arrive as quickly as possible, in Persian, Arabic, English or your own language: Explaining ... State that Amnesty International considers the punishment of flogging to constitute cruel, inhuman and degrading treatment amounting to torture ... Please send your appeals to:
Leader of the Islamic Republic, His Excellency Ayatollah Sayed 'Ali Khamenei, Shoahada street ... and Head of the judiciary: His Excellency Ayatollah Mahmoud Hashemi Shahroudi Ministry of Justice ... Send copies to diplomatic representatives of Iran accredited to your country ...

Outcome of the campaign

The SSF campaign has had some success. Although the campaign has not caused alterations to the Iranian Penal system, using the Internet has spread the news and created an international opposition, applying pressure on the Iranian authorities to adjourn some cases. For example, the Norwegian Ministry of Foreign Affairs personally contacted Iran's Ambassador, Abdolreza Farajirad, to protest against the stoning of Jafar Kiani in Iran (Berglund, 2009). UN human rights chief, Louise Arbour, condemned the execution, saying that 'stoning is in clear violation of international law'. She called on Iran to stop the stoning of Kiani's partner, Mokarrameh Ebrahimi, who is reportedly in jail with the couple's two children (United Nations, 2009). Also according to Radio Liberty, the United Nations, Western governments, and human rights groups have strongly condemned the stoning of an alleged adulterer. In a letter to the head of Iranian Judiciary, Ayatollah Mahmud Hashemi Shahrudi, Human Rights Watch urged prompt action to prevent the stoning and called on the Iranian authorities to revoke regulations under the country's Islamic Penal Code that permit execution by stoning. In response to this international pressure and the SSF campaign, Elham Aminzadeh, the Vice President of the Foreign Relation of Iran's National Security Commission, told ISNA (an Iranian news agency):

'The proof and substantiation of this campaign [SSF] is simply based on a list [of signatures] produced from the

Internet and members of the international community which is not recognised by us'.

In general, the Iranian government's response to this international pressure has been to ignore and deny but in most cases, these pressures have resulted in postponement or complete suspension of the punishments. According to Amnesty International, offenders Parisa, Shamameh, and Hajieh, who all faced death by stoning, have recently had their cases reviewed. On 5th December 2006, Parisa was released after receiving 99 lashes and Hajieh had her sentence overturned and was released. Shamameh's stoning was also rejected in the Supreme Court, ordering a retrial due to incomplete investigations in the case.

Discussion and conclusion

Does the Internet contribute to the accomplishment of conviviality in Iran? Utopian CM activists argue that Internet social networks will facilitate grassroots democracy, geographic boundaries can be diminished and 'diasporic utopias' can flourish. Online anonymity allows citizens to communicate more freely, thus promoting a more enlightened exchange of ideas (Toffler, 1991; Rheingold, 1993, 2002; Pavlik, 1994; Hague and Loader, 1999; Kamarck and Nye, 1999). The case studies show a marked difference between these utopian technological frames and the ways in which Iranian Internet social networks developed and were influenced by economic and political context. Contrary to the visions of the utopian CM, *our findings do not provide evidence that Internet availability will guarantee any significant changes towards the accomplishment of a convivial society*. Our findings show that Internet conviviality cannot be treated as an independent variable with deterministic outcomes on society, but as a technology that is shaped by ongoing economic and political forces. The Iranian Internet social networks are not universally accessible, frequently induce fragmented, nonsensical, and enraged discussion and the potential as a tool of liberation is tempered by the Iranian government's adoption of systems of surveillance and censorship.

Initially, the Internet was met with enthusiasm by the government and the Iranian public. However, the community of bloggers and the government embraced the Internet for different reasons. Some of the citizens' utilisations of the Internet created anxiety within the Iranian officialdom. Clerics that have once called the Internet a 'gift to spread the word of the prophet' (Hammersley, 2002) began calling it a 'Trojan Horse, carrying enemy soldiers in its belly' (Macintyre, 2005). Therefore, the same government that had formerly invested vast sums in promoting the Internet began investing heavily in censoring it. However, the government's lack of expertise in Internet technology did not produce effective censorship as the usage of the Internet was shaped by the online social networks of bloggers. The government's counter movement involved investment in the education of officials especially in the ministry of ICT in order to impose censorship. After several years of failed attempts to censor the Internet, the government considered its prohibition altogether. However, the government's future plans and current levels of reliance on the services provided by the Internet for cross organisational communication, e-government, e-commerce, etc. made it impossible to abandon it altogether.

Both cases demonstrate the campaign movements and counter movements of the government and how resultant state censorship was instituted and subsequently bypassed. A continuous 'cat and mouse' battle between bloggers and government ensued as the government instigated further efforts to remove anonymity from blogs, arrest bloggers, and block the campaign information. Neither group has been fully successful nor, in these two cases, are there any clear winners or losers but we witness an ongoing 'struggle'.

Feminist campaigners did not achieve anywhere near one million signatures and the SSF campaign was also largely unsuccessful in making any direct alterations to the Iranian Penal system and consequently, at the time of writing, stoning remains a legitimate form of punishment. However, campaigners, with the aid of international pressure, have achieved some success in minor changes to the law on marital age and in deferring and even revoking stoning sentences: achievements much celebrated by bloggers.

How much of this achievement is attributable to the conviviality of the Internet? The main contribution of Internet social networks to both cases was in the production, sharing, and communication of campaign information. Table 2 summarises the findings in relation to the characteristics of conviviality.

Internet social networks were employed for contacting individuals, collecting signatures, through petitions and emails, online banking and funds transfer using PayPal, arranging events, meetings and seminars and distributing educational material. The Internet enabled sharing of information that aided circumvention of government censorship and filtering of Internet content. This example of Internet conviviality enabled users to expand the realm of what can be said in public, promote campaigns vigorously, and reach out for the international community. However, our analysis of the CM technological action frame of democratisation enabled by Internet social networks remains pessimistic. This is because the obstacles faced do not stem from an inability to organise effectively or make optimal use of the Internet but from the status of the Iranian religious theocracy as an ideologically contentious issue; one in which powerful interests have a clear stake in the maintenance of the Sharia law underpinnings of stoning as a punishment and that of the position of women in Iranian society.

Isolating the success of the campaigns to Internet conviviality alone as utopian CM activists imply is problematic. The Internet campaigns we examined were intermeshed with other forms of activism involving other media and face-to-face encounters. Our study thus concurs with Diani's (2003) network perspective of social movements that stresses that Internet social networks are one of many factors woven into a web of multiple media, and face-to-face interactions that can be used as a facilitator of change. It was also apparent that the Internet differs from a mass broadcasting media. Access to the campaign sites in our study was selective, users chose to visit the sites or not and thus they tended to be self-selected, mainly 'converted' individuals or were those brought to the site from other media or face-to-face encounters. Referring to the case of Indonesia, Merlyna Lim (2003) writes: 'No political revolution can happen without involving society on a wider scale. Even those efforts within cyberspace are fruitless unless

Table 2 Findings summary

Conviviality concept	Findings/Illustration from the cases	
	Case 1: The One Million Signature campaign	Case 2: Stop Stoning Forever campaign
Users, rather than the designers of the technology, must have the power to shape it according to their tastes, desires and needs.	Government goal for Internet was for promulgation of the Shia ideology. Campaigners shaped the Internet to <ul style="list-style-type: none"> • collect signatures and money; • raise awareness; • arrange meetings; • access a large audience; • spread news and stories. 	The SSF campaign shaped the Internet to <ul style="list-style-type: none"> • spread news and stories; • provide legal education; • raise awareness; • spread petitions; • provide citizens with official's contact details to increase pressure; • provide detail about time and place of stoning and solicit campaigners' attendance.
Convivial tools must promote communities and encourage and maximise communication amongst the members of the society.	Bloggers discussed the campaign in detail and stated their opinions. Some weblogs were based outside Iran. The Internet facilitated the creation of an international network that both supported and opposed the campaign.	This campaign faced little organised opposition and facilitated a community across the world from news agencies to foreign embassies, human right campaigners, journalists and general public. The affiliation of these geographically spread members of the community was facilitated by the Internet.
Convivial tools must make the most of the energy of individuals, and maximise and encourage creativity and imagination of users.	The 1 MS campaign used PayPal to collect money, integrating the Internet with other technologies such as mobile phones to publish photos and videos, use of campaign banners by bloggers to advertise for the campaign. Facilities such as proxies to circumvent censorship to access blocked websites.	The Internet facilitated dissemination to mass media and reached a large audience some of whom pressured officials at critical moments. The major innovative aspect of its use in this case was probably the distribution of petitions and involving the international community.
Users of convivial tools must not be mere consumers, but also producers and contributors to the technology.	Internet social networks were not mere consumers. They educated readers and raised their awareness, readers provided their own feedback, and opposed or supported the campaign.	Internet users were not mere consumers of information, but they circulated the information, added feedback, and arranged meetings using the Internet.

they can be extended into real social, political and economic spaces' (p. 274). Of course, one could counter argue that the Internet is another manifestation of these spaces.

The Internet does enable dialogue with distant individual and groups adding credence to the 'death of distance' mantra. However, much of the dialogue we witnessed on the blogs involved users abusing anonymity and lack of spatiality to create 'noise' (examples were given in the direct responses by bloggers to the 'Open stadiums to Women' campaign above). We thus concur with Breslow's finding (1997) that Internet social networks promote a sense of sociality, but it remains to be seen whether this translates into solidarity. He argues: 'How should I know who is at the other end, and when the chips are down, will people actually strip off their electronic guises to stand and be counted?' (p. 255). Moreover, we witnessed the government restricting bandwidth, significantly reducing

the potential for the 'death of distance' and restricting the instantaneous communication claimed as transformational by utopian CM activists.

Critique of the CM activists' argument for the Internet as a democratic tool promoting free dialogue resides in, the Iranian Internet's Achilles' heel: its isolation from the bulk of the Iranian society. According to the World Bank (2008), Iran's GDP per capita is \$9855 for 2007, compared with the UK's \$35,100. However, Pars Online, a major Internet service provider in Iran, charged a monthly fee of \$65 for 128Kbps Asymmetric digital subscriber line (ADSL) access with unlimited traffic in the provinces of Iran and \$27 for a similar service in Tehran. In the UK, Virgin Media charged a monthly fee of about \$20 for 2Mbps broadband access. Comparing these figures demonstrates that average Iranian households in the provinces of Iran must spend a staggering one-twelfth of their monthly income to gain

access to very low speed Internet, something which is considered a luxury compared with food, education, and housing. In the UK, an average household spends a mere 146th of their monthly income to gain access to a high-speed broadband Internet. These figures not only demonstrate a clear gap in the affordability of the Internet access between the citizens of Tehran and those occupying the provinces of Iran, but it also reveals that the Internet is limited to the more affluent segment of the Iranian society.

The contributions of this paper are as follows. First, we provide a further case study in addition to Lim (2003) that uses Illich's conviviality concept. By applying Illich's concept of conviviality that was focussed on 1970s technologies to a latter day context we demonstrate the utility of the theory to contemporary technological developments and bring it to the attention of the Information Systems community. Second, conviviality provides a novel standard to judge technology as an alternative to the technological action frames of democratisation, death of distance, liberty, freedom/information rights. Third, we argue that the four conditions of conviviality of technology add value to the CM literature. The analysis demonstrates how the concept of conviviality is helpful in categorising the impacts and enabling a critique of the utopian technological frames of Internet social network CM activists some of which are identified in this paper.

Fourth, we contribute a detailed study of Iran, an under-researched location. We explore the tensions between Internet social networks and the importance of economic and political context with regards to the accomplishment of convivial society. This is the first known study that examines the impact of online campaigns and societal change in Iran. In addition, it provides several snapshots of the Iranian Internet communities attempting to make alterations to the Iranian constitution and society and also several accounts of the Iranian government trying to control the Iranian Internet and suppress the activities of particular groups. Our study examines the bi-directional struggle between the government and Internet community.

Finally, this study employs a novel way to study contemporary societies by conducting a virtual ethnography. Therefore, unlike many studies of the Internet which lack significant attention to users' activities and conversations in virtual communities, this paper is built mainly around an ethnography of these communities. The paper contributes to the studies that have employed this methodology and presents potential for subsequent researchers.

In the future, we plan to extend our research and analysis to other regimes such as China where the government has been more pro-active rather than reactive in controlling access to the Internet for its citizens.

Notes

- 1 Hijab is the Arabic term meaning to cover. In the Islamic context, it is a religious requirement that obliges women to dress modestly and to cover everything except the face and hands.
- 2 The Shia faith is the second largest denomination of Islam. Shias believe that Ali, prophet Mohamed's son-in-law, was his rightful successor. Significantly, Shias also believe that the religious leader is also the political leader in the Islamic state.

- 3 Virtual ethnography is a contentious area (Hine, 2000; Ruhleder, 2000; Hunt and McHale, 2007; Garcia *et al.*, 2009). The arguments centre on where the virtual ethnographer is located, the role and nature of technologically mediated communication and the special skills required in such communications including data protection (Garcia *et al.*, 2009). In our case, the location of the subjects, the confidential nature of the topics discussed and the consequences of exposure meant we had no choice but to employ technology-mediated communication with our subjects. In all cases, the confidentiality of communications was maintained with the utmost care.
- 4 This is, coincidentally, another example of conviviality.
- 5 To ensure the popularity of these weblogs Technorati was used. Technorati is a company that keeps track of weblogs on the Internet, providing some useful statistics for researchers.
- 6 Basij is a volunteer-based Iranian paramilitary force that was founded by Ayatollah Khomeini in November of 1979.
- 7 Zeitoon (Olive) is the interviewee's nickname. Her weblog <http://z8un.com> is one of the most well-known Farsi weblogs. Zeitoon has a different online identity from her real life and even her friends and relatives are unaware of her weblog. This is not uncommon and bloggers often choose not to identify themselves. Zeitoon did not agree to be interviewed orally to protect her identity.
- 8 This blogger was arrested and sentenced to a lengthy prison sentence as a result of the weblog. Temporary release from prison for medical treatment enabled participation in the interview.

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