



3-2014

# Whither Blogestan: Evaluating Shifts in Persian Cyberspace

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## Recommended Citation

Giacobino, Laurent; Abadpour, Arash; Anderson, Collin; Petrossian, Fred; and Nelleman, Caroline. (2014). Whither Blogestan: Evaluating Shifts in Persian Cyberspace. *Iran Media Program*. Retrieved from <http://repository.upenn.edu/iranmediaprogram/12>

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# Whither Blogestan: Evaluating Shifts in Persian Cyberspace

## **Abstract**

Between 2002 and 2010, the Persian blogosphere—or what is referred to as “Blogestan”—exploded in size and became the topic of numerous reports, essays, videos and books. Global interest in this emerging trend, however, seemed to decrease during the second presidential mandate of Mahmoud Ahmadinejad (2009-2013), when online social networking and microblogging became the most discussed and researched IT-related topics, along with the Iranian regime’s policies aimed at deterring online expression. This report is aimed at addressing whether Blogestan itself has faded in size, activity and influence since 2009. We use three parallel methodologies: An audience survey of 165 Persian blog users from inside and outside of Iran; a web crawling analysis of the Iranian blogosphere; and a series of interviews with 20 influential bloggers living outside and inside Iran.

## **Disciplines**

Communication Technology and New Media

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# Whither Blogestan: Evaluating Shifts in Persian Cyberspace

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MARCH 2014

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The Iran Media Program is a collaborative network designed to enhance the understanding of Iran's media ecology. Our goal is to strengthen a global network of Iranian media scholars and practitioners, and to contribute to Iran's civil society and the wider policy-making community by providing a more nuanced understanding of the role of media and the flow of information in Iran.

**Laurent Giacobino** has spent the past eight years designing and coordinating projects to foster the use of technology by civic actors in closed societies, particularly in the Middle East, Asia and Africa. He currently works as an independent consultant with different media development and technology organizations on programs focused on education and raising awareness on Internet freedom and digital security. He is the co-author of the two editions of "How to Bypass Internet Censorship" (2008, 2011). He holds a M.A. in Information Technology and Knowledge Management.

**Arash Abadpour** holds a Masters of Science in Computer Sciences and a Ph.D. in Electrical and Computer Engineering. He has been a blogger since October 2004, under the pen name Arash Kamangir. His Persian blog Kamangir (<http://persian.kamangir.net/>) is among the twenty most-read blogs in the Persian blogosphere. Arash is regularly consulted and interviewed on matters related to the circumstances of the Internet in Iran by the mainstream media. He provides commentary regarding the Persian blogosphere and has been involved in a number of research projects on the relationship between the Iranian users and the Internet. More information regarding his work on Internet use in Iran can be found on his personal website at <http://abadpour.com/>.

**Collin Anderson** (@CDA) is an independent researcher currently focusing on global trends in online activism, electronic surveillance and Internet censorship. He has also been involved in identifying the international flow of surveillance equipment and exploring alternative means of communications that bypass normal channels of state-control, as well as documenting the ramifications of export regulations and sanctions on democratization movements. He is the author of "The Hidden Internet of Iran: Private Address Allocations on a National Network" and of "Dimming the Internet: Detecting Throttling as a Mechanism of Censorship in Iran."

**Fred Petrossian** is online editor in chief of Radio Farda, Radio Free Europe's (RFE/RL) popular Persian site with 12 million page views every month. He co-edited and co-wrote a book on Iranian protest movement based on citizen media (*Hope, Votes and Bullets*, 2010). He is co-founder of award winning March 18 Movement to raise awareness about bloggers' safety around the world. Petrossian has been the Iran editor of Global Voices, a project that started at Harvard University to monitor citizen media and social media in the world. He has been an international speaker on civil society and citizen media in media and academic centers such as Yale University.

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# Acknowledgements

The authors wish to express their deepest gratitude to:

Briar Smith, Amy Brouillette, Magdalena Wojcieszak, the Iran Media Program, the Center for Global Communication Studies and The Annenberg School for Communication (UPenn), for their support and guidance in the composition and editing of this report;

John Kelly, Bruce Etling and Morningside Analytics, for their seminal 2008 report and for their openness to share their original datasets as well their insights on the present situation of Blogestan;

Dr. Pierre Blanchard for his advice on time-series analysis;

Bijan Khoshnood who contributed to the copy-editing of the report;

The bloggers and blog readers who have shared their experience and vision in the interviews and audience survey.

This report is the result of a brainstorming session between Briar Smith, Laurent Giacobino and Arash Abadpour during the 2013 Cyber Dialogue conference at the University of Toronto. The authors express their gratitude to the Canada Centre for Global Security Studies, the MUNK School of Global Affairs at The University of Toronto, Prof. Ron Deibert and ASL19 for allowing this discussion, as well as many others, to take place.

# Table of Contents

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The Iranian Internet Evolution	1
Summary of Key Findings	3
Introduction	6
Methodology and Sample Information	12
Key Findings from the Audience Survey	13
Key Findings of Web Crawling Analysis	22
Key Findings from Blogger Interviews	27
Conclusion: The Future of Blogestan	37
Bibliography	38
Annex: Methodology, Sample and Survey Information	40

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# The Iranian Internet Evolution

Foreword by John Kelly

Before we published our 2008 Berkman Center study, the Iranian blogosphere was described by experts as a place where young democrats opposed the regime. Articles, books, and interviews said this and little more about it. Its size and vitality were asserted, but as details highlighting a political vision of democratic shoots struggling up through the (hopefully melting) ice of authoritarianism. Spring was on its way.

Our study did not contradict this story, but the application of network analysis and statistical clustering to a huge corpus of actual Iranian weblog data showed that the young democrats were just one part of a larger network that contained many other kinds of Iranian bloggers. Unexpectedly, we discovered dense networks of conservative political and religious bloggers every bit as active online as the young democrats (who, as it turned out, also included a number of older expatriates). In some ways, the side of the Iranian blogosphere favoring the Iranian regime was more interesting than the opposition. Within it there were clear subgroups, such as the “CyberShia” who focused mainly on religion, and others who focused on insider politics from a conservative point of view. While all of these supported the Supreme Leader, some liked Ahmadinejad and some hated him. The divisions and arguments among conservatives revealed how Iran was no run-of-the-mill autocracy, but a hotbed of competing factions each with their agendas, supporters and advocates.

Beyond politics, there were also large clusters around cultural topics, notably Persian poetry and literature. The alignment of these clusters in the network showed cultural divisions that extended beyond overt politics. In Iran, which 14th Century poet you cite can say a lot about your 21st Century political views. And so the mapping showed that the division between the opposition and conservatives is not just a division between the people and a government, but one that ran right down the center of Iranian society.

Since 2008 we have kept an eye on the Iranian blogosphere, remapping it annually and sometimes around special occasions like the 2009 election. There have been some important changes, but also important continuity. The changes have resulted mainly from the efforts of the regime and its allies to influence online communications in their own favor, by suppressing dissenting voices and promoting friendly ones. The suppression has taken the form of blocking and forced removal of blogs, as well as intimidation of critical voices. The second approach has included efforts to flood the network with Basijis and other pro-regime bloggers. Both of these efforts have met with only partial success. The pro-regime, particularly CyberShia, sector of the network has expanded, but it seems mainly to be talking to itself. The opposition component has been diminished, but is still present and active. To stay online, most of the opposition bloggers have dropped off the Iranian blog hosts and moved to international ones like Blogspot and WordPress. This is where the continuity story picks up.

Even though some key regions of Iran’s weblog network grew and others shrank, overall the structure has remained remarkably similar. On one side of a broad divide lies opposition politics, literature, poetry, and cultural clusters associated with a mix of ancient Persian and modern secular traditions. On the other side lies conservative

politics and many strands of religious culture, theology and practice. Beyond these main groupings are blogs on pop culture, sports, and parenting, similar to the US. Amazingly, four years after our first map, only 15 percent of the blog URLs in the network were the same but the structural form was recognizably intact. Like the human body, individual cells grow and die but the person stays the same.

Lately, we have been mapping other “layers” of Iran’s networked public sphere. Because of blocking and other restrictions, the growth of Twitter and Facebook has been slow in Iran. But we have begun to identify significant Persian networks growing in each platform. This work is just beginning but so far, these networks show a similar divide between the religious and non-religious, pro-regime and regime critics. Of several authoritarian or semi-authoritarian countries we have studied, Iran was the first where we saw the regime mount a serious effort to shape the online environment by engaging in it, not just blocking or filtering. Perhaps China began this first, and now it is common practice in Syria, Russia and elsewhere, but Iran was definitely ahead of the curve. Now that there has been a political shift in Iran, and some hints that Internet restrictions may ease, it will be interesting to see how Iran’s networked public sphere evolves further. If we see a reprise of the original storyline about democratic shoots, it would be nice to discover that this time Spring is actually on the way.



# Summary of Key Findings

Between 2002 and 2010, the Persian blogosphere—or what is referred to as “Blogestan”—exploded in size and became the topic of numerous reports, essays, videos and books. Global interest in this emerging trend, however, seemed to decrease during the second presidential mandate of Mahmoud Ahmadinejad (2009-2013), when online social networking and microblogging became the most discussed and researched IT-related topics, along with the Iranian regime’s policies aimed at deterring online expression.

This report is aimed at addressing whether Blogestan itself has faded in size, activity and influence since 2009. To address these questions, we use three parallel methodologies:

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An audience survey of 165 Persian blog users from inside and outside of Iran;

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A web crawling analysis of the Iranian blogosphere, based on a list of 24,205 of the most active and connected Persian blogs between 2008 and 2012;

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A series of interviews with 20 influential bloggers living inside and outside Iran.

The audience survey, the web crawling analysis, and the blogger interviews were conducted between July and September 2013.

Our research confirms that the Persian blogosphere has undergone significant shifts since the late 2000s as a result of a confluence of multiple factors: state intervention, the rise of social networking sites, changes to Iran’s socio-political culture, and personal/professional issues. Our study finds that these factors have indeed resulted in a general dilution of Blogestan, as indicated by declines in blogging activities and the number of active blogs in our sample. Changes to the internal dynamics of the Persian blogosphere are also evidenced by shifts in blog content, how audiences interact with blogs and bloggers, and blogger-to-blogger relationships.

Specifically, this study finds a decline in overall blogging activity among our survey respondents, with nearly half reporting having stopped their activity, in large part because of time spent on social media. Our web crawling analysis confirmed this high rate of blog abandonment, with only around 20 percent of the prominent blogs from 2008-2009 still online in September 2013. In addition, our data shows a general decrease in the frequency of posting: 70 percent of bloggers surveyed publish one post per month or less—in contrast to earlier years when “if you did not blog for three consecutive days, then you would get hundreds of messages asking if you are alright.”<sup>1</sup>

Our analyses indicate that state intervention has played a central role in reshaping and diffusing Blogestan. In particular, Internet filtering—which began around 2004-2005 and intensified in the post-2009 context—has significantly limited and modified the diversity of voices in the Persian blogosphere, as well as the activity and longevity of certain blogs. According to our data, filtering practices vary according to a blog’s political orientation, web-hosting platform, and political climate. Reformist blogs are 17 times more likely to be filtered or removed than conservative blogs. Furthermore, three times the number of reformist blogs in our sample are “deleted” or “not found” in comparison to conservative blogs. In addition, nearly all blogs hosted on the only two popular platforms operating outside Iran, WordPress and Blogspot, are blocked in Iran. According to our analysis, these platforms host a majority of reformist blogs.

The state’s crackdown on online communications and bloggers produced a myriad of changes to the Persian blogosphere, according to our analyses. In the early years, external constraints encouraged the explosion of the blogosphere, as Blogestan provided a less restrictive environment compared to mainstream media and political discourse. Growing state pressures on bloggers, and the expansion of legal restrictions on blogging activities and online communications, however, put both bloggers and the Persian web in general under intense scrutiny. These conditions drove many prominent bloggers to alter or cease their blogging activities, while others decided to move to anonymous blogs, or to emigrate. Bloggers interviewed for this report confirm the negative impact of the so-called “diaspora effect,” which triggered inherent changes in the tone of their blogs and attitude both towards Iran and the West, often resulting in a loss of audience and a decrease or even cessation of their blogging activities.

The growth of social media, and, in particular, social networking sites (SNSs) like Facebook, is also among the most important causes of the erosion of Blogestan. Our audience survey shows that although social networking sites are perceived as both catalyst and impediment for blog usage, these platforms have significantly altered the way readers interact with blogs. Direct access to the blogs seems to be progressively replaced by an access via SNSs; the discussion on posts now takes place on SNSs and no longer via blog comments. Although most readers report a change in how they access and interact with blogs, nearly all respondents report still reading blogs, and according to our analysis, there is no detectable pattern of decline in blog consumption. However, the majority of the survey respondents started to read blogs at least four years ago: one may ask if there is any replenishment of the blog reader base or if Blogestan relies on a legacy readership.

Bloggers we interviewed generally agree that the increase in SNSs and link-sharing sites have had a negative impact on Blogestan, as these platforms offer both users and bloggers faster and more efficient modes of activity and participation. SNSs facilitate publication and instant promotion of any content, including short, often less analytical, and re-used content. They also provide a consistent, seamless and crossplatform experience for readers. The rise in SNS usage has not only significantly affected how and what types of blog content is produced and promoted, but also has fundamentally altered the nature of blogger-to-blogger and blogger-to-audience relationships within the Persian blogosphere. For instance, although the popular social networking and link-sharing site Balatarin is widely used to promote blog posts and to assess their impact, bloggers complain that it has also caused a “Balatarinization

of Blogestan,” which favors provocative, radical, and extreme content over the more thoughtful intellectual conversations that attracted many readers to early Blogestan.

Over time, most bloggers migrated to social networking sites to promote their blogs and instantly reach their audiences. Although this parallel use of SNSs and blogs helped some bloggers be efficient and responsive, most agree that the consequence of this platform migration is that social media are becoming the *de facto* owners of blog content, of discussion on posts, and by extension, of blogger-to-blogger and blogger-to-audience interactions. **Additionally the flood of content produced by thousands of SNSs users meant bloggers’ unique social status was impacted, and their contributions more easily lost in a sea of other contributions.**

At the same time, bloggers we interviewed report that the closure of popular services such as BlogRolling in 2010 and Google Reader in 2013 disrupted important connections between bloggers, hindering a key dimension of the dynamics of Blogestan. For instance, the feed aggregator Google Reader—nicknamed “Gooder” by Persian users—allowed audiences to follow numerous blogs efficiently while circumventing the censorship of filtered blogs.

Initially an unrestricted platform for a range of voices—including journalists and social activists—Blogestan grew increasingly more politicized as a result of changes to Iran’s socio-political culture and the increase in reformist and pro-democratic discourse. These socio-political changes in Iranian society led many bloggers to abandon the initial “personal diary” approach in favor of socio-political analysis and op-ed style commentary. This trend, emphasized by many of our interviewed bloggers, is also highlighted by our audience survey: the portion of blog readers interested in “personal interests and hobbies” has dramatically decreased, while more and more readers want to read about news, leading many bloggers to address more political topics that possibly were not their first preferences, and, in turn, reducing their incentive to blog.

Beyond these factors, bloggers we interviewed also cite financial and professional reasons for a decline in their own blogging activities. For instance, bloggers report that they reduced their blogging activities when they left university and began their professional lives, because blogging could not offer financial stability and because blogging might cause some risks to their new careers.

# Introduction

During the first decade of 2000, a significant number of reports, essays, videos, and books depicted and analyzed one of the most exciting trends of the so-called Web 2.0: the Persian language blogosphere, or Blogestan (literally: “province of the blogs”). From 2002 onward, Internet users from around the world were empowered with user-friendly and affordable tools allowing them to be creators and not just consumers of online information. With tens of thousands of active Persian blogs—and with Persian reportedly being the third most-popular language on the Internet<sup>2</sup>—Blogestan was seen by many as one of the most promising Internet grassroots movements.

This report attempts to understand the state of Blogestan in 2013 and how it has evolved since Western expectations for the Persian blogosphere began to deflate in the late 2000s. In so doing, it is necessary to first review the main narratives on Blogestan in order to demonstrate how perceptions of the Persian blogosphere have developed over the past decade.

## Iranian Blogosphere and the Emancipatory Narrative

The first significant publication about Persian blogs, *We are Iran: The Persian Blogs*, presented blogs as a safe haven for young, urban bloggers who espoused secular, pro-human rights, and democratic ideals, with aspirations for more freedom of thought and speech, and an inclination for a modern, even “Western” way of life.<sup>3</sup> This rich but distorted picture both reflected and corroborated Western narratives about the Persian blogosphere,<sup>4</sup> in which blogs were seen as the best hope for freedom and democracy in Iran: “If the commentaries by young Iranian bloggers are anything to go by, it seems that ideals have replaced ideology. They want accountability, pluralism and democracy and have shed the dogmatic ideologies of the past.”<sup>5</sup>

Various studies reinforced this perception of Iranian bloggers. Babak Rahimi highlighted the key role of the “20,000 active internet sites and weblogs [as] an alternative medium for expression that is denied to [young Iranian and especially women] in real public.”<sup>6</sup> Vancouver-based researcher Jordan Halevi (an online alias) asserted that most readers

<sup>2</sup> This ranking is often quoted and is based on December 2003 figures from the NITLE Blog Census website: <http://web.archive.org/web/20031202022722/http://www.blogcensus.net/?page=lang>. In late 2006 Technocrati only

ranked Persian as the 10th most used language on blogs: <http://www.sifry.com/alerts/archives/000443.html>.

<sup>3</sup> Nasrin Alavi, *We are Iran: The Persian Blogs* (Brooklyn NY: Soft Skull Press, 2005).

<sup>4</sup> This perspective had already been presented

by several Western media outlets. See Alfred Hermida, “Web Gives a Voice to Iranian Women,” *BBC News*, 17 June 2002, <http://news.bbc.co.uk/2/hi/sci/tech/2044802.stm>; and Michelle Delio, “Blogs Opening Iranian Society?” *Wired*, 28 May 2003,

<http://www.wired.com/culture/lifestyle/news/2003/05/58976?currentPage=all>.

<sup>5</sup> Alavi, 318.

<sup>6</sup> Babak Rahimi, “Cyberdissent: The Internet in Revolutionary Iran,” *Middle East Review of International Affairs*, 7.3 (2003), 4.

of Persian-language blogs at the time were young urban university students who openly opposed the regime's policy of web censorship, while noting that these readers also held "a wide array of views on religion."<sup>7</sup>

In 2008, a short animated film, "A Nation of Bloggers," described the blog movement in Iran as "a revolution within the revolution," and emphasized the reformist political message many young Iranians voiced through their blogs.<sup>8</sup> This idealistic vision became entrenched among Western policy makers, scholars and journalists—particularly as international relations intensified during Ahmadinejad's first presidential term (2005-2009).

Australian journalist Antony Loewenstein described how the socio-political culture in Iran forced citizens to develop public personalities distinct from their private lives, and how blogs give Iranians space to more freely express their private personalities.<sup>9</sup> While acknowledging the diversity of Blogestan—mentioning the religious leaders trained in Qom or pro-Ahmadinejad bloggers—Loewenstein portrayed Iranian bloggers as primarily young, educated, urban, middle or upper class, and unwilling to follow the society's strict rules: "Iran's online community is providing the strongest indication yet of how a predominantly young population under thirty wants to articulate an alternative Iranian identity."<sup>10</sup>

## Blogestan's Complexity: A Shift in Narrative

Meanwhile, more meticulous observers were presenting a less monolithic image of Blogestan, which reflected a much wider and dynamic socio-political spectrum than mainstream depictions. Fred Petrossian analyzed a cluster of pro-Islamic Republic Hezbollah blogs that focused not only on political issues but also on poetry, religion and other topics.<sup>11</sup> He also studied several anti-Semitic blogs, showing that anti-Semitism is a dynamic movement in Iran, combining traditional/religious, and domestic/Western elements.<sup>12</sup>

Additional studies attempted to analyze and quantify Blogestan in more systematic ways. Tehran-based Iran Civil Society Organization Training and Research Center (ICTRC) found a significant presence of blogs focused on religion, poetry and literature.<sup>13</sup> In 2008, blogger Arash Kamangir (author Arash Abadpour's online alias) launched "Didish" ("Have you seen it?"), a weekly analysis of trends and topics being discussed in

<sup>7</sup> Fred Petrossian, "Interview with Jordan Halevi, a Canadian Researcher on Iranian Blogs," *Global Voices*, 7 November 2006, <http://globalvoicesonline.org/2006/11/07/interview-with-jordan-halevi-acanadian-researcher-on-iranian-blogs/>.

<sup>8</sup> Vancouver Film School (VFS), "IRAN: A Nation of Bloggers," 2008, <http://vimeo.com/2139754>.

<sup>9</sup> Antony Loewenstein, *The Blogging Revolution* (Melbourne: Melbourne University Publishing, 2009).

<sup>10</sup> Loewenstein, 56.

<sup>11</sup> Fred Petrossian, "Hezbollah Goes Blogging," *Global Voices*, 12 December 2005, <http://globalvoicesonline.org/2005/12/12/iranian-hezbollah-goes-blogging/>.

<sup>12</sup> Fred Petrossian, (under the pen name Hamid Tehrani), "Iranian anti-Semitic Bloggers: From Mickey Mouse's Plot to Gaddafi's Jewishness," *History News Network* (HNN), George Mason University, 2008, <http://www.hnn.us/article/50535#>.

<sup>13</sup> Iran Civil Society Organization Training and Research Center (ICTRC), "Persian Blogosphere Crawler Report," 2006.

This report found some 150,000 Persian blogs and a domination of five weblog farms (Blogfa, Persianblog, Mihanblog, BlogSky, Parsiblog and Blogspot). It also showed that although the overall filtering ratio was very low (around 1 percent), filtering increased according to the popularity of blogs and differed according to the blog-hosting platforms.

the Persian blogosphere.<sup>14</sup> Although *Didish* was not regularly maintained, the original data were based on social aggregators that showed how blogs were competing against other sources of news and information (such as Radio Zamaneh or BBC Persian).

The mainstream narrative was most successfully challenged by the hallmark study “Mapping Iran’s Online Public: Politics and Culture in the Persian Blogosphere,”<sup>15</sup> which used computational social network mapping in combination with human and automated content analysis to demonstrate that the approximately 60,000 routinely updated Persian blogs covered “a wide range of opinions representing religious conservative points of view as well as secular and reform-minded ones, and topics ranging from politics and human rights to poetry, religion, and pop culture.”<sup>16</sup> Apart from depicting the complex connections between the different network formations, or clusters (“secular/reformist,” “conservative/religious,” “Persian poetry and literature,” and “mixed networks”), the study also showed that a surprisingly small portion of reformist bloggers actually blogged anonymously, and that less than 17 percent of the oppositional blogs (“secular/reformist” cluster) were blocked inside Iran.<sup>17</sup>

*Blogistan: The Internet and Politics of Iran*<sup>18</sup> also recognized the complexity and diversity of the Iranian blogosphere, noting that “far from being an undifferentiated ‘mass,’ bloggers and their ‘politics’ assume a range of broad orientations with different aims, content, forms of expression and connections to various networks, many of them contradictory and even hostile to one another.”<sup>19</sup> Likewise, journalist Cyrus Farivar asserted that “what has been happening in Iran during the two decades since the Internet first arrived is far more interesting than the simple narrative of a young wired generation throwing off the yoke of an oppressive regime.”<sup>20</sup>

Furthermore, Evgeny Morozov claimed that far from being the powerful tools for democratic debate, the Internet in general—and blogs and social media in particular—have been utilized by authoritarian powers for anti-democratic purposes, such as for gathering intelligence on citizens.<sup>21</sup> In the case of Iran, Morozov warned against equating “blogging to *samizdat* and bloggers with dissidents” as “there are plenty of pro-government blogs in Iran,”<sup>22</sup> some with even more conservative views than those of the authorities themselves.<sup>23</sup>

<sup>14</sup> Arash Kamangir, “Statistics of the Persian Blogosphere, Project ‘Didish,’” 2008.

<sup>15</sup> John Kelly and Bruce Etling, “Mapping Iran’s Online Public: Politics and Culture in the Persian Blogosphere,” Harvard University: Berkman Center for Internet and Society, 2008, [http://cyber.law.harvard.edu/publications/2008/Mapping\\_Irans\\_Online\\_Public](http://cyber.law.harvard.edu/publications/2008/Mapping_Irans_Online_Public).

<sup>16</sup> Kelly and Etling, 2.

<sup>17</sup> For information on the blocking of opposition blogs, Kelly and Etling relied on data from the OpenNet Initiative, which analyzed blocking patterns from a sample of 1,800 blogs.

<sup>18</sup> Annabelle Sreberny and Gholam Khiabany, *Blogistan: The Internet and Politics of Iran* (London: I.B. Tauris, 2010).

<sup>19</sup> Sreberny and Khiabany, 39.

<sup>20</sup> Cyrus Farivar, *Internet of Elsewhere: The Emergent Effects of a Wired World* (New Brunswick, NJ: Rutgers University Press, 2011).

<sup>21</sup> Evgeny Morozov, *The Net Delusion: The Dark Side of Internet Freedom* (New York: Public Affairs, 2011). See also Arman Nafisi’s analysis of 153 blogs, which concluded that the notion that blogs promote democratic ideals and political reform in Iran lacks sufficient

evidence, “Blogging outside Iran: A Tool for Internal Democratic Change?” Honors Thesis, University of Washington, 2008, [http://ccce.com.washington.edu/projects/assets/Nafisi\\_Blogging\\_Outside\\_Iran.pdf](http://ccce.com.washington.edu/projects/assets/Nafisi_Blogging_Outside_Iran.pdf).

<sup>22</sup> Morozov, 46.

<sup>23</sup> A series of reports by the Small Media Foundation (2013) also focused on conservative bloggers. See Small Media’s “Iranian conservative bloggers” pieces at <http://storify.com/smallmedia/>.

## Blogestan and State Influence

In the post-2009 context in particular, more researchers paid closer attention to the negative impacts of state interference over the Internet, including the expansion of technological and regulatory restrictions over online communications.<sup>24</sup> The OpenNet Initiative's (ONI) series of monitoring reports of the state's filtering practices have provided key documentation of the evolution of technological and policy-based restrictions in terms of access to online media and blogs, and blog-hosting platforms within Iran.<sup>25</sup> For instance, the program's 2006-2007 report found that at the time a substantial number of individual blogs hosted on Blogspot were filtered—including blogs related to religion, women's rights, political reform, and reproductive health—while few blogs were filtered on Iranian platforms like Blogfa and Persianblog.<sup>26</sup>

Likewise, Small Media Foundation also examined Iran's more recent filtering policies and found that authorities use a mix of "traditional" techniques ("black lists" of domains, keywords in URL and IP addresses) with more advanced methods (deep packet inspection, bandwidth throttling, alleged "smart control" of social networking sites, and filtering of VPNs and other circumvention tools).<sup>27</sup> These practices have had a strong impact on blogs and blog-hosting platforms on Blogfa and other Iran-based services, according to the organization.

At the same time, human rights groups and media monitoring NGOs, including Reporters Without Borders, the Iran Human Rights Documentation Center, Freedom House and Article 19 have raised international attention around the upsurge in detentions and imprisonment of journalists and bloggers, especially since 2009.<sup>28</sup> According to Freedom House, "since June 2009, the authorities have cracked down on online activism through various forms of judicial and extra-legal intimidation. An increasing number of bloggers have been threatened, arrested, tortured, kept in solitary confinement, and denied medical care, while others have been formally tried and convicted. At least 50 bloggers and online activists were arrested in 2009 and 2010."<sup>29</sup>

<sup>24</sup> "Internet Censorship in Iran: An Infographic," Iran Media Program (IMP), Center for Global Communication Studies, Annenberg School for Communication, University of Pennsylvania, <http://iranmediaresearch.org/en/research/pdf/1296>.

<sup>25</sup> OpenNet Initiative's reports on Iranian filtering and Internet censorship policies include: "Internet Filtering in Iran in 2006-

2007," 2007, <https://opennet.net/studies/iran2007/>; "Internet Filtering in Iran," 16 June 2009, <https://opennet.net/research/profiles/iran/>; "After the Green Movement: Internet Controls in Iran," 15 February 2013, [www.opennet.net/iranreport2013](http://www.opennet.net/iranreport2013).

<sup>26</sup> OpenNet Initiative, 2007.  
<sup>27</sup> Small Media Foundation, "Iranian Internet Infrastructure and Policy

Report," Election Edition, 2013, <http://smallmedia.org.uk/IIIPJune.pdf>.

<sup>28</sup> Reporters Without Borders, "Enemies of the Internet," Annual Reports, <http://surveillance.rsf.org/en/iran/>; Iran Human Rights Documentation Center, "CTRL+ALT+Delete: Iran's Response to the Internet," 2009, <http://www.iranhrdc.org/english/publications/reports/3157-ctrl-alt-delete-iran-039-s-response->

[to-the-internet.html#UloOgniEV2M](http://smallmedia.org.uk/IIIPJune.pdf); Article 19, Azad Tribune, 2009-2014, <http://www.article19.org/en/azad/>; Freedom House, "Freedom on the Net 2012: A Global Assessment of Internet and Digital Media," 2012, <http://www.freedomhouse.org/report/freedom-net/freedom-net-2012>.

<sup>29</sup> Freedom House, 273.

## Blogestan and Social Networking Sites

Another recent focus of scholarship relates to the impacts of new technologies on the Persian blogosphere. As highlighted by Sreberny and Khiabany: “[...] rather than targeting a large audience, [blogs] are indeed written for the benefit of other bloggers and ‘communities of interests.’”<sup>30</sup> If, as these authors suggest, blogging has always been more a conversation than a traditional medium like broadcasting, this would partly explain why many bloggers brought their “conversations” to social networking sites, where the audience is structurally limited to one’s own network (“friends,” “fans,” “followers,” etc.).

Social networking and microblogging sites have also contributed to the decline of blogs as a space for political debate, according to some researchers. Using a short survey of Iranian bloggers and media professionals from across the political spectrum, Petrossian confirmed the growing influence of Facebook as a central platform for obtaining and discussing information. Still, survey respondents said that blogs are irreplaceable, particularly for political and civil society activities.<sup>31</sup>

In a 2013 study defining archetypes of Iranian Internet users, Arash Abadpour and Collin Anderson concluded that blogging still plays a significant role for a portion of Internet users.<sup>32</sup> Likewise, researcher Klara Debeljak’s 2013 survey of more than 1,000 respondents in Iran showed that 36 percent of respondents use the Internet and 14 percent use blogs as sources for news and information.<sup>33</sup> This corroborates Iran Media Program’s earlier survey on media consumption habits among Iranians, in which 26 percent of the general population and nearly 90 percent of younger, tech savvy respondents reported turning to the Internet first to access news and information.<sup>34</sup>

<sup>30</sup> Sreberny and Khiabany, 41.

<sup>31</sup> Fred Petrossian, “Iran: Has Blogging Become Less Popular Since the Election?” *Global Voices*, 14 April 2010, <http://globalvoicesonline.org/2010/04/14/iran-has-blogging-become-less-popular-since-the-election/>.

<sup>32</sup> Arash Abadpour and Collin Anderson, “Fights, Adapts, Accepts: Archetypes

of Iranian Internet Use,” Iran Media Program, Center for Global Communication Studies, Annenberg School for Communication, University of Pennsylvania, March 2013, <http://www.iranmediaresearch.org/en/research/pdf/1287>. Among other archetypes, the authors listed five types of Iranian bloggers: the civil society blogger, the dissident blogger,

the lowprofile blogger, the IT blogger, and the famous blogger.

<sup>33</sup> Kalara Debeljak, “Youth in Iran: A Story Half Told,” InterMedia and Small Media Foundation, May 2013, <http://www.intermedia.org/youth-in-iran-a-story-half-told/>.

<sup>34</sup> Magdalena Wojcieszak, Briar Smith and Mahmood Enayat, “Finding A Way:

How Iranians Reach for News and Information,” Iran Media Program, Center for Global Communication Studies, Annenberg School for Communication, University of Pennsylvania, 2011-2012, (see page 11 and 27 for cited data), [http://www.iranmediaresearch.org/sites/default/files/research/pdf/1340899786/944/finding\\_a\\_way.pdf](http://www.iranmediaresearch.org/sites/default/files/research/pdf/1340899786/944/finding_a_way.pdf).



## The Recurrent Question of the Size of Blogestan

### Number of Persian blogs over the years, according to various sources

13,000 blogs (BBC Persian, 2003)
52,000 blogs (NITLE Blog Census, 2003) <sup>36</sup>
85,000 blogs (Alavi, 2005)
400,000 blogs (ONI, 2007)
700,000 blogs, including 100,000 active ("A Nation of Bloggers," 2008)
200,000 blogs, including 60,000 routinely updated (Kelly & Etling, 2008)
70,000 active blogs (Sreberny & Khiabany, 2010)
60,000 to 100,000 (Farivar, 2011)

Many observers have attempted to define Blogestan and its evolution by simply measuring its size—an appealing approach because of its simplicity and objectivity. Yet quantifying the Persian blogosphere has proven less straightforward than anticipated and has produced inconsistent results, as such measurements first require determining the content and boundaries of Blogestan. For instance, limiting the analysis to Persian-language blogs excludes other languages Iranians use for blogging (English, French, Urdu, Arabic, Turkic-Azeri, Kurdish), and includes bloggers using Persian language who are not from Iran or part of the Iranian diaspora (such as Afghani, Azerbaijani, and Tajik).

Likewise, limiting the data to the “.ir” top-level domain is also not useful, as “.ir” domains are not always used for blogs, particularly because of state-imposed restrictions. Many bloggers use Persian-dedicated blog farms like Blogfa, Persianblog, and Parsiblog.

Moreover, there is no real consensus on the definition of a blog: Is a blog single authored? Must it follow a simple layout and be organized in reverse-chronological order? Does it need to include a blogroll, an archive of posts, or an RSS feed? Does it need to allow user comments? Lastly, as noted by Bruce Arnold from Caslon Analytics, “several studies indicate that 60 percent to 80 percent of blogs are abandoned soon after their creation.”<sup>35</sup> The question of whether a blog can be considered active is therefore key to obtaining an accurate count of the number of blogs. Again there is little consensus on what can be considered an “active” blog.

Due to the vague definitions of “Blogestan,” “blog,” “active blog,” as well as the difficulty in turning these definitions into algorithms for large data collection, the results of the numerous attempts to measure the size of Blogestan have varied widely. Although researchers have used other methodologies to conceptualize, demarcate and analyze “national webs” and their features,<sup>37</sup> these new standardized methods have not been used regularly and systematically enough over time to offer a sufficient relevant benchmark to study the evolution of the Persian blogosphere.

<sup>35</sup> Caslon Analytics Blogging, “Blog Statistics and Demographics,” February 2009, <http://www.caslon.com.au/weblogprofile1.htm>.

<sup>36</sup> The National Institute for Technology in Liberal Education (NITLE) Blog Census, (no longer functional, information can be accessed at:

<http://web.archive.org/web/20031202022722/http://www.blogcensus.net/?page=lang.>

<sup>37</sup> Richard Rogers, et al. “National Web Studies: Mapping Iran Online,” Iran Media Program/Digital Methods Initiative, 2012, <https://mappingiranonline.digitalmethods.net/>.

# Methodology and Sample Information

This report presents the results of a comparison of three qualitative and quantitative sets of data in order to achieve a more comprehensive analysis of the development and status of the Persian blogosphere.<sup>38</sup>

Our analysis is derived from:

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• A majority of respondents in our audience survey sample are younger than 30 years of age.

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• Roughly two-thirds (66 percent) are male and the remainder are female.

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• Most are educated, holding at least a bachelor's degree.

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• Approximately two thirds (63 percent) of respondents live inside Iran.

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• Our web crawling dataset consists of 24,205 blogs.

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• The sample is dominated by Blogfa, which represents nearly 70 percent of the total 24,205 blogs.

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• Because of the methodology used to select these active and prominent blogs, the size of sample differs by and ranges between 6,061 blogs to 9,121.

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• Eleven respondents lived in Iran and nine had left the country since they started blogging.

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• Eleven of the interviewed bloggers were female and nine were male.

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• Seventeen were currently bloggers and three had stopped blogging for different reasons.

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An **audience survey** of 165 blog readers, focusing on blog consumption habits and how these have developed over time. The 27-question survey was created on Google Forms and distributed to a network of bloggers via email, Facebook, Twitter, Google+. As further detailed in the Methodology of the Audience Survey (see Annex p.40), we cannot assess to what extent this sample is representative of the readers of Persian blogs. However, our sample includes a range of respondents in terms of gender, age, educational background, and residence (from both inside and outside Iran).

A **web crawling analysis**: To complement the quantitative data of the audience survey, we used automated web crawling techniques to assess the connection between factors such as filtering, political orientation, and hosting platform on the evolution of Persian blogs over time. Our crawling analysis was based on the data from the 2008 “Mapping Iran’s Online Public” and on the annual updates of this dataset aggregated by data analysis company, Morningside Analytics through 2012. We also ran an extra data collection and analysis in order to gather information on the status and levels of activity of each blog, as well as on filtering and/or removal occurrences. Every blog from each annual sample was attached to a topical category (or “*attentive cluster*”)—“reformist,” “conservative, or “other”<sup>39</sup>—using human examination and a computational analysis of the frequencies of words and phrases.

A **series of interviews** with 20 bloggers who have been active members of Blogestan sometime during the past ten year period.<sup>40</sup> Bloggers were selected on the basis of their personal experience with blogging as well as their knowledge of Blogestan in general.

<sup>38</sup> For more detail about the methodology of all three data sets, see Annex.

<sup>39</sup> The “other” cluster includes Persian poetry and literature, and mixed networks.

<sup>40</sup> Interviews were conducted between June 20 and September 12, 2013 over email, Skype,

or Google Chat, depending on the bloggers’ preferences and security requirements.

# Key Findings from the Audience Survey

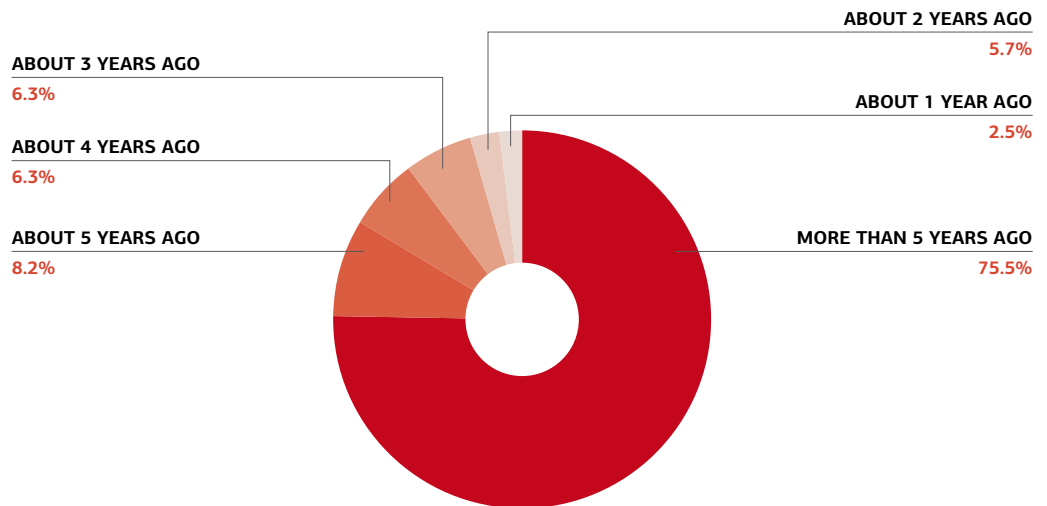
This study finds that the Persian blogosphere has experienced significant shifts and patterns of decline since the late 2000s as a result of a combination of: state influence—specifically increased filtering and direct pressure on bloggers; the rise of social networking sites; changes to socio-political conditions in Iran; and personal/professional reasons.

Results from each of the three datasets used in this study are presented below.

## A Legacy Readership

Nine out of ten of respondents began reading blogs at least four years ago. While this may indicate that Blogestan’s readership has a strong pre-2009 legacy, the question remains as to whether the new generation continues to read blogs or if they skip directly to other social media like Facebook, Balatarin, Twitter etc.

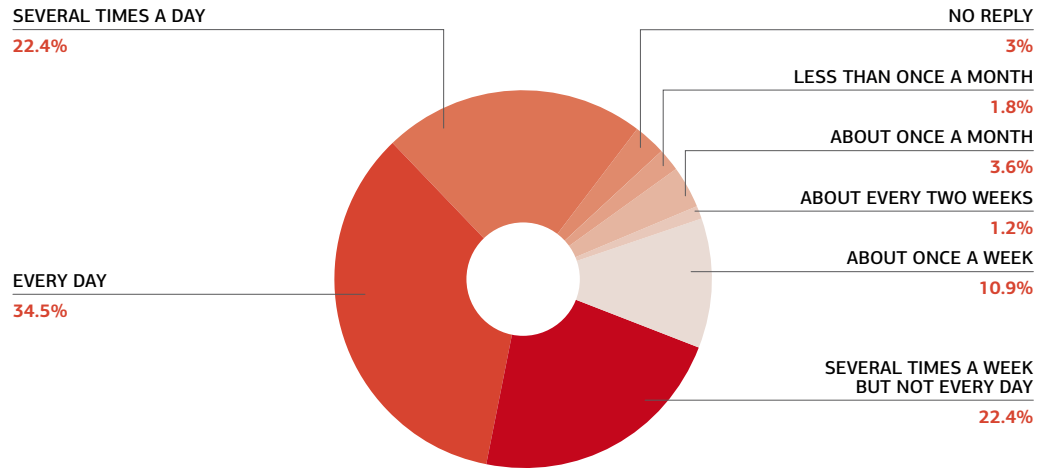
FIGURE 1. FIRST ENCOUNTER WITH BLOGS



## Still Reading Blogs

Nearly all respondents (99 percent) report they still read blogs and a solid majority do so several times a week or more.

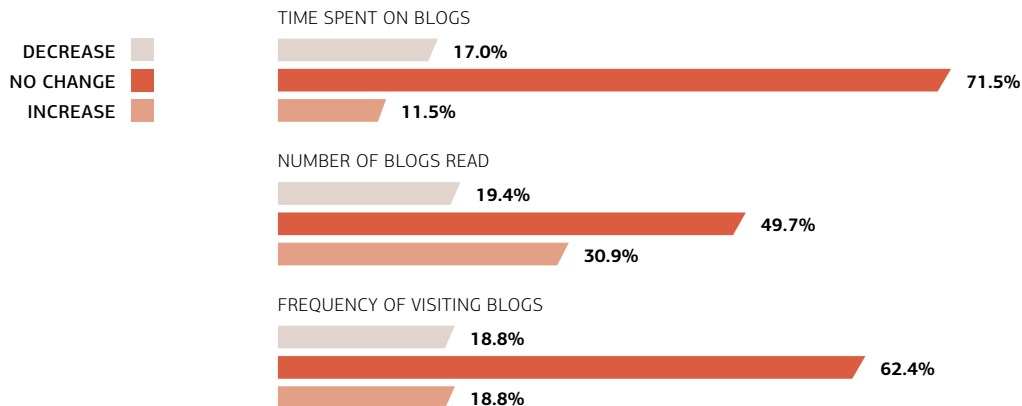
FIGURE 2. FREQUENCY OF READING BLOGS



## Evolution of Reading Habits: No Clear Quantitative Pattern

The vast majority of respondents (92 percent) report a change in their blog reading habits between the time they started to read blogs and the summer of 2013. However, there is no quantitative trend in terms of modification of time spent on blogs, number of blogs followed, or frequency of visits. This suggests that the change in reading habits is qualitative rather than quantitative.

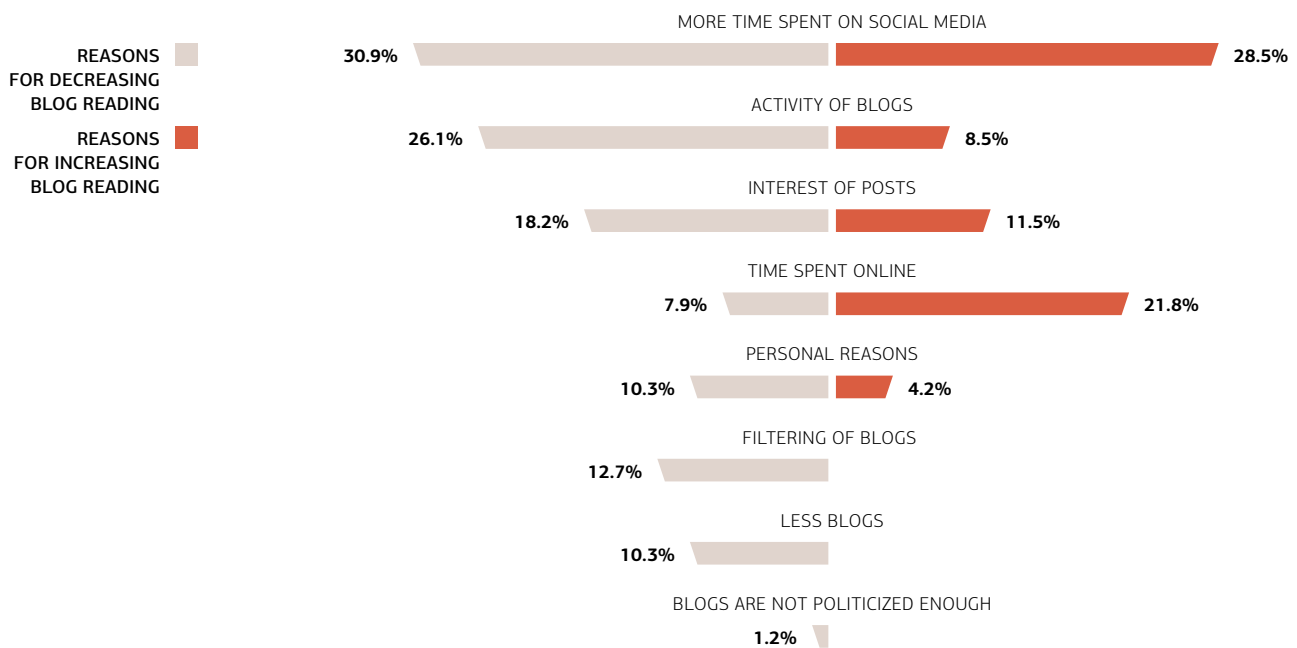
FIGURE 3. CHANGES IN BLOG READING HABITS



## Social Media Both Catalyst and Impediment to Blog Consumption

Respondents overwhelmingly chose social media as the primary reason for both an increase and decrease in their blog reading activities. Additional reasons cited by respondents for a decline in blog use are a decrease in blog activity, decreased interest in blog posts, decline in the general number of blogs, filtering, and personal reasons, respectively. After social media, the top reason respondents cite for increased blog reading is longer time spent online.

FIGURE 4. REASONS FOR CHANGE IN BLOG READING HABITS



## Evolution of Readers' Preferences

Survey participants cite decreasing interest in personal topics (everyday life, interests and hobbies, other people's opinion and experience) as well as in topics with social and cultural themes. In contrast, respondents report increased interest in news consumption (domestic news, foreign affairs, economics), as well as for information that could improve their situation in difficult economic times (education, life abroad, IT/science).

**FIGURE 5. REASONS TO READ BLOGS, INITIALLY AND NOW**

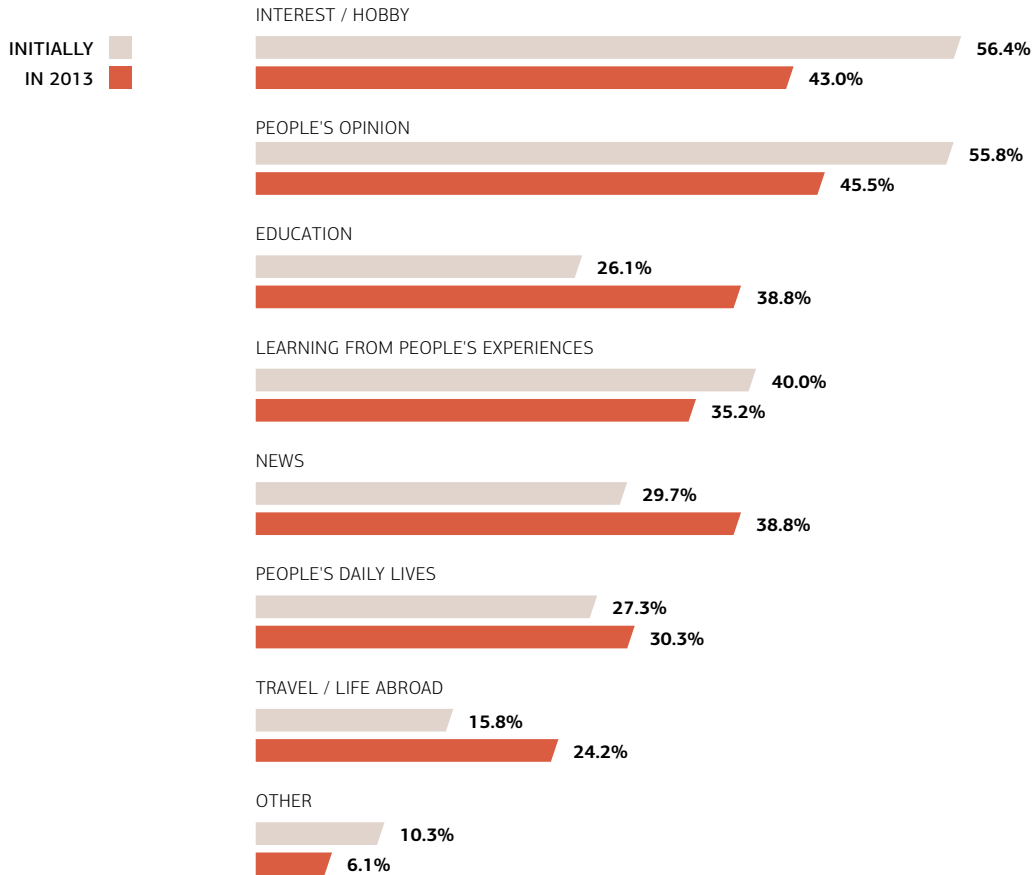
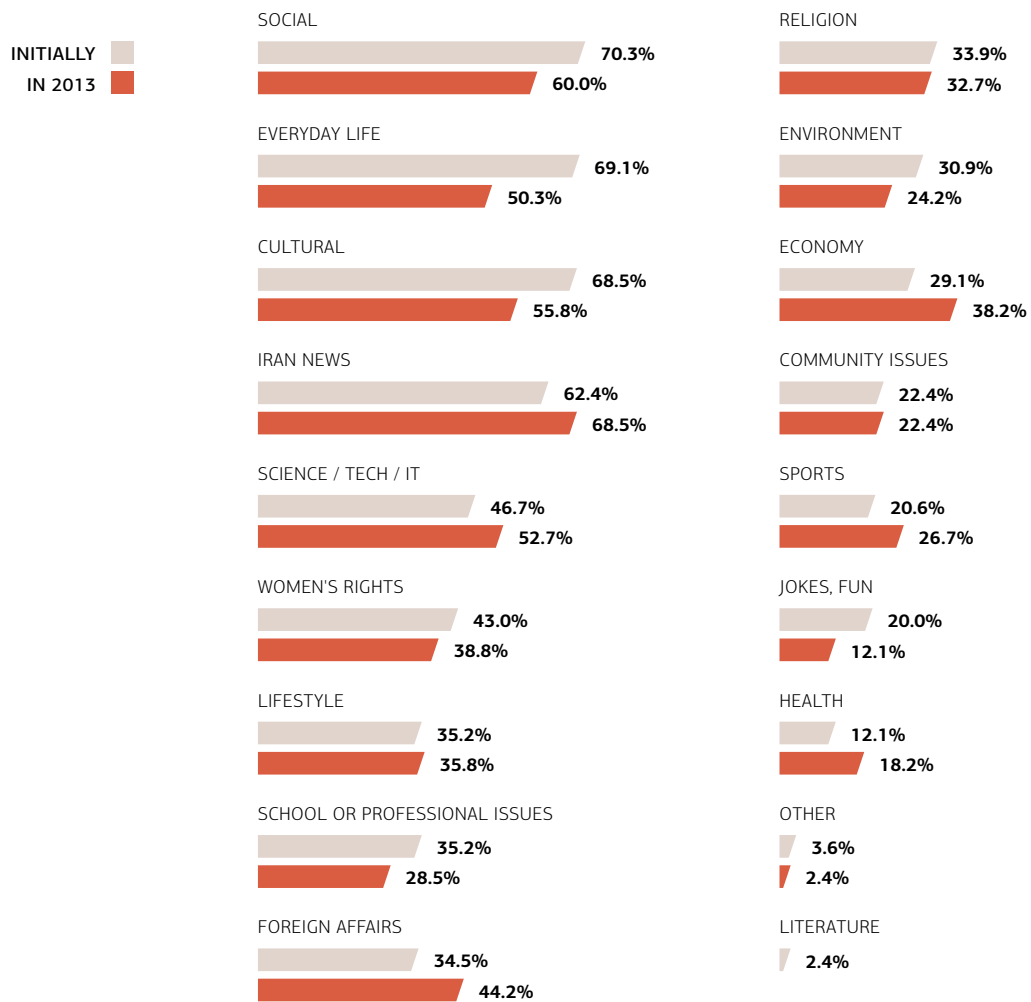


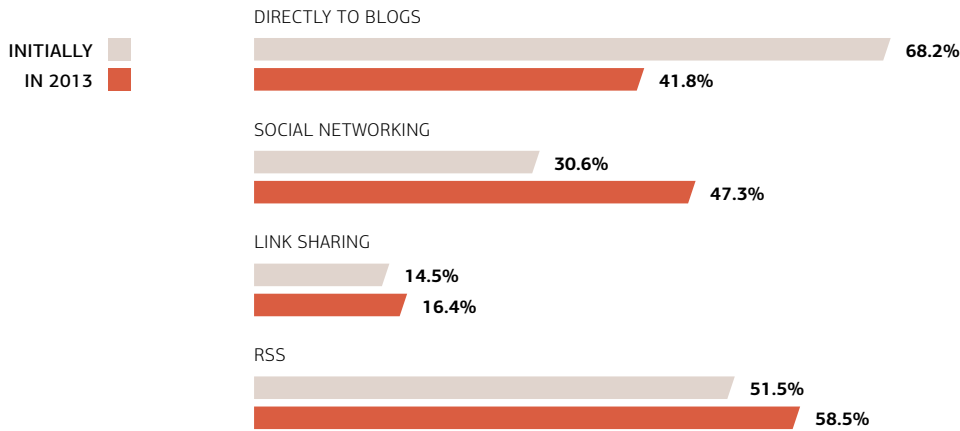
FIGURE 6. TOPICS MOST OFTEN READ ON BLOGS



## Access via Social Networks Progressively Replacing Direct Access to Blogs

Respondents confirm the growing prominence of social networking and link-sharing sites as a means of accessing blogs: a majority report they no longer access blogs directly but instead do so through various social media and link-sharing platforms.

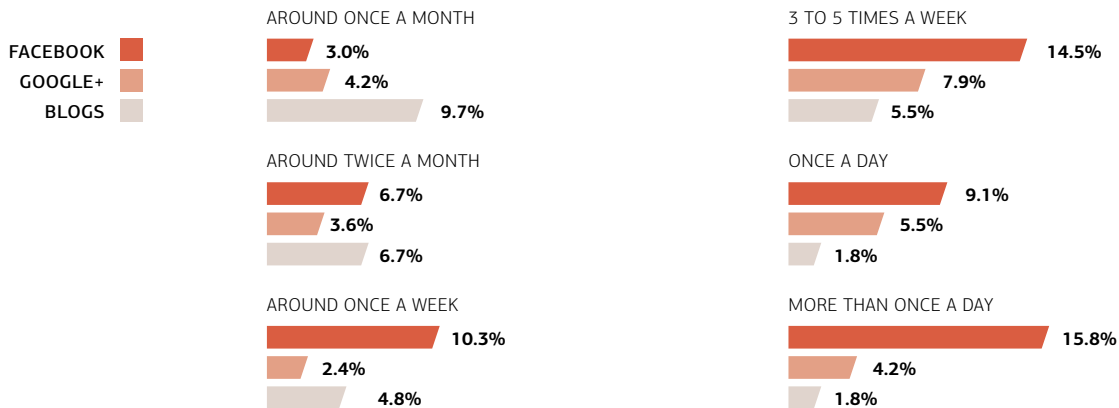
FIGURE 7. USE OF SOCIAL NETWORKING AND LINK-SHARING SITES TO ACCESS BLOGS



## Comments on Social Networks More Frequent than on Blogs

Respondents comment more often on social networks such as Facebook and Google+, although they still post comments on individual blogs.

FIGURE 8. FREQUENCY OF COMMENTING ON BLOGS (BY PLATFORM)



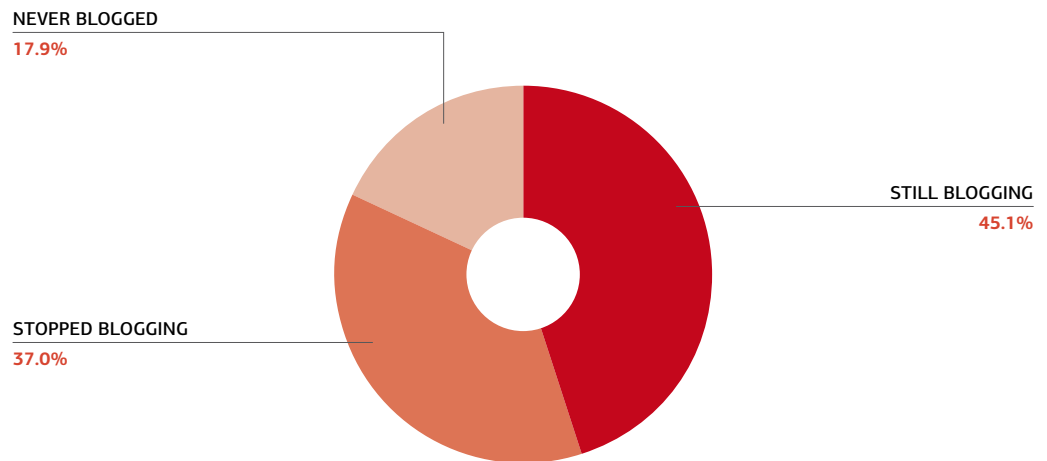


## Most Blog Readers are also Bloggers but many have Stopped their Blogging Activity

Our data corroborates prior research indicating that there is a significant overlap between readers of blogs and active bloggers.<sup>41</sup> A strong majority of respondents in our sample currently write or have written a blog in addition to being an active blog reader. Yet according to our data, more than a third of these respondents have stopped their blogging activity.

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**FIGURE 9. BLOGGING ACTIVITY AMONG READERS**



## A Slow Publication Pace

Among our subset of readers who are also bloggers, the rate of publication on active blogs is relatively low. Nearly 60 percent publish a post only once a month, or even less frequently.

## Reasons to Start Blogging / Reasons to Stop Blogging

Interestingly, there is significant overlap among our subset of readers who are also bloggers in terms of the reasons they cite for both starting and stopping blogging activities. According to our data, “personal satisfaction”/“personal reasons” are the main reasons survey respondents give for beginning as well as abandoning a blog. “Saying things that cannot be said in public” and “sharing news not covered by mass media,” are cited as important reasons for starting a blog, while “fear of censorship” and “too many blogs filtered,” are the key reasons for no longer blogging. One crucial reason for stopping blogging is the increase in time spent on other social media platforms.

FIGURE 10. REASONS FOR STARTING A BLOG

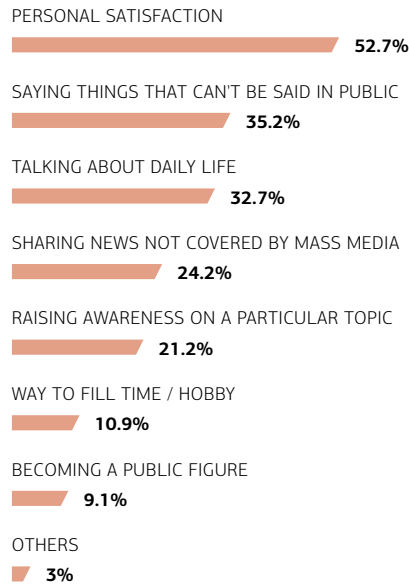
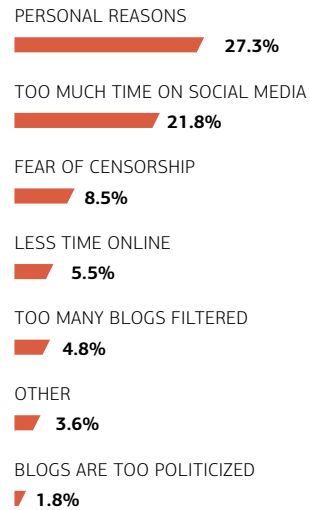


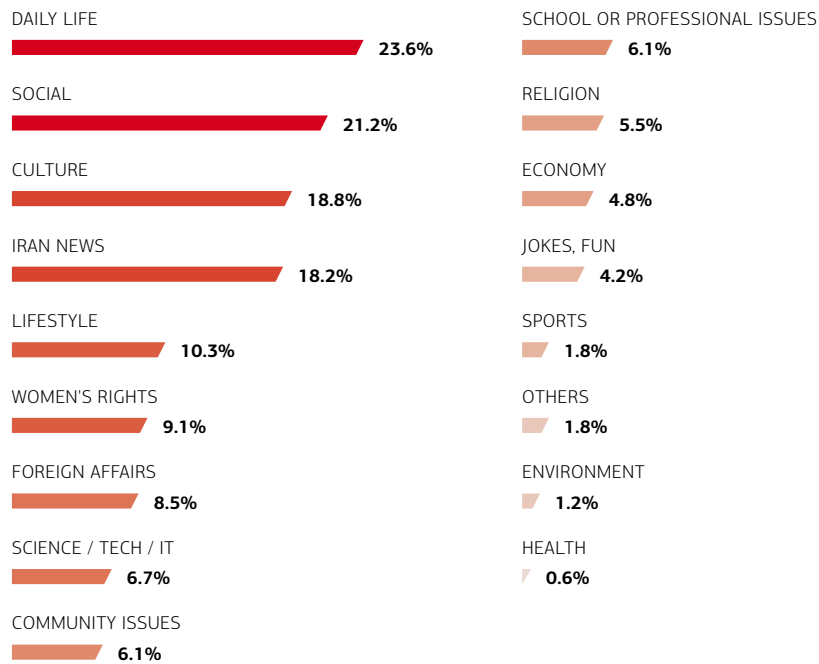
FIGURE 11. REASONS FOR STOPPING BLOGGING



## A Divergence in Blog Content and Reader Preference

Our data show that blog topics recently addressed by our subset of blog readers who also blog focus mainly on personal concerns (daily life, lifestyle) and socio-cultural issues—topics in which the readers in our sample also report having less interest. Conversely, topics that readers cite having been more interested in over the years (domestic news, foreign affairs, science/IT, economics) are for the most part not often covered by our subset of bloggers. This suggests a divergence between readers’ current interests and the topics that are actually addressed by bloggers.

FIGURE 12. RECENT BLOG TOPICS



# Key Findings of Web Crawling Analysis

As noted in the previous methodology section, our crawling analysis is based on datasets of 24,205 blogs from the 2008 Persian Blogosphere project,<sup>42</sup> and on annual updates of this dataset aggregated by Morningside Analytics through 2012. We also conducted additional analyses on the status and level of activity of each blog, as well as any filtering or removal occurrences, according to assigned clusters of the blog’s political orientation (“reformist,” “conservative,” or “other”).<sup>43</sup>

According to our findings:

**There are notable differences in the frequency of filtering and removals between different blog hosts and political affiliation clusters.** The two platforms based outside Iran—Blogspot (often called “Blogger” after being purchased by Google in 2003) and WordPress—appear to be almost entirely filtered in Iran (98 percent and 96 percent, respectively). This not entirely complete level of filtering is due to the fact that although the filtering system in Iran uniformly blocks Blogspot and WordPress, exceptions are explicitly formulated in a so-called “white list” allowing access to specific sites.

A review of the 2 percent of Blogspot and 4 percent of WordPress blogs from our dataset that are not blocked and were still active in September 2013 shows that none include reformist content and half are explicitly pro-regime or contain hardline religious content.<sup>44</sup>

Furthermore, our research shows that Blogspot and WordPress attract almost no conservative blogs (1 percent and 4 percent respectively) and host a majority of reformist blogs (51 percent and 78 percent respectively). In contrast, Parsiblog attracts predominantly conservative (96 percent) and almost no reformist blogs (1 percent).

Lastly, removals due to violations of the law or terms-of-service agreements are rather limited on platforms operated from inside Iran (4 percent or below) and never occur on Blogspot and WordPress, which is understandable as platforms outside Iran are not required to comply with Iranian laws and policies.<sup>45</sup> Removals are enforced on Iranian platforms regardless of the location of their servers.<sup>46</sup>

<sup>42</sup> Kelly and Etling, 2008.

<sup>43</sup> Each blog in the annual samples was assigned a topical category (or *attentive clusters*) using human examination and a computational analysis of the frequencies of words and phrases. See more on Web Crawling methodology in Part 1 on methodology and sample information.

<sup>44</sup> See, for example: <http://basijnetwork.blogspot.com> and <http://ahestan.wordpress.com/>.

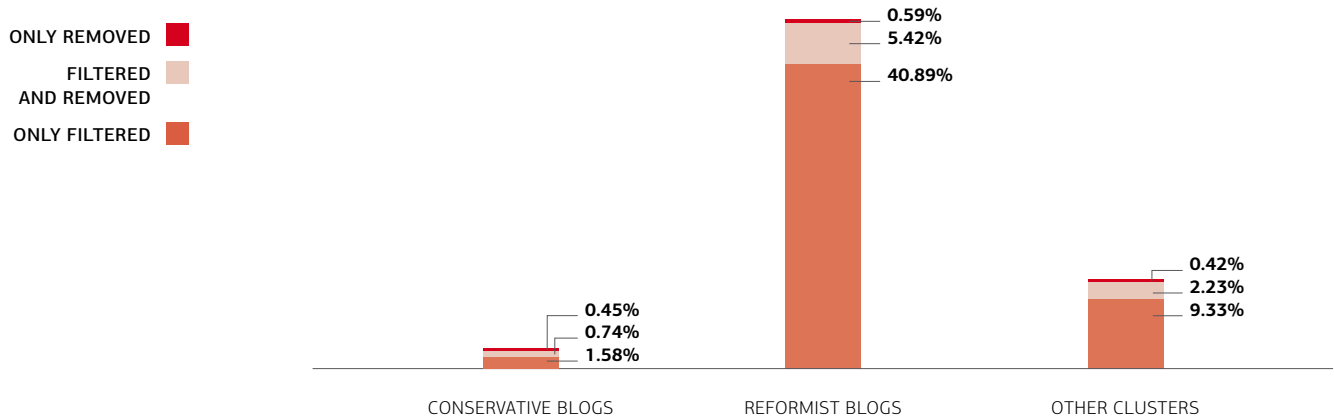
<sup>45</sup> For more detailed data on removals by Iranian and non-Iranian platforms, see Part 2 on methodology and sample information.

<sup>46</sup> Any entity—persons, companies, or infrastructure—that could fall within the jurisdiction of Iran can be defined as an “Iranian platform.” While most Persian blogging platforms are hosted outside of the country, their owners are either inside or beholden to the government in some

way. Hence, WordPress would not fall within this domain; however, Blogfa would. Even though Blogfa is incorporated and hosted outside Iran, its founder lives in Iran.

The number of reformist blogs that are filtered or removed is 17 times greater than that of conservative blogs. We also cross-referenced the information between clusters and filtering/removal for violations of the law or terms-of-service agreements. Our analyses shows that reformist blogs are more often filtered or removed than conservative ones: nearly half of reformists blogs in our data set have been filtered or removed, compared to just 2.8 percent of conservative blogs. We also observe that most blogs that were taken down at some point are still technically filtered, which suggests that they were first filtered by the authorities and subsequently removed.

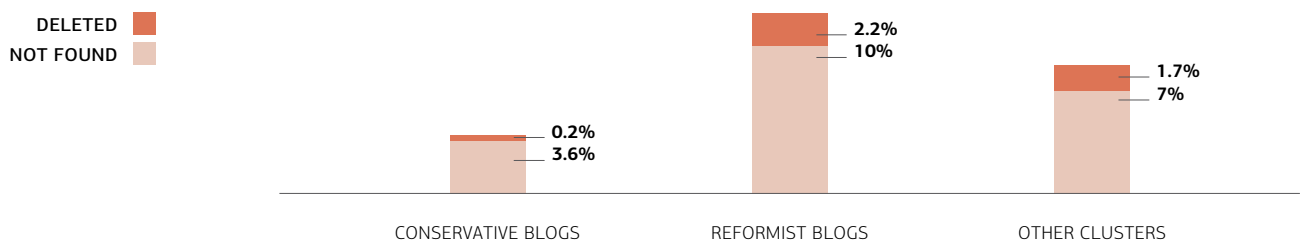
FIGURE 13. FILTERING AND REMOVAL BY CLUSTER AFFILIATION



Three times the number of reformist blogs have been “deleted” or are “not found” compared to conservative blogs. We analyzed the error messages generated by the hosting platform and coded these errors as “deleted” (when the blog was deleted and it is not specified if it was deleted by the platform or by the user) and “not found” (when the blog could not be located by the platform, which implies it does not exist anymore).

The imbalance in the rate of these errors between reformist and conservative blogs suggests that at least a portion of these reformist blogs which were either deleted or not found have actually been taken down for political reasons and the hosting platform is not transparent about the motive behind these removals.

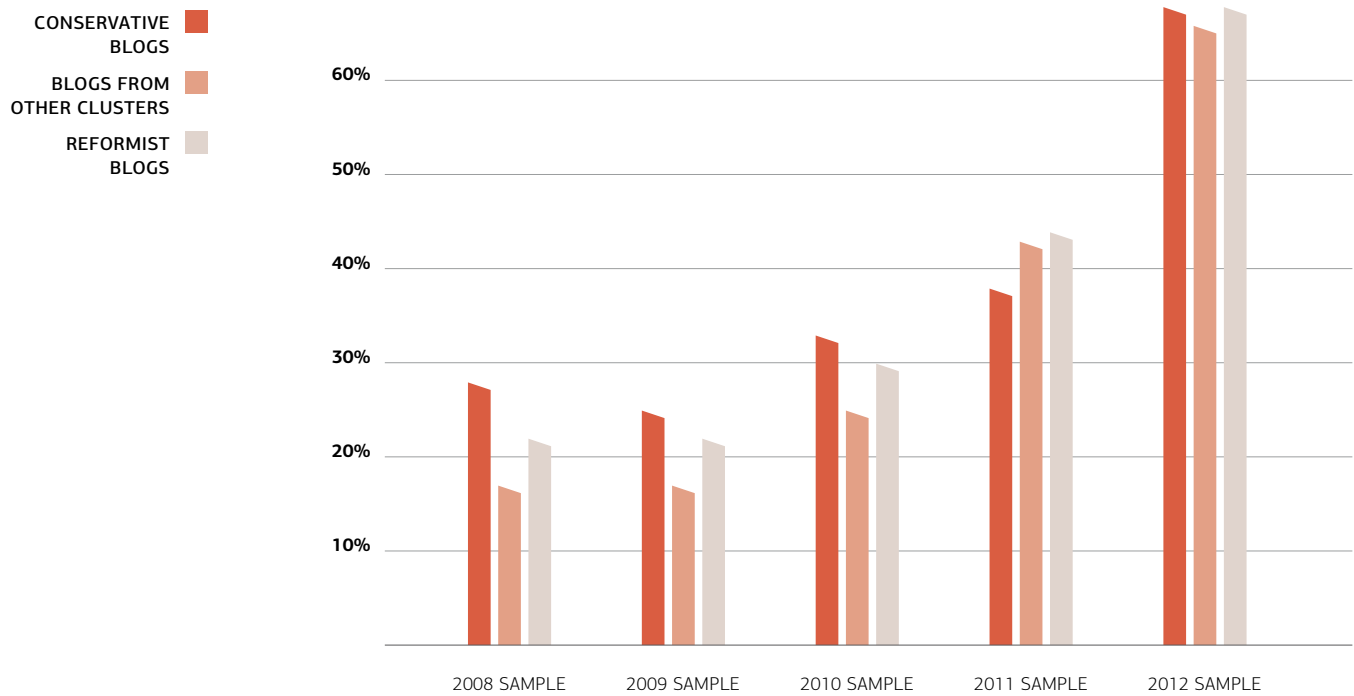
FIGURE 14. PERCENTAGE OF BLOGS “DELETED” OR “NOT FOUND”



**Conservative blogs tend to have a longer lifespan than reformist blogs.** In cross-referencing information on the availability, activity, and political orientation of the blogs from the different yearly samples, our data show that blogs supporting reformist ideas have a shorter lifespan than conservative blogs.<sup>47</sup>

If we consider the entire list of blogs, regardless of the year(s) they were present in the annual samples, we find that **39 percent of conservative blogs versus 31 percent of reformist blogs** were still available and active in September 2013. In addition, 38 percent of blogs from the “other” cluster were still active in September 2013.

**FIGURE 15. PERCENTAGE OF STILL ACTIVE BLOGS CLUSTER AFFILIATION (AS OF 2013)**



<sup>47</sup> The trend is reversed in the 2011 sample, with 43 percent of reformist and 38 percent of conservative

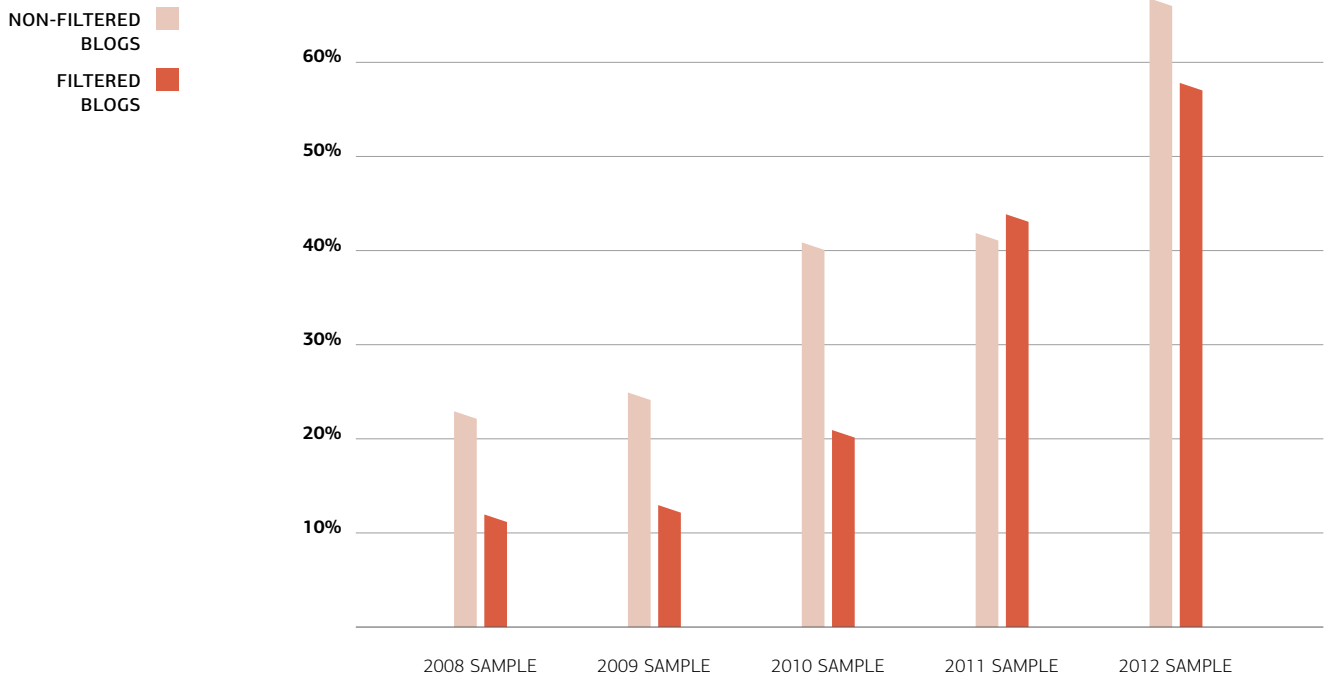
blogs still active in 2013, which is likely a result of our sampling, as the 2011 includes

fewer conservative blogs following a redefinition of the attentive clusters used by Morningside Analytics.

**Filtered blogs tend to have a shorter lifespan.** Similarly, when we cross-reference information on the availability and activity of the blogs from the different yearly samples and the frequency of their filtering, the results indicate that filtered blogs have a shorter lifespan than non-filtered blogs.<sup>48</sup>

If we consider the entire list of blogs regardless of the year(s) they were present in the yearly samples, we find that **45 percent of non-filtered blogs** are still available and active in September 2013, versus only **30 percent of filtered blogs**.

**FIGURE 16. PERCENTAGE OF STILL ACTIVE FILTERED AND NON-FILTERED BLOGS (AS OF 2013)**



We also conducted an analysis of the number of blogs that have been taken down by blog platforms for violating the law or terms-of-service agreements. As our research shows, most removals target blogs hosted on Blogfa,<sup>49</sup> which hosts the majority of Persian blogs.<sup>50</sup> We observe that of the 16,755 Blogfa blogs in our sample, 668—or nearly 4 percent—were removed.<sup>51</sup> The majority of the removals took place between 2011 and 2013.

<sup>48</sup> The trend is reversed in the 2011 sample, with 44 percent of filtered and 42 percent of non-filtered still active in 2013. This is an effect of our sampling (see previous note).

<sup>49</sup> The scripts we developed to detect removal messages were more efficient on Blogfa than on other Persian platforms.

Further investigation with scripts refined for each blog hosting platform could produce supplementary results.

<sup>50</sup> As noted previously, 74% of blogs in our sample are hosted on Blogfa. See Part 2 on methodology and sample information.

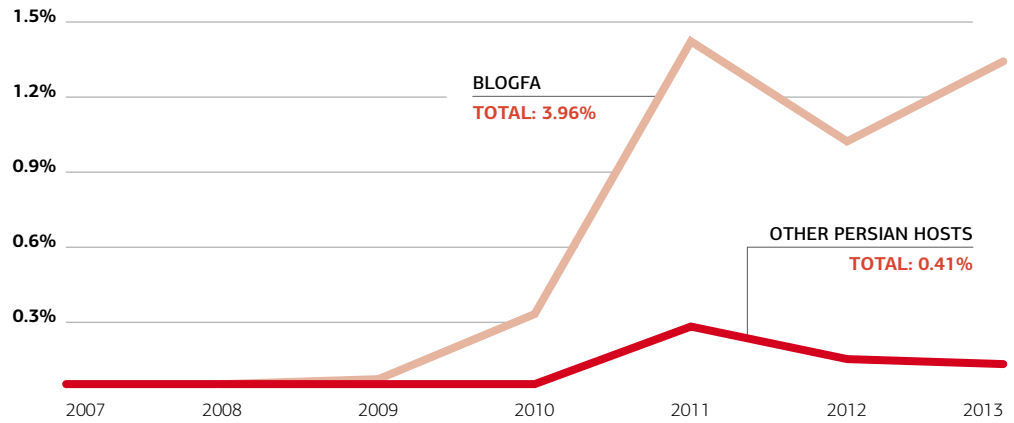
<sup>51</sup> These numbers are consistent with those

reflected by the site owner, as reported by Small Media Foundation: “Alireza Shirazi, the founder of Blogfa, expressed concerns on Twitter about the future of the domestic blogosphere due to filtering: “Horrible events are occurring. I receive orders to block around or more than 100 blogs per day. In the future, [we won’t] have

any blogs.” Shirazi has previously noted weeks where Blogfa received up to 600 takedown orders, elaborating that they are often for offending terms related to hacking and music.” See “Iranian Internet Infrastructure and Policy Report,” Small Media Foundation, January 2013, <http://smallmedia.org.uk/content/62>.

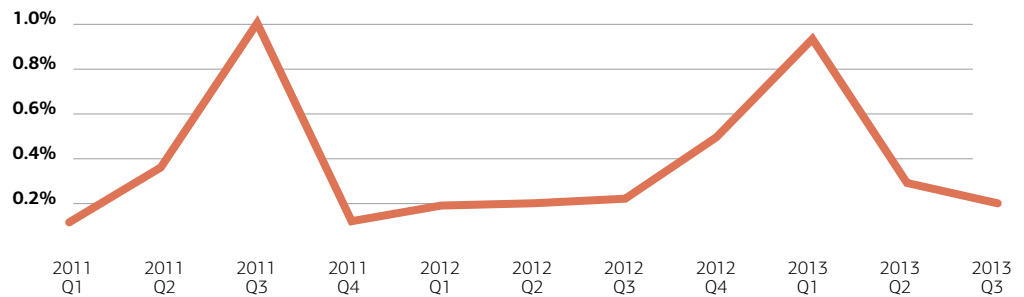
Moreover, the blogs removed between 2010 and 2013 had existed for at least four years on average, based on their data from the Archive Wayback Machine website.<sup>52</sup>

FIGURE 17. FREQUENCY OF BLOG REMOVALS ON PERSIAN WEB HOSTS



In looking closer at the years 2011 to 2013, it appears that blog removals occur irregularly. For instance, we can observe a peak in takedowns during the first quarter of 2013, when authorities were engaged in an intensive online censorship effort in the run-up to the June 2013 presidential election.<sup>53</sup>

FIGURE 18. BLOGFA REMOVALS (2011-2013)



<sup>52</sup> In order to collect data on blog takedowns, we relied on Archive's Wayback Machine, which retrieves and stores large sections of content on the

Internet for the purposes of maintaining historical records, including the blogs within our sample.

<sup>53</sup> See Small Media Foundation, "Infrastructure and Policy reports," January 2013, <http://smallmedia.org.uk/content/62>; February 2013, <http://smallmedia.org.uk/content/78>;

February/March 2013, <http://smallmedia.org.uk/content/82>.



# Key Findings from Blogger Interviews

Our interviews with bloggers focused on the following areas of inquiry:

The impact of emigration of many prominent bloggers on the Persian blogosphere, or the so-called “diaspora effect,” and whether and how this produced changes in blog content, readership and relationships with audiences both inside and outside Iran;

How personal and/or professional issues—including financial and economic pressures and career changes—could influence blogging activities;

The influence of state intervention, including both filtering practices and direct pressure on bloggers by authorities;

The role of new technologies, particularly social networking sites and micro-blogging, in reshaping the interactivity and dynamics of the Iranian blogosphere;

The impact of changes in the socio-political climate in Iran during the first decade of 2000 on the Persian blogging culture.

## The Diaspora Effect: The Impact of Relocation

Bloggers we interviewed stress the “diaspora effect,” or the impact of relocation from Iran to other countries, as an important factor that modified the relationship between bloggers and their audiences. At the start of a blogger’s career, a blogger establishes an audience through a particular perspective, style, and language—the blogger’s “particular flavor,” as one respondent puts it. Changes in a blogger’s tone and attitude after moving from Iran to another country can impact how the blogger is perceived by readers, as does the fact that the blogger is no longer in the same place and living in the same conditions as a large part of their audience.

For instance, while a blogger in Iran is more likely to provide first-hand experiences of events, those located outside Iran more often rely on other sources of information, which can have their own prejudices and biases, according to our interviews. One blogger explains how after moving to Europe he noticed a change in his approach to subjects that are forbidden or taboo in Iranian society, as well as “subtle, unconscious changes that the audience detects and reacts to.”

*“ You are not the same person that you were before you left Iran and the audience notices this. You are like a product which has changed its flavor and thus needs to market itself again and recreate its audience.”*

Our interviewees also emphasize how emigration produces a shift in perspectives, which can result in declines in or changes to blogging activities. On a practical level, relocated bloggers typically have less time to blog while integrating into a new environment, for instance. Yet relocation can also mean a change in a blogger's perception the host country and the West in general, as well as a shift of perspective on Iran, especially with respect to notions about freedom of expression and individual rights.

Some relocated bloggers may even change gears by supporting the decisions of the ruling class in Iran (if they were previously against it), according to surveyed bloggers. Nostalgia for the homeland and seeking potential opportunities to return to Iran may have persuaded bloggers to abandon previous perspectives on certain topics. Audiences often detect a change in the blogger's value system and priorities, which has a significant impact on readers' continuing interest in the blog. In these cases, the blogger may be described as "having lost it" or "having turned her back to her own cause now that she is safe."

## Personal and Professional Issues

Interviewed bloggers indicate that when they first interacted with the Internet in the late 1990s or early 2000s, they mainly went online for specific purposes, such as to email or visit a certain website. However, using the Internet as a platform for publishing content was also among the very first applications mentioned by bloggers with whom we spoke.

Blogging, except in rare cases, did not provide the necessary economic or financial security, according to interviewed bloggers. In addition to the time required to maintain a functional blog, some bloggers maintained self-hosted blogs which incurred additional costs.

*“ They closed the newspaper. I was still at school and had a small printing business. I used that income to pay for the expenses of my blog.”*

Statements from our interviews with bloggers show that in the early years of Blogestan, many bloggers were university students. One reason for the proliferation of student bloggers could be that universities and academic centers were among the first institutions in Iran with affordable or even free access to the Internet. This also explains why many bloggers had to reduce their blogging activities as they moved into later stages of adulthood.

*“ We used to publish a local newspaper in the university that they had just banned and so we had discussions on what we could do next. My brother used to bring printed hardcopies of different websites and blogs home. One day he printed a copy of the instructions that Hossein Derakhshan had written for setting up a blog in Persian. My brother encouraged me to start a blog. So I did, and I started publishing what I would send out to the newspaper on my blog as well. These pieces were related to the internal politics of the university.”*

Bloggers also mention their involvement in more formal online publishing as an important factor for retiring from Blogestan. One blogger describes his “ascent” from a beginner to a well-known political blogger who was later recruited by online news portals based outside Iran.

*“ I had to manage two websites and I did not really have time for my own blog. The point is that the websites had much greater audience size and capacity than my own blog, so I gradually shifted all my efforts to the websites.”*

## State Influence (I): Blogestan - A Haven for Journalists and Activists

Interviewed bloggers emphasize that state involvement played a key role in the initial expansion of Blogestan. External pressures appear to have encouraged many bloggers to start their own blog, as Blogestan provided a less-restrictive environment compared to Iranian mainstream media, in terms of content and attitude towards the social/ political establishment.

*“ In Blogestan, people talked about the topics in a more relaxed way than in print media and in a language which was closer to audiences. The content was both less constrained and more informal. Both aspects were rarities.”*

Moreover, for bloggers who also worked for more formal publications like local newspapers, the restrictions on print media also drove many to invest more time in blogging. One blogger working at a local newspaper describes how he decided to “take blogging more seriously [because] they were just telling us that we cannot write about this or that topic in the newspaper.” Several interviewed bloggers describe blogging as an act of resistance against the hegemony of mainstream media, corporate ownership and state control of the media and public sphere.

*“ Bloggers insist on producing a different point of view, when everything else is harmonized.”*

This harmonization meant that the media was forced to comply with restrictive conditions and the closure of a significant number of newspapers and magazines. Blogestan was one of the few outlets for former journalists. Blogestan in particular and the web in general, attracted increased interest from journalists—even though many journalists, according to one blogger “did not take Blogestan seriously at the beginning.”

While Blogestan enabled anyone to produce and interact outside the restrictive boundaries of the public space in Iran, certain groups converged on cyberspace faster than others. For instance, the early years of Blogestan saw a surge of participation among female bloggers sharing perspectives on both public and private matters. One female blogger points out that women were essentially only represented as mothers and wives in traditional media, while in Blogestan, women were less constrained and could have an identity outside of these social constructs. As such, Blogestan provided a public forum in which females could discuss their perspectives on a range of issues, including ideas of sexuality and intimate relationships, according to our interviews.

Social and political activists were also quick to start using blogs and many of the interviewees mention that blogs made it possible to discuss social and political issues not allowed in the print media. Direct involvement in activist causes soon became a major theme in Blogestan. One blogger recalls how he used Javascript codes to produce a timer showing the amount of time that pro-democracy journalist Akbar Ganji had spent in prison: “I created the widget and then other bloggers posted it on their blogs.”

## State Influence (II): Crackdown on Blogestan and its Aftermath

Many of our participants suggest that blogging was a way “to be heard” and that they did not have a particular target audience in mind and or an understanding of the consequences of their public content. One blogger notes that his complete openness about his opinions meant that the Ministry of Intelligence and National Security agents were reading his blog, something he only realized when confronted by government officials.

*“ They showed me a stack of papers, each one a blog post that I had written, and they had highlighted portions and sections. After I was released, my blog in effect became my case file. I did continue blogging. I would even address my interrogator on the blog, and he once called me back to mention that I was making my case more dangerous. All in all, the blog wasn’t what it used to be. It wasn’t a channel of communication between me and my audience. Unwanted eyes now preyed on my blog for what I wrote and for the others who commented on it. It was neither personal for me, nor safe for the audience.”*

Bloggers in our interview sample report instances in which their friends or family expressed discomfort with the content they published, particularly if the blog post contained references to sensitive personal or sexual issues. One describes an incident in which her partner was extremely displeased about her latest post in which she discussed an incident of sexual abuse that happened during her childhood. Another blogger describes a post with a sexual undertone that caused tensions with her colleagues. Thus, some bloggers interviewed report that they stopped publishing content that was outside the normative framework of their social circles.

Our interviews indicate that as Iranian authorities began to monitor cyberspace in order to trace and spot dissent, bloggers became more aware of issues of security and privacy, which lead to changes in their blogging content and activities. One blogger suggests that: “more eyes were watching.” Some bloggers in our sample report they became more self-aware and rechanneled some conversations into more private online or offline spaces. Increased awareness of privacy issues also can be traced to the fact that as younger bloggers grew older they became more concerned about the potential impact of their blogging activities on their professional careers. One blogger explains that after he graduated from university and started his job, he reviewed his blog and unpublished several pieces of content.

Although several interviewed bloggers emphasize the importance of blogging under their real names, the increase in state intervention and scrutiny forced many bloggers to “hide behind a pseudonym,” as one blogger explains. Under these circumstances, it is likely that some simply opted to stop blogging. Others chose to start a new anonymous blog. These bloggers, however, were accustomed to receiving attention and feedback from their audiences and their anonymous blog often failed to compete with the famous blog and thus, we suggest, bloggers lost interest in working under the new alias. Around the same time, social media was on the ascent, and bloggers began to channel more sensitive content into private posts on social media platforms. As a result, Blogestan lost some of its most significant bloggers as well as some aspects of its iconoclastic spirit that had initially attracted audiences.

## Impact of Social Media (I): Social Networking Sites

When asked about how social media and in particular social networking sites (SNSs) have impacted their blogging activity, some bloggers stress that the line between SNSs and blogs is not as clear as one might think. Another blogger points out that Facebook’s Note capability may in the future evolve into a tool that would compete with blogging platforms.

*“ It is meaningless to insist that a blog must be located on Blogspot or Blogfa. The position of the blog does not have significance. We are left with the assertion that blog is a dead phenomenon if we signify the historical form of publication. I think blogs have switched from the old manifestation, where they were carried in a unique URL, into becoming an inhabitant of social media.”*

The introduction and further development of SNSs impacted Blogestan in various ways, particularly in terms of content production, according to our blogger interviews. From a technical standpoint, a blogger has to maintain a healthy and up-to-date installation of a Content Management System (CMS), if utilizing a self-hosted blog and a functional theme and peripherals, including a FeedBurner connection for example. According to bloggers, social media, on the other hand, offers a free, functional blogging platform where traffic is guaranteed. Compared to publishing content on a blog, which potentially requires a certain level of technical expertise—for example, if the blogger wants to embed a YouTube video—social media offers a ready-made and amateur-friendly environment with low barriers to participation.

Interviewees also describe how in the early years, blog content was primarily text-based, which meant bloggers became known for their skills in producing written content. SNSs have facilitated the use of images and videos, allowing users to quickly post audiovisual content that often attracts more viewers.

*“ These days, people get more attention for a picture of their new haircut than what we would get back in the years when we posted a blog post that we had spent a significant amount of time working on.”*

SNSs also encourage the production of short, pointed, emotionally-charged, and “sophisticated-looking” pieces at the expense of longer, more analytical, intellectual blog posts.

*“ It does not make sense to write a long blog post, just utter it in a Facebook status update, where you are always right because you are vague, and then you will receive a hundred likes.”*

An interviewee compares SNSs to “fast food,” explaining, “I would spend a significant amount of time producing content for my blog and then I would receive one comment, whereas I can post a shorter piece on the social media, on which I’ve spent less time, and still I’ll get 100 likes and 100 comments.” Other bloggers also point out that novelty is a requirement in Blogestan, whereas reusing/reposting available content on SNSs is common practice. This puts bloggers at a disadvantage with the rest of social media users, as their less frequently updated content is in competition with an ocean of reused and reposted content.

Content producers in Blogestan have to rethink the promotion strategies for their blogs in light of new possibilities and growing SNS audiences. One interviewed blogger states that he shares selected pieces of content as soon as they are published. Another blogger created Facebook pages and groups and shares the content of his blog posts in their entirety on social media sites. In describing the dramatic impact of such strategies, one blogger explains, “People read the post on Facebook and left their comment there. It did not make sense for them to do an extra click and write their comment underneath the post. As soon as the first comment was posted on Facebook, the rest followed. The social media now owned the item.” Following that logic, and taking into account that most SNSs dissolve content, which makes content retrieval difficult after time passes, the remaining function of blogs from the perspective of bloggers is to “merely be an archive.”

*“ Blogs have now become the personal archives of individuals. It is a common practice now that an individual would set up a blog in order to keep track of his writings elsewhere.”*

Bloggers we interviewed report that from the content consumer’s perspective, SNSs provide a more homogeneous experience. Buttons and links are always in the same location, independent of what content one may be looking at on Facebook, Twitter, and Google+. In contrast, every blog has its own theme, locations for links, archive, etc. The comment section underneath a post may request the user to enter several pieces of information, whereas all these operations are seamless on any given SNS. Additionally, many blogs lack a proper mobile version, according to bloggers. The text may become unreadable and the images may not scale properly when a blog is browsed on a smartphone. With the rising use of smartphones, audiences are understandably having a harder time accessing blog content compared to content on social media. Blogs for the most part still require a larger display and a keyboard for content production.

Audience interaction over blogs is also quantitatively different, according to bloggers in our sample. The absence of elements such as “like” and “plus” requires interested audience members to type a response, usually requiring approval from the blogger. Social media accelerated this process.

*“ Content is delivered to its audience in matters of seconds on social media, something which took hours in Blogestan.”*

Several bloggers, however, emphasize the positive impact of social media, such as how these platforms enable them to satisfy members of their audience who want reactions to daily events, or ‘crowdsourcing’ ideas: “I get some feedback and people would add or remove from the idea. Sometimes I end up writing a blog post about the idea, which has now been ironed out and described more clearly,” according to an interviewed blogger.

## Impact of Social Media (II): BlogRolling.com and Gooder

Interviewees also stress how technological shifts and the closure of popular blog feed and feed aggregator services have negatively impacted the Persian blogosphere. The blog feed platform BlogRolling was a tool through which readers on one blog were alerted when other blogs on the blogroll published new content. BlogRolling.com also acted as a kind of currency in Blogestan: the more a blog was added to the blogrolls of other blogs, the more this increased its potential readership. Having another blogger on your blogroll was as a sign of mutual respect and companionship. According to one blogger: “My audience was the same group whose writings I read.[...] I had them on my blogroll and they had me on their blogroll.” When Blogrolling.com shut down its service in late 2010, bloggers were forced to utilize Yahoo! Pipes, which required more elaborate programming.

*“ I knew everyone on my blogroll. Identities were real, not artificial, as they are now.”*

According to our sample, blog feeds and feed aggregators were important components of Blogestan in a number of ways, and Google’s shut down of Google Reader (‘Gooder’ as Iranians called it) in 2013 hit especially hard. These tools removed the need to regularly browse individual blog addresses for new content, and many of them were accessible on platforms other than a personal computer. Server-based feed aggregators, such as Google Reader, functioned as a kind of circumvention tool, allowing their Iran-based users to read content from filtered blogs, as the aggregation of content was conducted on servers outside Iran and was therefore free of the limitations imposed on the Internet inside Iran. Feed aggregators also allowed access to blog content outside the blog’s template. This way, one was able to read the content of a post without having to wait for the entire blog to load—an important feature in Iran’s speed-restricted environment.

Moreover, bloggers report how they were able to acquire information about the readership of their blog through feed aggregators and third-party tools, such as Feed Burner, which was used to maintain and groom blog feeds and inform bloggers about their feed's popularity. Google Reader allowed its users to post comments underneath aggregated pieces of content and to interact with others. In effect, Google Reader had become a private social network centered on blogging and populated by many bloggers and mature blog readers. This blog-focused enclave dissolved in the cacophony of social media when Google Reader was shut down, forcing content from Blogestan to compete against other forms of content, and losing some of its interactive capacities in the process.

*“ No one really writes a comment anymore, and even if they do, the comments are lost in social media. When Gooder was around, that was where the comments would be left, and the bloggers would know that.”*

The bloggers interviewed also say that the closure of Google Reader and BlogRolling disrupted important connections between bloggers, who used to be able to re-route some of their traffic to others through their blog roll, thus performing community building. Around the same time, the general volume of traffic in Blogestan dropped as readers began following links on social media. Re-routed traffic, which served as a kind of currency in Blogestan, is no longer as prevalent, which has weakened blogger-to-blogger connections.

*“ I would post a link to a blog on my blog and the traffic on that blog would suddenly jump from 10 to 1,000. This gave both me and the blogger a buzz. I was capable of sending out traffic, and this meant that I mattered. On the receiving end there was a blogger who was catapulted into fame. Both parties gained something. We do not have this anymore. We helped others to be seen and they helped us to be seen. These attitudes are lost now.”*

## Impact of Social Media (III): From Sobhaneh to Balatarin

Aside from the aggregators mentioned above, other tools played key roles in helping Persian bloggers measure and increase traffic to their pages, according to our blogger interviews. One blogger mentions that in the first years of Blogestan, Yahoo! Messenger was often used to promote their content: “Back in the day, the first thing you would do after you published a post was to send the link to your contacts on Yahoo! Messenger.” One of the first concrete indicators of a blog's audience was the number of page visits. One blogger mentions his sense of satisfaction when “105 people visited my blog in one



day,” but at his blog’s most influential peak, “2,000 or 3,000 people would visit my blog every day.” Another blogger states that his “primary” goal in blogging was to have a high “counter.”

*“ When I started blogging, the only thing which mattered to me was that my counter should grow. It just mattered that the number of visitors of the blog would go up.”*

Sobhaneh, a link-sharing service created by Hossein Derakhshan that allowed administrators to post links to blogs and other sites, is considered one of the first portals for blog content.<sup>54</sup> A blogger describes his page visits growing exponentially when links to his content were posted on Sobhaneh. Anecdotal evidence indicates that prior to the introduction of the major social networks and Balatarin, Sobhaneh was one of the most significant platforms on the Persian-language web. One blogger suggests that choosing your title in order to attract visitors from Sobhaneh was an art form.

What Sobhaneh had started for Blogestan was continued more aggressively by Balatarin which is a key tool for bloggers to promote blog posts and to instantly assess their success based on the number of positive (“plus”) and negative (“minus”) votes as well as clicks from Balatarin to their blog. One blogger states that “social media gave us new numerical criteria in order to measure the size of a post’s audience: number of likes on Google Reader and Facebook, how many times the post was shared on the social media, and the number of votes on Balatarin. These were quick ways to assess how successful a post had been in attracting the audience.”

The competitive dynamics of Balatarin motivated its users to post links that would receive as many “pluses” as possible before disappearing among the hundreds of newly posted links. One blogger says: “Balatarin gave birth to a generation of blogs which produced content for Balatarin. Some of the content only made sense if you were aware of what had gone on the day before on Balatarin.” For bloggers wanting to push their link onto Balatarin’s “hot page” in order to get a shot of high traffic, the capacity of the title and the short description to attract immediate attention of readers became more important than the thoughtfulness of content. This process, which we call the “Balatarinization of Blogestan,” favored provocative, polemical, and extreme content over the thoughtful intellectualism of early Blogestan. This also produced a counter-movement against Balatarin among some bloggers: the statement “do not link content from this blog in Balatarin” can be seen on several blogs at the time of this report’s writing.

*“ I think Balatarin was one of the most important driving forces for political blogs. It has since succumbed to the thrill of controversy, though.”*

<sup>54</sup> Often referred to as Iran’s “blogfather,” Derakhshan, a Canadian-Iranian blogger, was sentenced to 19 years in jail in 2010. He is currently imprisoned in Tehran.

## Socio-political changes

Interviewed bloggers describe how content produced in Blogestan underwent a transition from personal and private matters to essay-style analysis. Bloggers use terms such as “a film I had watched,” “an interesting conversation I had with someone,” and “my own relationships” to describe the themes of the pieces they published around 2005. Later, however, these themes were modified. According to bloggers we interviewed, the political climate under President Khatami had a significant influence on Blogestan, as many bloggers abandoned their initial, more confessional focus on personal opinions and experiences. President Khatami’s two presidential terms (1997-2005) included both the rise of the reformist narrative and its collision with the conservative political current, politicizing Blogestan. One blogger describes her transition from being a chronicler of her own personal experiences into “an analyst of socio-political conditions.” Another blogger maintains that it became increasingly “taboo” to discuss “your own pathetic life, when students had been beaten up in the dormitory of the University of Tehran.” During this critical period of socio-political change, the once prominent topics in Blogestan became less popular as audiences demanded more current event analysis, whether or not this was the blogger’s primary interest or focus.

In the early years of Blogestan, the podium to discuss off-limits or ignored issues was an attractive novelty. Authorities had not yet started filtering the Internet and the conversation on the web was essentially uninterrupted. Blogestan had a strong monopoly over content on the Persian-language web, according to bloggers interviewed for this report. The rise of social media meant that bloggers suddenly had to share their audience with hundreds of thousands of new participants who became new content producers, impacting bloggers’ sense of being exceptional and motivation to blog.

*“ It used to be a big thing to be a blogger. It isn’t anymore. Everyone is talking now.”*

One well-known blogger interviewed for this study mentions that during his first two years of exposure to Blogestan, he would passionately read blogs but avoid contributing. He says: “It took me a long time before I could have the courage to approach the Mount Olympus of Blogestan and consider myself worthy of joining it as a producer, as opposed to the silent consumer that I was.” This statement typifies how audiences gradually transitioned into playing a stronger content production role and contributed to the shifts in conversational dynamics online.

# Conclusion: The Future of Blogestan

From its inception, Blogestan has been driven and shaped by changing socio-political conditions and technological developments. The early Persian blogosphere flourished as an alternative, unregulated space for expression outside the restrictions of mainstream discourse as Internet use exploded among Iran's majority youth and tech-savvy population. In later years, the Persian blogosphere morphed under intensified state pressures and regulations as the spread of new, more streamlined social media platforms began to outpace and replace blogs among both bloggers and readers. As our research shows, these factors, collectively, have significantly altered the participatory dynamics, experimental character and potency of the early Blogestan scene.

These changes raise key questions about the future of the Persian blogosphere. Some interviewed bloggers seem pessimistic about Blogestan's survival—especially as social networking sites are reshaping the online ecosystem of the Persian blogosphere and beyond. Our data indeed supports the notion of an overall decline in blogging activities as well as a high level of blog abandonment since 2008, in part as a result of the increase in social networking sites.

Other facts, however, give a more positive prognosis: nearly all survey participants are still reading blogs; hence if there was indeed some change in blog reading habits over the years, there is no clear pattern of slowdown in blog consumption. Likewise, many bloggers disagree with the “end of history” notion regarding Blogestan and believe that cyberspace is young, evolving and prone to new developments. For instance, John Kelly, in the Forward of this report, maintains that although external factors did have an effect on Blogestan, its overall structure has remained remarkably constant over the years, despite a significant turnover and replacement rate among blogs.

Other bloggers also suggest that Blogestan, to survive, will likely need to abandon the now- antiquated, tech-heavy blogging platforms and adapt to new, more efficient technologies by integrating, rather than competing against, the advances of social networking. To some, it is increasingly evident that the early manifestation of Blogestan is no longer a viable model, and that Blogestan's future depends in part on its ability to mobilize the capacities of social networking that are constantly re-generating new avenues of communications.

Yet beyond new technologies, Blogestan's ability to retain its influence and relevance within in the socio-political discourse in Iran depends too on its continuing capacity to provide dynamic and pluralistic content that nourishes the public sphere.

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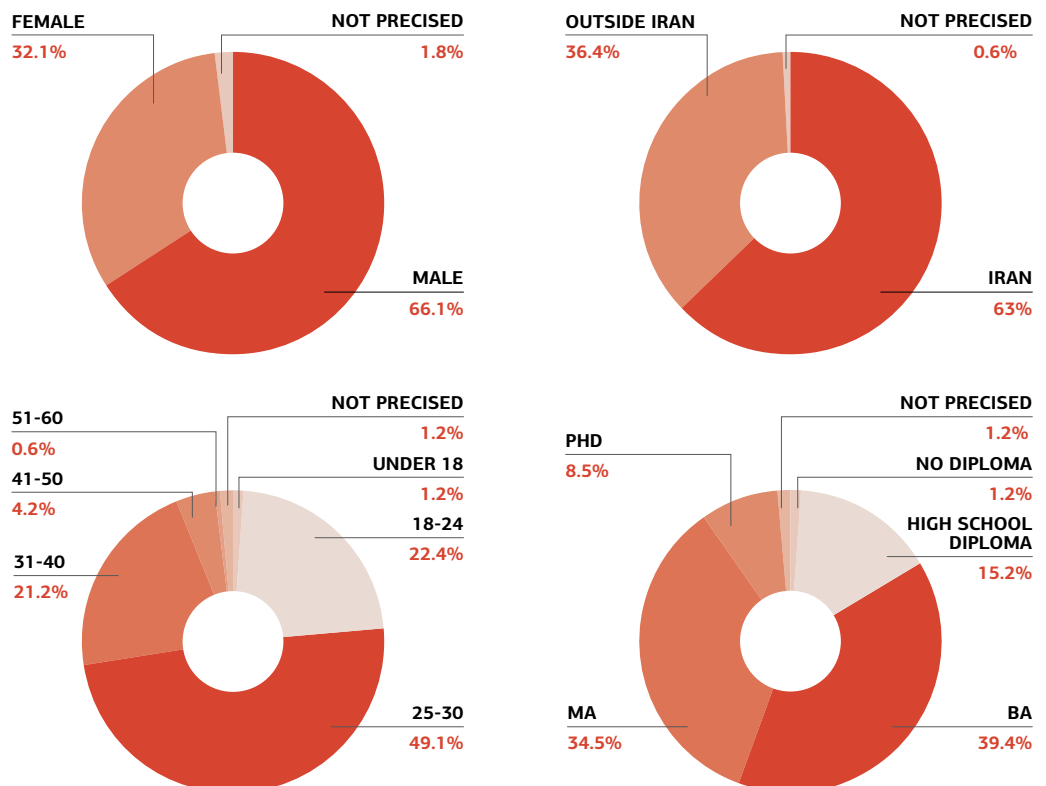
# Annex: Methodology, Sample and Survey Information

## Methodology for the Audience Survey<sup>55</sup>

The audience survey involved a 27-question survey of blog readers. Most questions focused on blog consumption habits and how these have developed over time. Previous research shows that there is a significant overlap between readers of blogs and active bloggers, which is why we also included five questions targeted at blog readers who also have their own blog, in order to observe the development of blogging habits in conjunction with reading habits.

The survey was created with Google Forms and then distributed to a vast network of bloggers by emailing, Facebook, Twitter, and Google+. The survey was targeted at blog users both inside Iran and outside Iran; responses were collected anonymously for security reasons. The audience survey did not attempt to cover the whole spectrum of Iranian Internet users, blog readers and bloggers, but rather to identify trends within Blogestan audiences through a broad sample of users. In total, between July 25 and August 8, 2013, 165 people responded to the survey, with the following demographic breakdown:

ANNEX FIGURE 1. SAMPLE DEMOGRAPHICS



<sup>55</sup> For the full Audience Survey as well as the raw data, please contact the authors of this report.

## Web Crawling Methodology

To complement the quantitative data of the audience survey, we used automated web crawling techniques to better understand the evolution of Persian blogs over time. Our objective was to assess the connection between factors such as domestic filtering, political orientation, historical trends, or the hosting platform. In order to have a benchmark snapshot of a relevant portion of Blogestan dating back to the 2000s, we contacted the authors of the “Persian Blogosphere Crawler Report.”<sup>56</sup> However, the original dataset had been lost following the close-down of the Tehran-based organization by the authorities in 2007.

The dataset collected for “Mapping Iran’s Online Public: Politics and Culture in the Persian Blogosphere” was on the other hand still available, and the authors of that report kindly offered to share it for further study.<sup>57</sup> In addition, they also suggested that we make the most of similar datasets that had been constituted between 2009 and 2012, which had not been published.<sup>58</sup>

Due to the methodology used to select these active and prominent blogs, the size of the sample differs according to year and ranges between 6,061 blogs to 9,121. Also, it is important to note that these yearly samples overlap for a total of 24,205 distinct addresses aggregated across the five measurements, with 2012 being the most unique. In the table below we indicate the total number of blogs for each yearly sample, the number of blogs present for the first time any given year, and the blogs present in one sample only.

**ANNEX FIGURE 2. BLOG SAMPLE**

	2008	2009	2010	2011	2012
TOTAL NUMBER OF BLOGS FOR EACH YEARLY SAMPLE	6,061	8,092	9,121	7,665	7,471
BLOGS NOT PRESENT IN PREVIOUS SAMPLES	n/a	2,620	5,715	3,553	6,256
BLOGS ONLY PRESENT IN THIS SAMPLE	574	1,188	3,079	3,357	6,256

Every blog of each yearly sample was attached to a topical category (or *attentive clusters*) using human examination and a computational analysis of the frequencies of words and phrases. In the initial report by Kelly and Etling, the categories were: “secular/reformist,” “conservative/religious,” “Persian poetry and literature,” “mixed networks.” This last category gathered blogs focused on sports, celebrity, and minority cultures.

<sup>56</sup> Iran Civil Society Organization Training and Research Center (ICTRC), 2006.

<sup>57</sup> Kelly and Etling, 2008.

<sup>58</sup> The datasets gather Persian blogs that have been identified each year as the most active and prominent. According to John Kelly: “The selection of each yearly list involved

several filters such as recentness of publication and minimum degree requirements. It relies on social network analysis, not case/attribute data. So, this is not sampling. It

represents the most active and connected part of the blogosphere, and what’s missing is just the poorly connected and mostly inactive long tail.”

In the samples from 2009 to 2012, the number of clusters was increased but meta-categories remained stable, which allowed us to identify “opposition/reformist/secular” and “conservative/religious/CyberShia” blogs. To simplify the presentation of the findings, we decided to refer to the former group as “reformist” and to the latter as “conservative.” We gathered all the other clusters, including Persian poetry and literature, and mixed networks, under the label “other clusters.”

Using the datasets presented above, we also collected the following additional data:

### **Blog Status and Blog Activity**

These traits correspond respectively to the questions “is each blog in our different sets still online?” and “what are the dates of the last publications from each blog?” Our datasets contained blogs distributed unevenly across seven hosting platforms. Each required different approaches to aggregating activity, with user modifications and themes creating idiosyncrasies on data collection, even within the same platform.<sup>59</sup>

### **Blog Filtering**

Our second data collection endeavor focused on the **accessibility** of the blogs from inside Iran. One limitation of this collection was that no dataset exists that would indicate the accessibility of a site in Iran at any given time, limiting our ability to create time-series based analysis. Therefore, we could only assess whether each site was blocked at the date of the test, at the end of September 2013. In addition, we could not determine the accessibility of sites regardless of whether the actual site was live or not. It has previously been determined that Iran’s web censorship partially occurs based on whether the “Host” HTTP header or the page address requested match a blacklist.<sup>60</sup> The censorship apparatus is agnostic to what the host on the other end actually is and can

<sup>59</sup> To ascertain the status of each blog, the script first attempted to connect to the URL and retrieve its front page. Based on previous observations, this script initially checked as to whether the content contains strings associated with platform error messages such as those associated with site deletion or violations of terms of use. The script and researchers also performed checks to determine if the host was still responsive or whether the domain appeared to have lapsed. The status values included: ‘not found’ or ‘unavailable,’ ‘deleted’ or ‘disabled,’ ‘empty,’ ‘private,’

‘moved,’ or ‘filtered.’ While these errors may potentially have resulted from the same causes, such as a blog being deleted because it had violated the terms of service or local laws (otherwise coded as filtered), we were limited to the attribution provided by the platform. Therefore, where we could not differentiate whether a user or authorities had removed a blog in the error message, we disaggregated these cases to treat them differently from those where attribution was clear. To evaluate the activity of each blog, the script first attempted to find its RSS feed via an analysis

of the HTML code of the frontpage. If no such tag was found, a best guess of the location for the feed was made based on prior observations of the blogging platform. If both methods failed, then the front page and archive pages were searched for HTML tags identified as likely containing timestamps for posts. An attempt was then made to parse potential date strings based on Jalil or Gregorian date format. To allow for the quantitative analysis of the result of the data collection activity, we decided to label any blog still online as “active” that had least

five posts published during the previous 12 months, or that had at least one post published every three months in the past twelve months. We included this second criterion in order to take into account blogs for which we could only retrieve data on the overall activity per month using archive analysis.  
<sup>60</sup> Simurgh Aryan, Homa Aryan, and J. Alex Halderman, “Internet Censorship in Iran: A First Look,” Free and Open Communications on the Internet, 2013, <https://www.usenix.org/conference/foci13/workshop-program/presentation/aryan>.



be tested through a forged request to a control server. This forged request will trigger the same set of filtering rules as if the traffic were directed for the real end destination, so long as it traverses the international gateway. This approach allows a researcher to send headers to a site that should return a predetermined string in response to any request. This test was built on the OONI network interference testing framework.<sup>61</sup>

### **Blog Takedowns**

Technical limitations on the accessibility of blogs by the filtering apparatus only reflects one aspect of the state censorship of Blogestan. Most Persian blogs (92 percent of our sample) are hosted on platforms managed by companies established in Iran or subject to regulations of the Iranian government, and, therefore, appear to respond to takedown requests from Iranian authorities. From the authorities' perspective, the benefit of takedowns compared to mere filtering is that the former cannot be accessed with circumvention tools. Additionally, since much of the country's content filtering occurs at the international gateway, platforms hosted in country are not able to be filtered directly.<sup>62</sup>

In order to collect data on blog takedowns, we relied on Archive's Wayback Machine, which retrieves and stores large sections of content on the Internet for the purposes of maintaining historical records, including the blogs within our sample. Archive presents a "memento" API service, which is a standard that allows for a program to easily move between different archived copies of the site. We used this API to detect abnormal decreases in the size of successive archives and to spot removal messages on the front page of each blog. In doing so, we were able to track down an approximate historical period for the takedown or abandonment of numerous blogs hosted on Persian-language blogging platforms.

<sup>61</sup> OONI developer documentation: <https://ooni.torproject.org/docs/>.

<sup>62</sup> Alireza Shirazi (@alirezashirazi), "The filtering system cannot block domestic websites," 3 June 2013,

<https://twitter.com/alirezashirazi/status/341532866871709696>.

**ANNEX FIGURE 3. FREQUENCY OF BLOG FILTERING AND REMOVALS BASED ON HOSTING PLATFORM AND AFFILIATION CLUSTERS**

Platform	Total	Filtered	Removed	Conservative	Reformist	Other clusters	Hosted in
ALL	24,205	3,780	704	5,825	4,375	14,005	
		16%	3%	24%	18%	58%	
BLOGFA	16,755	1,100	668	4,435	1,816	10,504	USA
		7%	4%	26%	11%	63%	
PERSIANBLOG	2,313	154	0	202	566	1,545	USA
		7%	0%	9%	24%	67%	
BLOGSPOT	1,750	1,721	0	13	899	838	USA
		98%	0%	1%	51%	48%	
PARSIBLOG	839	44	11	809	7	23	Iran
		98%	0%	1%	51%	3%	
MIHANBLOG	429	31	18	117	34	278	Iran
		7%	4%	27%	8%	65%	
BLOGSKY	373	70	1	46	126	201	USA
		19%	0%	12%	34%	54%	
WORDPRESS	367	352	0	14	285	68	USA
		96%	0%	4%	78%	19%	
MALAKUT	15	11	0	0	11	4	USA
		73%	0%	0%	73%	27%	
AKKASEE	10	0	0	0	7	3	Iran
		0%	0%	0%	70%	30%	
PARSIBLOG	7	0	0	5	0	2	Iran
		0%	0%	71%	0%	29%	
Myblog	7	0	0	3	0	4	France
		0%	0%	43%	0%	57%	
PARSIYAR	3	0	0	3	0	0	Iran
		0%	0%	100%	0%	0%	

## Methodology for Blogger Interviews<sup>63</sup>

Bloggers who could be considered influential were selected to ensure they had both extensive experience with blogging as well as knowledge about Blogestan in general. Selected individuals had to have been active members of Blogestan sometime during the past ten year period. They had to have participated in different roles in order to assure broad understanding of Blogestan, such as being active blog readers, and have experience with social media so as to have an informed view of its impact on Blogestan. The list of bloggers to interview was further refined during the selection process, based on representativeness and availability, and limited to twenty individuals. Eleven were based inside Iran and nine had moved outside the country after they started blogging. Eleven of the interviewed bloggers were female and nine were male. Seventeen bloggers had continued to blog, however, with different frequencies, and three had stopped blogging for different reasons.

The selected bloggers were contacted through email or a message on Google+ or Facebook and interview questions were delivered either over email or through a video conversation over Google Chat or Skype. The bloggers were given complete control of the time and method of communication in order to satisfy their security requirements. The interviews were carried out between June 20 and September 12, 2013. Respondents were asked 19 questions covering the Internet, social media, personal context, political context as well as additional open-ended questions.

<sup>63</sup> For the full interview script as well as an explanation of the intent of each question given to bloggers, please contact the report authors.