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# Digital activism in the Middle East: mapping issue networks in Egypt, Iran, Syria and Tunisia

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The shocking image of the young student Neda Salehi dying, after appearing to have been shot by the Iranian government's Security Forces, dominated the global news and online platforms during the 2009 'Iran election crisis'. Iranian protestors took to the streets, internet, blogosphere and Twitter to express their discontent about the re-election of President Mahmoud Ahmadinejad. In the days following the election, the global news attention shifted from the situation on the ground to the role of Twitter in 'the Iran crisis'. With headlines such as: 'Iran's Protests: Why Twitter is the Medium of the Movement' content organisers such as Twitter increasingly become part of reality and the web becomes a space for analysis. Unique to the web and content organizers is that they mediate the formation of online networks and make these networks traceable. Using natively digital research tools, this paper mapped issue networks of digital activism in the Middle East to understand if the internet mediates the organisation of activism for social change in repressive environments. Digital activists are individuals, sometimes organized in social organizations, that actively express or engage online for development and social change.

The 'Twitter revolution' in the 2009 Iran election crisis shows that anyone with access to a computer, internet connection or a mobile phone can now publish to a potential audience of millions within minutes. This access has brought opportunities and challenges for both governments and activists in the Middle East. Governments want to control the free flow of information and communication by outsourcing censorship, blocking websites and harassing and jailing bloggers, online journalists and digital activists. Digital activists want to overcome these challenges and use the 'freedom' of the internet to organize around social and political issues. There is a natural discrepancy in the desire to control the internet and the freedom of information the internet inherently brings.

This paper compares the characteristics of the issue network concept with the results of this research's digital activism network mapping to understand if the internet mediates the organization of activism for social change in repressive environments. The intended purpose is to illuminate if digital activism in the Middle East form around issues, which actors are included in their networks, how the networks are structured, and where these issue networks are taking place geographically. In addition this paper looks at the link between repression and online network strategies of activists. Governments in the Middle East try to control the internet and repress online freedoms. If the internet mediates the organization of digital activism networks it also makes these networks and actors traceable.

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One can assume that the extent to which governments repress online freedoms will have an impact on the online network strategy of activists. To test this assumption this paper compares digital activist networks in four countries – Egypt, Iran, Syria and Tunisia – with different levels of repression.

**Access and control of the internet in the Middle East**

In the Middle East and North Africa the broadband connections are growing faster than anywhere else in the world. This flowering access can be attributed to the governments' investment in policy and (infrastructural) internet projects. These investments are economically motivated by the governments' desire to keep up and remain part of the global information economy. However, the growing access has also restricted their ability to control information. During critical moments in time, governments in the Middle East are known to cut the internet to limit the flow of alternative information. The internet increases the amount of information and the ease of communication in a region where information is heavily state controlled. Therefore, the internet is seen as a possible actor to alter the rigid power dynamics between social actors and the regime (Human Rights Watch 2005, Open Net Initiative 2009c, Shaery-Eisenlohr personal communication).

The rise of the internet has led to an increase in online civic activism in the Middle East. Citizens are blogging, organizing protests and using social networks like Facebook and Twitter for advocacy purposes. The 'Twitter revolution' in Iran demonstrates the potential the internet has in the hands of activists. Why activists turn to the internet is very context dependent. In Iran, journalists and activists share a common view that the internet is a place to circumvent the state-controlled media and find and disseminate relatively unfettered information. In Syria, an important attribute ascribed to the internet is that it enables activists to establish connections and share information. One prominent Syrian human rights activist told Human Rights Watch (2005), 'The internet is the only way for intellectuals to meet and share ideas in Syria today'. In Egypt, human rights activists say that internet access has considerably strengthened the reach and effectiveness of the national human rights movement. They can now publicize human rights abuses, organize protests and reach different segments of society, such as the youth.

This increase of online activism has spurred governments in the region in their attempts to control access to information and content by expanding their tactics to 'technical filtering, laws and regulations, surveillance and monitoring, physical restrictions, and extra-legal harassment and arrests' (Open Net Initiative 2009c). The Freedom House Internet Freedom Index[1] ranked Iran and Tunisia as 'not free' and Egypt as 'partly free'. Iran's desire to control the internet was demonstrated in 2008, when a draft policy providing for the death penalty for online activities was first debated in parliament. In addition, the government proclaimed a war of words, a strategy that entails thousands of blogs with pro-government information to swarm the blogosphere and 'out blog' alternative voices. The war of words, in conjunction with open surveillance and the increase in regulatory attention intensifies an online atmosphere of fear that promotes self-censorship and discourages dissenting views (Human Rights Watch 2005, Freedom House 2009, Open Net Initiative 2009b).

Iran is not unique in its harsh censorship tactics. Tunisia's government continues to suppress critical voices and opposition activity, both in the real world and in cyberspace. Tunisia maintains a focused, effective system of internet control that blends content filtering with harsh laws to censor dissident and alternative information. In addition, all the internet cafes are state-controlled, and the government requires them to document users' identities (Open Net Initiative 2009e). Syria was not part of the Freedom House internet index,

however in 2006 it was described by Reporters without Borders as 'the biggest prison for cyber dissidents in the Middle East, because of the number of arrests and mistreatments of online activists'. From 2007 until 2009, the situation has not improved, therefore Syria can be considered as 'not free' (Reporters without Borders 2006). Even the more moderate governments in the Middle East and North Africa try to manage the internet. The Egyptian government does not engage in widespread online censorship, but does want to control this new medium by harassment and detainment of bloggers and online actors (Human Rights Watch 2005, Reporters Without Borders 2006, Open Net Initiative 2009a, Open Net Initiative 2009e).

The extent to which governments repress online freedom will have an impact on the online network strategy of activists. The internet enhances the visibility of actors in a network as it is a medium that makes the social link traceable. Thus, it can be assumed that the more virtual and real life repression digital activists encounter, the less incentive there is to be exposed by forming online networks. On the other hand, digital activists see the internet as a space where power relations are negotiated and their isolation can be decreased. To do this, one needs to communicate and form ties with other social, political and international actors. This paper compares the assumption that repression will have an impact on online network strategies of activists by looking at digital activist networks in countries with different levels and tactics of repression.

**The internet and the formation of issue networks**

The image of Neda dying in the streets of Teheran, which dominated the global news and online world in 2009 illustrates the collision of old realities and new technologies taking place in the Arab world. That new technologies are to some extent changing the social and political dynamics of the Middle East is suggested in the research on 'The Arab Online World' by Etling *et al.* (2009, 7):

> The blogosphere, online forums, chat rooms, video sharing sites and mobile phones are becoming emerging networked public spheres, in which the power of the elites to control the public agenda and bracket the range of allowable opinions is seriously threatened.

They make two interesting suggestions; emerging networked public spheres and the role of the internet in network formation. When the internet can facilitate opening the public space for engagement through the formation of networks, then what does the concept of a net-worked public sphere suggest? Marres and Rogers (2005) were among the first scholars to look at the web to study the online phenomena of public debate and public spheres. Instead of finding public debate they discovered inter-linked pages that were formed around particu-lar issues. These online activities did not present 'points of views' or actors participation in a debate, as could be expected in a public sphere. Instead, the websites presented the issue at hand, what it is, who is involved and what should be done about it. In general they found that the Web distinguishes networks that form around specific issues, thus the suggested emerg-ing networked public spheres are to be understood as issue networks.

*Issue network concept*

The formation of networks can enable social actors to fulfil their role in the public domain as critics of governments, corporate and social organizations, and their advocacy for these actors to respond to political and social problems. Political scholars assume that the

network represents an important site for issue formation. Margaret Keck and Kathryn Sikkink (1998) see 'the framing of issues' as a prime political project pursued by these networks, so that they may acquire resonance in political circles and public spheres. The network increases actors' power and ability for dialogue, and enables the public to participate directly in democratic politics. On the Web this means that issue networks are a set of webpages that all treat a particular issue and are connected by the hyperlink (Marres 2005).

The concept of the issue network invites us to focus on the framing of issues as a crucial dimension of politics and enriches our understanding of the networked politics of actors, and the role of the internet in facilitating this. The issue network theory has three specific features. Firstly, actors in an issue network do not necessarily have to share much in culture and lifestyle, but are connected to one another by a particular issue. Thus in this context, the issue becomes the enabler of the connection between the actors in the issue network. Secondly, the issue network draws attention to issue framing as a crucial aspect of politics. Thirdly, the issue network includes a broader spectrum of (potentially conflicting) actors – governmental, non-governmental, for-profit sector – that can be part of an issue network (Marres 2006).

Why is it important to follow the medium and look at the web to understand issue networks? According to Marres, the internet should be considered an active mediator of issue networks because of the following characteristics:

(1) The internet can enable or disable the ability of individuals or organizations to contribute to issue formation. When a piece of information is presented in a PDF format it is likely to sit on one's computer and probably not reach anyone. If you would present the same information on a blog, website, social network or other type of Web 2.0 sphere, the information can be distributed automatically via really simple syndication (RSS), search engines, and hyperlinks and can be joint, ripped or tagged by other actors. Thus, Web 2.0 spheres increase the likelihood that information will resonate on the Web and will enable and increase the formation of networks on certain issues.

(2) When following hyperlinks, Marres and Rogers (2005) found inter-linked pages that did not engage in a public debate around an issue, but 'rather defined the issue in question in ways that built from, and countered, issue-definitions presented on other pages in the network' (p. 923). They found that hyperlinks distinguish and enable networks that form around issues, explain issues and offer solutions.

(3) The internet enables actors to broaden beyond their original members, increasing the momentum and power of the issue network. According to Marres and Rogers, John Dewey's (2001 [1927]) concept of 'the public' is particularly interesting for understanding the formation of networks online. The public is seen as a set of actors that are confronted by the same problem that is not addressed by any responsible body. These affected actors organize into a public to mobilize around this issue. Dewey's concept of the public is in line with the internet as mediator of actors to form around or organize the issue. In some cases of issue network formation, the internet enabled the range of actors involved to broaden beyond the original actors, increasing the momentum and power of the issue network.

(4) The internet can mediate issue networks that take place in a different geo-location to where the issue is taking place on the ground. In the case of Iran's election crisis, it started as a national Iranian issue, which was picked up by outside actors and started resonating internationally. This example demonstrates that there is a difference between where an issue is happening and where the issue network is constructed (Rogers 2009a).

**Natively digital research – a hyperlink analysis**

When looking at internet research, traditional methods focus on the divide between the real and the virtual. It looks at how much and which information of society and culture is online. These methods limit the understanding of the dynamics of the internet. The internet has a logic of its own, and consist of several webs and spheres that are created by search engines, social networks, the blogosphere, Twitter and other online tools and devices (Rogers 2009b). Thus, when taking to the internet for research purposes, it is important to understand some of its basic technical characteristics. The general perception that the internet is one big cyber space is incorrect; it is more grounded to geo-locations than people think. 'The ip-to-geo (address location) technology was developed to channel information nationally: when one types in google.com in France, google.fr is returned by default' (Rogers 2009a). This grounding of the web is not only done by Google but also by other major content-organizing projects, making the world wide web a series of national webs. Content organizers, such as social networks and the blogosphere, also channel information in their specific way to create their own account of reality. This research used new research methods that follow the medium and use the logic of the search engines, social networks and the blogosphere to map networks of digital activism in repressive environments.

The basis for the analysis of digital activism networks in repressive environments is the hyperlink, an online device that enables the creation of networks. Linking is a phenomenon that has moved from the offline into the online world, and has been studied extensively in social sciences.[2] Within the field of sociology extensive research has been done on the tendency of social actors to form ties with similar actors. Furthermore, communication researchers have identified the process of selective behaviour; where individuals choose what medium to experience, how to interpret the content, what to remember and forget according to their prior interests and beliefs. Thus with regard to the internet this also applies to *who* and *what* they link to (Etling *et al.* 2009). According to Bruno Latour,[3] the Web is important to social sciences since it has made social links traceable.[4] This traceable link defines the position of an actor in a network by the number of links and the type of links that one receives or makes. The character of the actor is defined by the types of hyperlinks given and received (Govcom.org 2009, Rogers 2009a). As such, mapping issue networks through analysing the linking pattern will provide an idea of who the actors are and their positions within in a network. The underlying assumption of this research is that the internet makes it possible for online networks to exist, and that natively digital methods make it possible to research and understand the formation of these online networks.

*The issue crawler*

To understand if digital activist networks are issue networks, this research uses two natively digital research tools; the *issue crawler* and *issue harvester*.[5] The issue crawler is a hyperlink internet mapping device that can be described as an 'issue network' location and visualization machine. The underlying idea is that websites link selectively, as opposed to erratically. Making a link to another site, not making a link, or removing a link, may be viewed as conscious acts by online actors. 'The issue crawler follows the outgoing hyperlinks of the starting points through several iterations, and performs a co-link analysis, determining which pages receive two or more links from the broader network thus disclosed' (Marres 2005, p. 105).

There is a dilemma in mapping digital activism networks in repressive environments. The visualization of digital activism activity and content can expose and harm the people involved. To ensure that the actors involved remain anonymous, this research makes its distinctions based on the functionalities of the URL – blogs, news sites and websites – instead of the domain names. In the blogs, a distinction can be made between blogs that are self-hosted or on a blog platform; the latter of which differ in their size/popularity and their geographic location. This is important when trying to understand digital activism networks: censors have different powers over a blog platform than over self-hosted blogs, with a blog platform they only have to block one domain instead of a wide range of self-hosted domains. Governments also have different powers over local blog platforms; it is easier for censors to exercise control over local than an international blog platform by restriction, regulation and outsourcing censorship. The Iranian government encourages people to blog through large local platforms, like blogfa.com, which enables them to keep track of what is happening online and target censorship more effectively.

In order to find issue networks of digital activists in the Middle East amongst the immense quantity of websites, this research has collected a sample of URLs, which were the starting point for the digital activism network mapping. These starting points were constructed by contacting activists in the Middle Eastern region, who provided a list of URLs that to their knowledge are used for digital activism in Egypt, Iran, Syria and Tunisia. The starting points are the input for the issue crawler and the issue network maps are the output of the issue crawler. Figure 1 list details for the four respective countries.

### Issue harvester

The idea behind the issue harvester is that the frequency in which actors in networks use particular words, says something about the issues these networks form around. The issue harvesting tool works as follows: URLs and a list of issues (words) are put into the issue harvester. The tool crawls the URLs for the frequency of which the issues are mentioned. The outputs are word clouds; the issues in combination with the frequency of which they are mentioned per URL.

This research manually compiled an issue list by analysing which issues were discussed in the network URLs in Egypt, Iran, Syria and Tunisia. A total of 206 issues could be discerned, which were categorized into three groups; issues, actors and places. Each group contained a number of sub-categories, which in turn contained a number of issues (see Appendix). These 206 issues were translated into English, Farsi, Arabic and French, and each URL in the issue network was scraped for each issue in every language. It was found that the issue network maps of Iran and Tunisia are loosely structured and contain several clusters of URLs, though here only the clusters of interest[6] were scraped for the 206 issues. The output of the scrapper was word clouds of issues that showed either the number of times certain issues were found per URL or an accumulated tag cloud of the number of times certain issues were found in the network. This word cloud enabled the analysis of which issues are discussed where, in which country, in which cluster of interest, by which actor and in which language.

### Limitations of research

This research chose to use natively digital research methods to look at digital activist network formation and the effect of repression on these strategies. This approach limits the analysis in not saying anything about soft-censorship. Soft-censorship is the fear and

**Iran**
**Input: 20 URLs**                    **Output: 71 URLs**
*10 blogs*                            *36 blogs*
7 blogfa.com                          19 blogfa.com
1 blogspot.com                        3 wordpress.com
1 persianblog.ir                      2 persianblog.ir
2 self hosted blogs.                  2 parsiblog.com
                                      10 self-hosted

*2 news sites*                        *7 news sites*
*8 websites*                          *28 websites*
3 international sites                  12 local websites
1 regional sites                      7 regional/international human rights sites
4 local sites                         9 media/government sites

**Syria**
**Input: 68 URLs**                    **Output: 93 URLs**
*23 blogs*                            *84 blogs*
12 self-hosted                        47 self-hosted
  8 wordpress.com                     27 wordpress.com
  2 blogspot.com                      7 blogspot.com
  1 damasceneblog.com                 2 jeeran.com
                                      1 damasceneblog.com

*4 news sites*                        *4 news sites*
*41 websites*                         *5 websites*
6 news/governments sites              2 international human rights sites
35 regional Kurdish sites             3 regional Kurdish sites

**Egypt**
**Input: 14 URLs**                    **Output: 74 URLs**
*7 blogs*                             *57 blogs*
4 blogspot.com                        35 blogspot.com
1 wordpress.com                       15 self-hosted
1 blogspirit.com                      3 wordpress.com
1 self-hosted                         3 blogspirit.com
                                      2 egyblogs.com

*2 news sites*
*7 websites*                          *14 websites*
Local sites                             9 local sites
                                        5 international human rights sites

**Tunisia**
**Input: 10 URLs**                    **Output: 67 URLs**
*5 blogs*                             *35 blogs*
4 blogspot.com                        14 rfs.org
1 maktooblog.com                      13 blogspot.com
                                        4 self-hosted
                                        1 over-blog.net
                                        1 wordpress.com
                                        1 canalblog.com
                                        1 blogspirit.com

*3 news sites*
*5 websites*                          *29 websites*
5 international sites                  17 international sites
                                      12 local sites

Figure 1.    Issue crawler data set mapping digital activism.

self-censorship that is created by the repressive measures governments take which prevents people from publishing critical information. Natively digital research methods are restricted to the Web thus the effect of soft-censorship that prevents critics or critical information to go online cannot be explored in this research.

With regard to the internal validity of this research, it has to be acknowledged that the formation of the starting points and the construction of the issue list have an effect on the general statements that can be made about digital activism in the Middle East. A choice was made to use contacts with digital activists from the Middle East to construct the dataset. This has been done for the following reasons: (i) it is difficult to identify local digital activism websites due to the sensitive nature of digital activism in the Middle East and the amount of information available online; (ii) one of the issue crawler's criteria is that an actor need to receive two or more links from the network to be included in the issue network. This logic behind the issue crawler has removed and added actors on the map according to their prominence, leaving starting points that are not of interest to the digital activism issue networks out of the results.

With regard to the external validity of this research, it has to be recognized that issue networks of digital activism in repressive environments are very context specific. Distinguishing factors include external factors like: (i) access to the internet, both physical access, literacy access and computer skills; (ii) the demographic composition of the country's population and online population; (iii) the amount and manner of censorship and oppression by government; and (iv) the culture of activism in the country. This research can generalize about the organization strategies of digital activism the Middle Eastern region, but will not be able to make any generalizations on issue networks of digital activism in repressive regimes elsewhere in the world.

**Issue networks in the Middle East**

In comparing the issue network characteristics (Figure 2) – actors, structure and geo-location – with the digital activism networks in Iran, Syria, Egypt and Tunisia (see Figures 3 and 4) this research found some clear distinctions. All the networks differ with regard to actors and structures. In Iran, half of the actors are blogs, which are mostly hosted on local blog

Issue network map analysis
1. Structure
   - Location of actor on map
   - Number of hyperlinks
   - Density of  the network
2. Actors
   - Type of actor
   - Domain name
3. Geo-location
   - Local
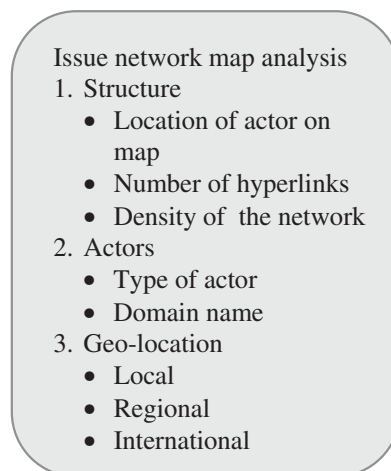   - Regional
   - International

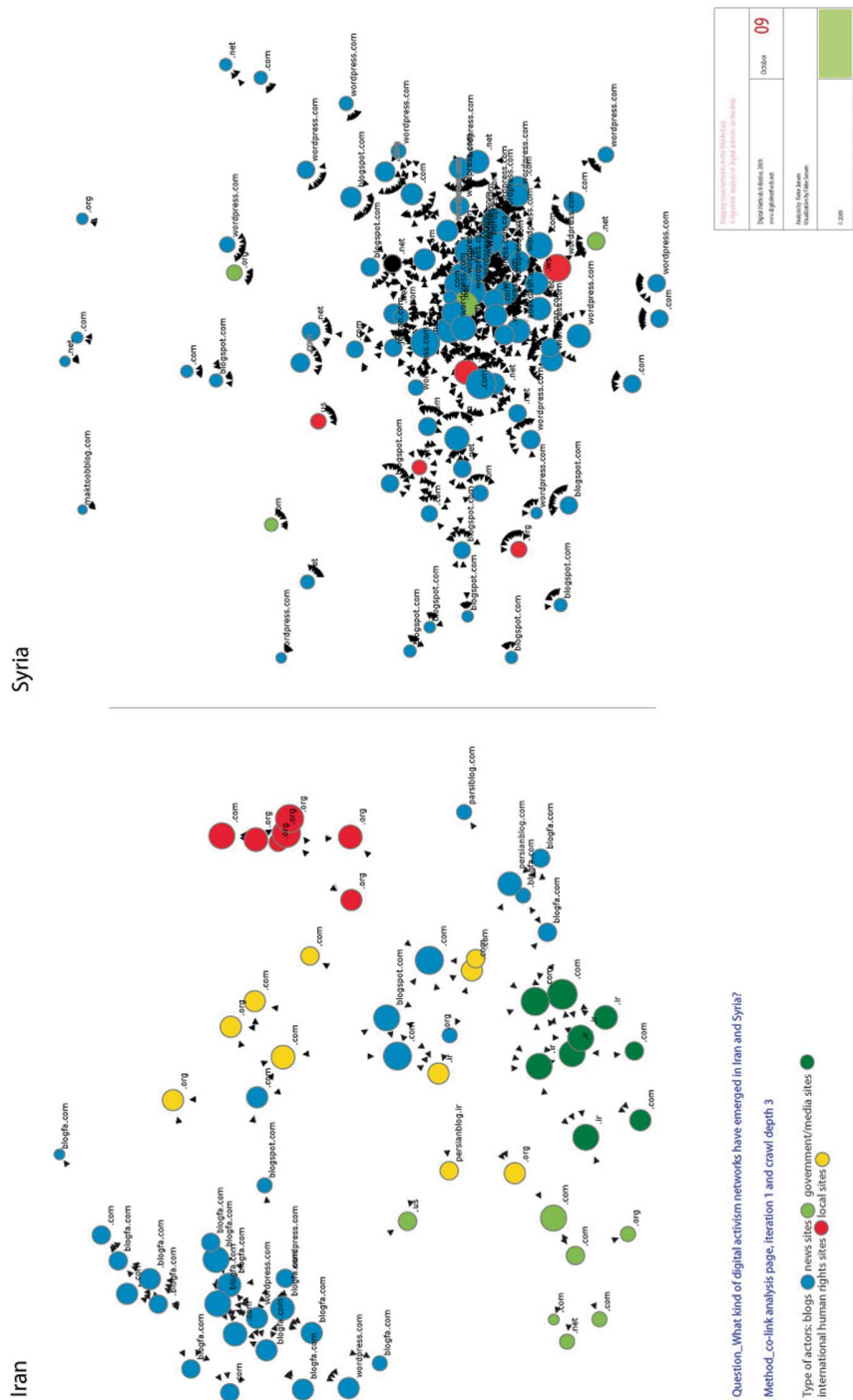Figure 2.    Issue network characteristics.

Figure 3.    Digital activists in the Middle East. What kind of issue networks do they form? Iran and Syria.
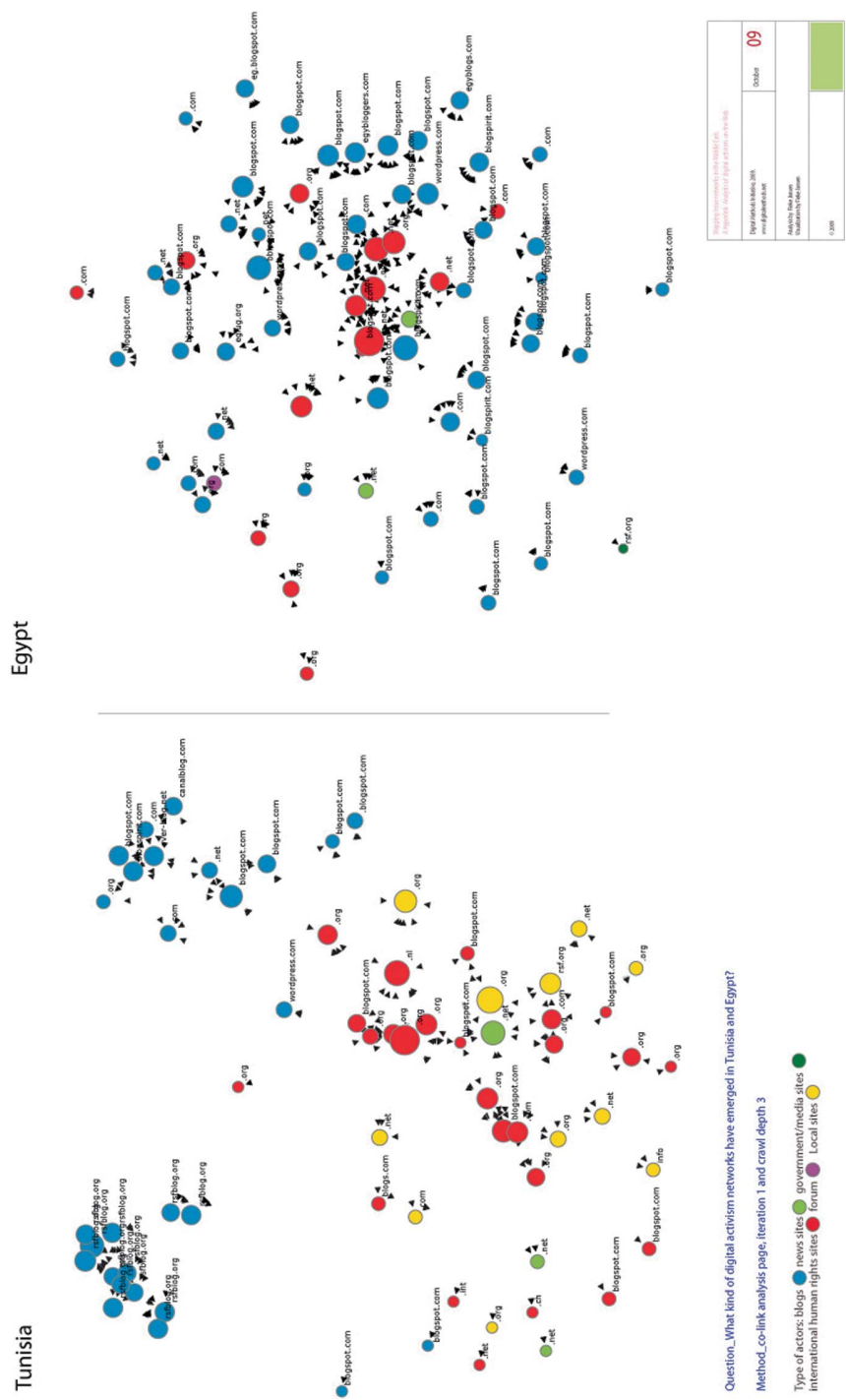
Figure 4.    Digital activists in the Middle East. What kind of issue networks do they form? Tunisia and Egypt.

platforms. The other actors show an interesting mix of local, news, government and international human rights sites. These actors form a loosely structured network that links five distinctive clusters. There are three blog clusters, one international human rights cluster and one government/media cluster, which are only tied together by a single actor. In Egypt most of the actors are blogs, and the majority use international blog platforms. There are no news actors in this network but there are local and international human rights actors. What stands out is the structure of the Egyptian digital activism network; where all the different types actors link to each other in a highly networked network. The Tunisian digital activism network includes a mixture of different actors in one cluster; blogs, organizations, media and international human rights organizations. In Tunisia half of the actors are blogs, and self-hosting blogs and the rsf.org blog-platform are very popular. The other half of actors shows a mixture of local and international websites. In Syria there is a highly structured network of mostly blogs with a few international websites. Most of the blogs are self-hosted and otherwise on international blog platforms.

The digital activism networks in the region do not only differ in the combination of actors and structure. When taking a closer look at the geo-location of the actors, the grounding of the networks was different in each country. The loosely structured network in Iran is very local, with local blog networks and local governmental/media actors. These local clusters have some connection to regional and international human rights actors through crucial actors that tie these networks together. In Syria the highly connected blog networks are mostly local Syrian blogs, with some international human rights websites. In Tunisia there is a distinct mixture of local and international websites a distinction from Iranian, Syrian or Egyptian networks. The international websites in these issue networks are a number of very active Tunisian Diaspora digital activists who have been forced to leave Tunisia but have remained active in Tunisia's webs and spheres.

The networks of digital activists were compared on 206 different issues. It was interesting to see how on the one hand the more general issues like government, poverty, unemployment, transparency and independence are important in every country and resonated in each issue network. And on the other hand the issue networks of Iran, Egypt and Tunisia resonated issues that are very geographically located. In the Iranian issue network the issues that resonated were very political and context specific on topics of internet activism, governance and Iranian current affairs. The Egyptian issue network discussed all 206 issues from local sensitive actors like the Muslim brotherhood to regional governance issues. The Tunisian digital activism network is very content specific, focusing mainly on human rights violations by the Tunisian government and internet censorship. Syria was less context-specific, in the digital activism network the more general issues resonated with great frequency. Local sensitive issues concerning the opposition, press or online dissidents were not found. When looking at the actors, structure and geo-location of the digital activist networks in Iran, Syria, Egypt and Tunisia the question is: do they form around particular issues and frame them as to acquire resonance in the public sphere? The digital activism network maps confirm this, yet there are differences in these issue networks. In the loosely structured issue network of Iran, conflicting actors (activists, the government and international human rights organizations) can be found that group into like-minded clusters. The issues discussed in the blog cluster are context specific and activist by nature. The Tunisian digital activism issue network includes a broader spectrum of actors, which is highly influenced by active participation of digital activist in the Diaspora. Syria has a highly connected issue network that forms around more moderate issues. In Egypt a multi-actor, highly connected issue network was found that discusses all the 206 issues of this research.

*Language*

As an additional step, this research looked at language as a strategy of digital activism. The resonance of each issue was compared in four different languages: Arabic, Farsi, English and French. The networks in Syria and Tunisia revealed that language can imply something about the intended audience of certain issues discussed in the issue network or explain a disconnect between the online and offline world. In Syria the leading language in the issue network is Arabic. When examining the issues' resonance in Arabic and in English this research found that the Arabic content related to more general issues like government, unemployment and poverty. Whereas more specific activist issues like arrested journalists, harassment of journalist or illegal arrest are only discussed in English. These specific English issues resonate with both the local and international actors. Publishing these issues in English and not in Arabic could be a strategy of local blogs to amplify certain issues in the international arena. The Tunisian issue networks showed a different linguistic issue at hand. In the Tunisian issue networks the dominant language is French. On the ground, the official Tunisian language is Arabic and French is classified as the second language. This demonstrates a linguistic disconnect between the online and offline world. The Syrian and Tunisian issue networks language mapping demonstrates that language can be incorporated as an important factor in issue networks of digital activists in repressive environments.

*The influence of repression on issue networks*

In mapping digital activism this research found that each issue network has very distinctive features. Can these differences be ascribed to the earlier assumption that different levels of repression have an impact on the network strategies of online actors?

In Iran, the internet was seen by journalists and digital activists as a place to find relatively unfettered information and in recent years the protest movement of Iran has seen the benefits of the internet for organizing social and political networks (Zuylen 2009). The dilemma that the internet can both be an open space for activism but can also increase the visibility and vulnerability of actors, can explain the type of issue network this research found. On the one hand political and activist issues resonate and conflicting actors are included in the issue network. On the other hand the Iranian issue network is very actor dependent and loosely structured which can imply a certain reluctance to link to multiple actors. This discrepancy can explain that the internet in Iran specifically mediates activism issue networks that are aware of this dilemma. It is interesting to note that digital activists might be aware of this dilemma, but unlike Syria and Tunisia, self-hosted blogs are not popular and local blog platforms like blogfa.com are used. This makes monitoring and censoring blog content easier for the government.

There is an inherent conflict within issue network formation in repressive environments. On the one hand digital activists become traceable when they form online networks. On the other hand they need to form networks to negotiate power relations and decrease isolation. This assumption seems conflicting with the Syrian issue network map. Syria has been identified as 'the biggest prison for cyber dissidents', yet the digital activism issue network map of Syria is highly connected (Reporters without Borders 2006). Syrian digital activists might be highly networked but the issues that resonate in this network are more moderate and less activist than topics found in the issue networks of Iran or Egypt. These findings coincide with the comment a Syrian human rights activist made that the internet is the only intellectual meeting place. In Syria, this highly networked issue

network in combination with the resonation of the more moderate issues can explain that the internet mediates an intellectual issue network and not necessarily an activism issue network.

The Egyptian digital activism issue network that this research found is a very open, strong, local, and highly connected network. At the same time, Egypt has one of the most open online environments in the Middle East. Limited repression and absence of widespread censorship could explain that digital activists can form relative open, strong and multi-actor issue networks and blogs on international blog platforms instead of self-hosted blogs. The issue network concept states that a high variety of actors can increase the momentum and power of framing an issue so that it can acquire resonance in the public sphere.

The Tunisian government on the other hand continues the suppression of critical voices and opposition activities both online and offline. This repression could be expected to silence or caution the local digital activists in their network strategies. However, the harsh offline repression has had an impact on the online network formation of digital activists. Tunisia has a Diaspora community that was forced to leave their country but who is still very active online discussing the local human rights and internet censorship situation. This Diaspora community intertwines online with the local digital activists, and influences the local situation. Therefore, this paper found a local/Diaspora digital activism network that is very specific to the Tunisia issue network map.


**Conclusion**

The 'Twitter revolution' during the Iran election crisis is illustrative of the changes that are taking place in the Middle East. The internet provides both governments and digital activists in the Middle East with vulnerabilities and opportunities. Governments in the Middle East invest in the internet and encourage the spread of these new technologies from an economic perspective. They see the opportunity in and the need to remain part of the global information economy. On the other hand, the spread of these new technologies is challenging the control they have over information and communication. For digital activists, this rapid introduction of the internet has provided them with the possibility to challenge existing power relations, decrease their isolation and mobilize for social change. This research aimed to answer the following question: are digital activist networks issue networks and does the level of repression have an effect on the organization of these networks?

In mapping digital activism networks in different repressive environments, this research found that digital activism networks indeed do form around issues and that there is an inherent conflict in the formation of networks in repressive environments. On the one hand networks enable the negotiation of power and decrease isolation and on the other hand networks make the actors traceable and visible for the oppressor. This research found that this conflict influences the network strategy of digital activists in the Middle East.

Iran has activist networks that balance the tech-savvy and activist nature of its online activities and on the other hand the vulnerability of these networks in a repressive environment. Syria has intellectual issue networks. While Syrian digital activists deal with serious online repressiveness and use the limited open space that the internet has created to come out of isolation, they form basic connections and have intellectual discussion. Egypt has relative open and strong issue networks. In the relative open environment the Egyptian digital activists have been able to form highly connected, multi-actor, local networks. Tunisia has local/Diaspora issue networks; local digital activist challenge the repressiveness of Tunisia by intertwining with a very active Diaspora.

The issue network concept is based on actors, structure and geo-location. In addition, this research has found that language can also be an important factor in issue network strategies. Choosing to resonate certain issues in a particular language can imply something about the intended audience for whom the network is framing an issue. Resonating certain issues in English instead of Arabic could be a strategy to amplify certain issues in an international arena.

### *Food for thought*

The Middle East and North Africa and the increasing access to the internet is an interesting combination that requires more extensive research. There are a number of areas that require further research:

(1) To what extent is the voice of digital activists heard locally? Are these digital activist issue networks accessible within the specific countries or is the content blocked locally?

(2) The relation between increased access to the internet in the Middle East and on the other hand the sharply decreased access during critical events: what kind of information wars are happening and what strategies are used?

(3) What role does repression and soft-censorship in silencing critical actors and critical content?

(4) Are language strategies general online phenomena or are they specific to repressive environments?

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### Notes

1. Freedom House is developing ways to better understand the emerging threats to internet freedom; in the pilot project it has tested 15 countries, which included Iran, Tunisia and Egypt.
2. Social scientists like J. Bryant, M. McPherson, L. Smith-Lovin, J.M. Cook, and E. Zuckerman.
3. Bruno Latour's argument in a lecture to the British Virtual Society Research Centre (1998) in Marres (2005).
4. This medium makes the organization of social relations tangible as it can rely on the pre-existing documentation of social life that are encoded on the Web by actors themselves (Marres 2005).
5. Tools can be found at www.digitalmethods.net.
6. In Iran there are five clusters; three blog clusters, one media/government cluster and an international human rights cluster. The three blog clusters are the cluster of interest as the media/government cluster can not be considered an digital activism issue network and the international human rights cluster contained international actors like amnesty and global voices that are known for the issues that they work on.

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**Appendix**

Table   A1.    Sample of issues resonating in issue networks.

Issue categorization

| Categories | Sub-categories | Number |
| --- | --- | --- |
| Rights | Rights | 9 |
| | Freedom | 12 |
| | Equality | 2 |
| Actors | Online actors | 8 |
| | Political | 11 |
| | Press | 2 |
| Categories | Sub-categories | Number |
| | Government | 14 |
| | Women | 10 |
| | Students | 6 |
| | International actors | 10 |
| | Labour | 8 |
| Issues | Internet | 24 |
| | Activism | 33 |
| | Governance | 19 |
| | Minority | 22 |
| | Arab | 5 |
| | Defence of | 3 |
| | Religious | 3 |
| | Labour | 5 |

Note:
*Online actors are bloggers, cyber-dissidents, dissident websites etc.
**Labour actors are trade unions, labour movements, fired workers, etc.