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Cute Cats to the Rescue? Participatory Media and Political Expression
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This essay is a chapter in the forthcoming Youth, New Media and Political Participation, edited by Danielle Allen and Jennifer Light, (under review, MIT Press).

Abstract

Participatory media technologies like weblogs and Facebook provide a new space for political discourse, which leads some governments to seek controls over online speech. Activists who use the Internet for dissenting speech may reach larger audiences by publishing on widely-used consumer platforms than on their own standalone webservers, because they may provoke government countermeasures that call attention to their cause. While commercial participatory media platforms are often resilient in the face of government censorship, the constraints of participatory media are shaping online political discourse, suggesting that limits to activist speech may come from corporate terms of service as much as from government censorship.

Introduction

Shortly after Hosni Mubarak stepped down from the Egyptian presidency, handing power to the Supreme Council of the Armed Forces, BBC journalist Richard Engel snapped a photo in Tahrir Square that elegantly summarizes one narrative of the Arab Spring: A bearded man holds a handmade cardboard sign that declares "Thank You, Facebook". (Engel 2011)

There have been lengthy debates in the popular press and academic circles about the importance of digital tools in enabling activists to mobilize rapidly with little advance organization. (Rheingold 2003, Shirky 2008, Gladwell, 2010) The successful uprisings against the Tunisian and Egyptian governments have offered a new set of events for interpretation, with some arguing that social media was pivotal in triggering protests (Howard et al. 2011), and others taking a more skeptical stance. (Anderson 2011, Aday et al. 2012).

Whether digital tools were central or peripheral to these activist movements, accounts focused on the role of social media in the Arab Spring largely celebrated the utility of widely used social media tools. Activists in Tunisia used Facebook to share photos and videos of protests in Sidi Bouzid with national and global audiences. Protesters in Egypt used Flickr and YouTube to share images and videos from Tahrir Square. In contrast, publishing platforms designed with activists in mind, like Tor's Hidden Services or Status.net's decentralized microblogging platform, do not appear to have played a major role in organizing or documenting the Arab Spring protests. (A notable exception is Wikileaks, which likely had impact

in Tunisia when diplomatic cables obtained by the group were leaked to Tunileaks, a local transparency organization.)

The use of popular platforms to disseminate activist content is consistent with an idea I proposed in 2007, sometimes called "The Cute Cat Theory". (Zuckerman 2008) At the time, I was working closely with the Open Society Foundation to evaluate funding proposals for digital tools and training designed to help activists share content online. I was struck by how many proposals wanted to create publishing and communication platforms explicitly for activists, and how few considered the use of existing social media tools. Tongue firmly in cheek, I offered a "theory" suggesting that Internet tools designed to let ordinary consumers publish non-political content are often useful for activists because they are difficult for governments to censor without censoring innocuous content; because censorship of inoffensive content can alert non-activist users to government censorship; and because activism using consumer tools can tap the "latent capacity" of non-activist users to create and disseminate activist content.

The theory, as originally articulated, was offered as a descriptive summary of observations I had made about the use of social media tools by activists, and a normative prescription for activists: before building a new tool, consider the strengths and weaknesses of existing, widely-used tools. The Arab Spring, and particularly the use of social media by Tunisian activists to recruit Tunisians to participate in anti-government demonstrations, offers an opportunity to consider the strengths and weaknesses of the Cute Cat Theory in the descriptive sense, to test whether it helps explain the utility of consumer social media tools in documenting protests and mobilizing activism. The strengthening of censorship regimes in countries like China, where thousands of government and commercial employees work to control what is posted online, suggests a test of the predictive power of the theory, which suggests that, even censored, tools like Sina Weibo may be more important for mobilization and activism than the "Internet Freedom" tools funded by the US government and other donors.

Examining the successful use of consumer tools for activism in Tunisia and China suggests that resilience to censorship may be a less important benefit than the ability to leverage participation, remix and humor to spread activist content to wide audiences. At the same time, close examination of the circumstances that allow activist content to spread using consumer Internet tools reveals a host of threats to this type of online speech. In particular, a reliance on commercial platforms for public speech may subject activists to "intermediary censorship", or non-government censorship by the owners of digital platforms for speech

The Internet is Made of Cats

We can consider the modern Internet age to begin some time between January 1993, with the release of the Mosaic web browser, and April 1995, with the decommissioning of NSFNet, the government-funded academic network that formed

the backbone of the early academic Internet in the US. Before the modern Internet age, the Internet was largely government and university built, and was primarily a text-based network used by experienced computer professionals. In the modern age, the network was built by telecommunications companies, used for commercial as well as educational uses, and supported text, images and video, making it more useable for a less experienced, wider audience.

The most obvious feature of this transitional moment was the rise of the transactional Internet. Companies like Amazon and Ebay opened shop in 1994, and numerous competitors followed. Less obvious was the rise of personal publishing sites, like GeoCities, Tripod and Angelfire, which allowed individuals to create content online without learning the intricacies of HTML. In 1998, the most popular websites were search engines and portals, which indexed this content. Next most popular were the personal publishing sites, followed by the transactional sites. (Bump 2010)

In 2004, Dale Dougherty of O'Reilly Media coined the term Web2.0 to describe the next wave of these participatory media platforms. (O'Reilly 2005). Many of the field's exemplars had already launched: Blogger (1999), Friendster (2002), MySpace (2003), LinkedIn (2003), Orkut(2004), Flickr (2004) and Facebook (2004). Others followed soon after: YouTube (2005), Wordpress.com (2005), Twitter [2006], Tumblr (2007). The common ground between these apparently diverse sites was a shared business model: the companies provided users with tools, and the users, following their own interests, generated content that sustained advertising. As of 2012, this remains a dominant web business model. Four of the ten most popular websites are Web2.0 businesses (Facebook, YouTube, Twitter, QQ), and a fifth, Wikipedia, is non-commercial, but also built through user contributions. (Alexa, 2012)

The web, as designed by Tim Berners-Lee at CERN, was intended to let physicists share research findings online. As innovators commercialized the Web, it became a space for commerce and distribution of content by established publishers. With Web2.0, the web became a space for the creation and dissemination of amateur content. The contemporary Internet was designed, in no small part, for the dissemination of cute pictures of cats.

Participatory Media Becomes Political

The rise of easy-to-use content creation tools and free hosting was a boon for many groups, but has had particular significance for activists and political dissidents. In countries where government authorities controlled access to the press, dissident groups turned to online spaces to advance their agendas. As governments saw dissident speech move online, some have moved to control online speech, and activists have been forced to find creative ways to help their content reach its intended audience. One of the techniques that has emerged is using popular platforms, used by millions of users, to disseminate speech.

One of the most active user communities on Tripod.com (where this author managed the founding technology team) from 1996-1999 was a group of Malaysian activists who supported Deputy Prime Minister Anwar Ibrahim, a fierce critic of Prime Minister Mahathir bin Mohamad. Ibrahim's supporters found it difficult to express themselves in Malaysia's controlled media environment, so turned to Tripod's free homepages to publish alternative newspapers and organize a defense of Ibrahim against politically motivated corruption and sodomy charges. (Holmes and Grieco, 1999)

As Web2.0 tools became more powerful, activist uses of the tools grew increasingly sophisticated. In 2004, Tunisian dissidents Sami Ben Gharbia, Sufian Guerfali, and Riadh "Astrubal" Guerfali formed *Nawaat*, deriving the name from an Arabic word meaning "the core". Nawaat began as a blog dedicated to documenting the shortcomings of the Zine El-Abidine Ben Ali government and its aggressive censorship of the Internet. Nawaat's founders saw Ben Ali's skillful control of media as a key part of his strategy for holding power. By portraying Tunisia as moderate, modern and stable, Ben Ali was able to attract international events to the country, including the 2005 meeting of the World Summit on the Information Society.

Nawaat's founders, all of whom fled harassment and prosecution in Tunisia and emigrated, used the Internet as a channel for disseminating counterpropaganda to challenge Ben Ali's government, primarily through Internet video. Astrubal's first widely distributed video was a remix of Apple's famous "1984" commercial. The ad, re-released in 2004 to promote the iPod, featured a dystopian landscape dominated by Big Brother speaking on a giant video screen, smashed by hammer-throwing athlete. In Astrubal's remix, Ben Ali speaks on the giant screen, and as the screen shatters, we see a young Tunisian girl opening her eyes, as if waking from a bad dream.

Distributed via Dailymotion and other online video-sharing sites, the video found viewers in Tunisia, but received little attention outside the country. Obama supporter Phil De Vellis remixed the identical video in 2007, with Hillary Clinton in place of Big Brother, apparently unaware of the earlier Tunisian remix. (Zuckerman 2007). Astrubal's next project received broader attention, and showcased the power of Web2.0 methods. Using data from planespotter sites like Airliners.net, which allow aviation fans to post images of airplanes on the tarmac at different airports, the Nawaat team was able to document the movements of Tunisia's presidential jet. The jet trips evidently weren't being taken by Ben Ali, who was photographed in Tunisia while his jet was in Europe. In a web video which features photos from Airliners.net and "flyover" footage generated with Google Earth, Astrubal suggests that the jet was used by Ben Ali's wife Leila, to manage her business interests in Europe. The video received attention in the international press, including a story in Foreign Policy magazine that instructed readers in becoming "Presidential plane-spotters" (Foreign Policy, 2007).

One result of these videos was increased censorship of the Internet by the Tunisian government, which began blocking Dailymotion shortly after the second video was released. The Nawaat blog, as well as Ben Gharbia and Astrubal's personal blogs were blocked as well. While this censorship might look like a victory for the Tunisian government, the Cute Cat Theory offers a historical explanation for why censorship may have increased the reach and impact of Nawaat's action .

Most Tunisian Internet users did not see Astrubal's videos on Daily Motion – the video has garnered less than 65,000 views since being posted in 2007. But vastly more Tunisians experienced the blockage of DailyMotion, one of the most popular video sharing sites in the Francophone world. Tunisians with no interest in political activism, those focused on the more quotidian, "cute cat" aspects of the Internet were made aware that their government was controlling access to certain Internet sites. It is reasonable to assume that at least some asked questions about the blockage and learned from more politically-attuned friends about the Astrubal video. By blocking all of DailyMotion, instead of taking more sophisticated steps to block the plane-spotting video, the Tunisian censors blocked their target but generated substantial collateral damage; in the process, they sensitized Tunisians to the issue of censorship, and likely drove some to seek alternative paths to access that content.

An earlier story from Bahrain suggests how backlashes to online censorship might work as a mechanism for introducing internet users to anti-censorship technologies. In 2006, anonymous Bahraini activists used Google Earth to document the annexation of public lands by members of the monarchy. A 45-page PDF file, featuring annotated Google Earth maps, compared the size of annexed lands to well-known landmarks like Bahrain's F1 racetrack, and densely populated slums. Embarrassed by the maps, Bahrain's ministry of information blocked access to Google Earth for roughly a week. While the site was blocked, the PDF continued to circulate via email, as it would have been very difficult for the Bahraini government to prevent the circulation of PDFs without causing grave harm to everyone who uses PDF to exchange business documents. (Zuckerman 2006) Bahraini activists, including prominent blogger Mahmood Al-Yousif, responded to queries from frustrated Internet users who wanted to verify the PDF for themselves, and taught Bahrainis to use proxy server to evade the government's block on Google Earth and any other prohibited sites. (Al-Yousif 2006)

By blocking Google Earth, the Bahraini government stumbled into a situation sometimes termed the "Streisand Effect." In 2003, Barbara Streisand unsuccessfully sued Kenneth Adelman and Pictopia.com for including a photo of her house in an online collection of photos of the California coastline. She lost the suit, and the otherwise obscure photo was viewed hundreds of thousands of times due to the publicity surrounding the case. (Masnick 2003) Realizing that censoring Google Earth was simply driving more people to learn to evade net censorship, Bahrain's Ministry of Information lifted the site blockage.

Blocking a tool like DailyMotion or Google Earth sets up a complex dynamic between the company that provides the tool and the country that blocks the tool. It is possible that Tunisia could have used a more sophisticated form of web censorship and blocked only Astrubal's videos, not the entire DailyMotion site. However, by blocking the entire site, Tunisia's government costs DailyMotion the attention – and revenue – from millions of Tunisian users.

DailyMotion, therefore, has an incentive – the lost page views - to examine the videos in question and remove them if they violate the site's terms of service. If DailyMotion chose to remove these videos, it would serve as a victory for the Tunisian censors. Alternatively, DailyMotion could choose to keep the videos online but block them from being viewed in Tunisia. This might also satisfy the Tunisian censors, though the videos would still be available to viewers outside Tunisia. In either of these theoretical cases - the removal of the videos, or the country-specific blocking – the actions suggested by the Cute Cat theory do not work, as only the offending videos are blocked or removed, and apolitical users are not subject to the collateral effects of censorship. In other words, censorship only benefits activists when it is overbroad and creates collateral damage.

Because not all censorship is overbroad, it is worth considering other reasons why Web 2.0 tools have proven helpful to activists. These other reasons include their ease of use, their ability to leverage latent capacities and their resistance to certain types of internet censorship. Even in cases where governments do not attempt to block online content, there are compelling reasons for activists to use existing social media tools to organize and share content.

Ease of use: While the Nawaat activists are technically sophisticated, many activists are not. Because Web2.0 tools are designed for use by millions of unsophisticated users, they've been extensively tested for usability and tend to be well documented. Often, their interfaces have been translated into multiple languages, making them easier to use for people who speak English as a second or third language. It's notable that DailyMotion is hosted in France and was one of the first video hosting sites available in French, the working language for the Nawaat activists.

The large userbase for Web2.0 tools means these tools are highly discoverable. While an experienced activist might be aware of the power of Tor hidden services to publish content while maintaining a high degree of anonymity, an inexperienced user is far more likely to publish a site as a Blogger blog or a Facebook group.

Latent capacity: Because so many non-activist users use blogs, Facebook and video sharing to express themselves, it's possible to think of this large population of users in terms of a "latent capacity" for activism. Should an issue arise that inspires a user of Web2.0 tools to activism, she will be well-positioned to create and share content, and she will have a pre-existing audience of her friends and followers.

We saw this latent capacity at work during post-election violence in Kenya in 2007, where bloggers who'd previously focused on topics like banking or sports used their online presence to document government violence and to promote interethnic efforts at peace. The large number of Kenyan bloggers who discussed the conflict and peacemaking efforts online may have contributed to the rapid resolution of the conflict and to its international visibility. (Zuckerman 2008)

DDoS resistance: An increasingly important argument for the utility of Web2.0 tools for activists is their resiliency to Distributed Denial of Service attacks. DDoS attacks seek to censor websites by overwhelming them with bogus traffic. They can be organized by a group of adversaries - for example, the DDoS attacks mounted by Anonymous, in which a set of users download a tool called Low Orbit Ion Cannon and jointly target sites for attack - or mounted by a single individual who controls hundreds or thousands of compromised computers in a "botnet". DDoS attacks are capable of crippling small to mid-sized websites, and large websites maintain security teams in part so they can fend off DDoS attacks quickly.

One of the reasons DDoS attacks are such powerful tools for silencing speech is that it's extremely difficult to determine the provenance of a DDoS attack, as the computers involved in the attack are often compromised and acting without instructions from their owners. Pro-democracy organization VietTan believes their site is the target of DDoS attacks organized by the Vietnamese government, but it is very difficult to verify this claim. No matter who's responsible for the attacks, VietTan chose a simple expedient for hosting a new site that promotes censorship circumvention tools: they host the site as a Blogger blog, relying on Google's security team to fend off any DDoS attacks. Sites like Blogger have much higher technical and bandwidth capacity to fend off DDoS than individual activist sites, and very rarely experience meaningful downtime via DDoS. As a result, they are a good hosting option for activists with reason to fear that their sites might be attacked. (Zuckerman et al. 2010)

For all these reasons – increased cost of censorship, usability, discoverability and DDoS resistance -tools designed to let people share cute pictures of their cats with friends often outperform special-built tools designed to enable activists and promote social change. This should not be read as a blanket recommendation that activists use Web2.0 tools for all purposes. In some cases, security considerations mandate that different approaches be taken – organizing a secret action via Facebook, and relying on the site's authentication to protect the organizers, would be deeply unwise. But the utility of Web2.0 tools suggest that anyone advising activists on tools and tactics should seriously consider these tools before suggesting special purpose tools, or designing novel tools and platforms. And because Web2.0 tools are so often used for activism, they suggest challenges and responsibilities for the companies that provide them, as we discuss in the final section of this paper.

Cute Cats and the Tunisian Revolution

The fall of the Ben Ali government in Tunisia offers an opportunity to examine the power of social media as a force for mobilization, and the challenges governments face when censoring popular services.

On December 17, 2010 a street vendor named Mohamed Bouazizi had his produce and digital scales confiscated by police officers in the town of Sidi Bouzid. The police officers were probably seeking a bribe to return the scales. Bouazizi protested his treatment and security officer Faida Hamdi allegedly slapped him in the face and spat at him, publicly humiliating him. Bouazizi sought an appointment with the regional governor to protest his treatment, and was denied an audience. He purchased a can of gasoline from a nearby petrol station, doused himself and set himself alight, standing in traffic near the governor's office. Bouazizi survived his self-immolation and was hospitalized in Sfax, and later in Ben Arous. He died of his burns on January 4th, 2011.

Protests against government corruption and economic hardship commenced in Sidi Bouzid only a few hours after Bouazizi set himself alight. Despite increasing suppression by the Tunisian government, protests continued through December 28th, when Ben Ali visited this town, hoping to calm the anger. Instead, protests spread to other cities in the country, including rallies by labor unions, lawyers and other groups in the capitol of Tunis. Protests were met with violence from security forces, and an estimated 338 protesters and security forces were killed in clashes. Ben Ali shuffled his cabinet, promised the creation of hundreds of thousands of government jobs, shut down schools and universities, but failed to quell the outrage. On January 14, he dissolved his government, declared a state of emergency, and fled with his family to Malta, and later to Saudi Arabia, where he remains in exile, the first dictator felled during the Arab Spring.

While this narrative is factually correct, it's incomplete and unsatisfying. Previous protests in Tunisia, including a 2008 protest in Gafsa had been speedily suppressed by Ben Ali's government. The factors behind the 2010-11 protests – anger at government corruption, frustration with economic stagnation and lack of opportunity – had been present for years. Ben Gharbia has told audiences that even the trigger for these protests – Bouazizi's self-immolation – was not unique, and that Tunisians had set themselves ablaze in protests earlier in the decade.

In January 2008, protests erupted in Gafsa and surrounding cities in Tunisia's interior, an area dominated by phosphate mining. The proximate cause for the protest was the announcement of 380 new hires by the Gafsa Phosphate Company. The company had been ordered to hire a quota of local workers – they did, but they selected the children of well-connected political and tribal figures, not the unemployed most in need of work. Sit-ins, marches and other protest actions were staged in Gafsa and surrounding areas until June 2008, and were met with increasing force by Tunisian authorities. By June, 300 activists had been arrested and protester Hafnaoui Maghzaoui had been shot to death by security forces. While the protests were documented on websites like Nawaat and by international human

rights organizations, they went unreported in the Tunisian media, and the protests did not spread beyond the Gafsa region. (Gobe 2010, Amnesty International 2009)

The Tunisian Internet Agency (ITA) began aggressively censoring the Internet prior to the Gafsa protests, blocking DailyMotion and YouTube in response to earlier videos from Nawaat and others. In June 2008, as the Gafsa protests reached a peak, they began blocking Facebook, at that point used only by a few thousand Tunisians. The blockage of Facebook was a rallying point for Nawaat – they had worked to educate their Tunisian comrades about tools they could use to evade blockages of video sharing sites, without much success. They shifted their campaign to focus on Facebook, and encouraged Tunisians to sign up for the service in defiance of the block, using proxy servers. Nawaat claims a sharp increase in Facebook signups during the week-long blockage. It's impossible to know whether the increase in Tunisians on Facebook came from Tunisians in the diaspora or Tunisians evading Internet censorship, but the campaign apparently caught the attention of the ITA. They quietly lifted the block on Facebook a week later. (Ben Gharbia 2011)

In the interim between the Gafsa and Sidi Bouzid protests, both the ITA and Nawaat were busy. As Facebook became increasingly popular in Tunisia, Tunisian authorities approached the platform in two ways. Tunisian leaders, including Ben Ali, began using the service and collecting Facebook friends. By the time of his ouster, Ben Ali had 232,000 friends on Facebook, or more than 2% of the Tunisian population – this made him the second most popular African leader on Facebook, behind Nigeria's president Goodluck Jonathan. (Katlic 2010) At the same time, ITA began intercepting the passwords of Facebook and Gmail users. Working with the national ISP, they redirected login attempts to the two sites to a script that captured usernames and passwords, allowing officials to log into accounts and document the social networks of social media users. Writing on Global Voices, Slim Amamou exposed this practice in July 2010, alerting Facebook users that their online interactions were likely being watched by Tunisia's censors, and perhaps by security forces. (Amamou 2010)

Nawaat, in the meantime, launched a new campaign to discredit the Ben Ali government. In November 2010, Sami Ben Gharbia was contacted by someone in the Wikileaks hierarchy who expressed frustration that Julian Assange had agreed to cooperate with large, international news outlets like The *Guardian* and The New York *Times* to release a large trove of US diplomatic cables, rather than working with activists and journalists in the countries mentioned in the cables. The dissident Wikileaker sent Ben Gharbia a cache of cables that documented US awareness of Tunisian government corruption, which Ben Gharbia promptly published as "Tunileaks."

Because his personal blog and Nawaat were both blocked in Tunisia, Ben Gharbia was not able to host the leaked content on his personal site. Instead, he turned to Google's Ap Engine, hosting the content on Google's cloud of servers. To block the site, the ITA was forced to block Ap Engine, and dozens of Google products that rely

on Ap Engine for their functioning. They did so in early December, 2010. (Ben Mhenni 2010) The block alerted many Tunisian citizens to the existence of the cables, as blocking Ap Engine caused substantial collateral damage to sites Tunisians were used to using.

When protests in Sidi Bouzid erupted, they were well documented via videos posted to Facebook, at that point, the only video-hosting site accessible to most Tunisians. These videos were not easy for the average user to find – generally, you needed to know the name of a particular Facebook group to find the videos. Since many Tunisians knew their Facebook accounts could be monitored by the government, many users were reluctant to "like" or share the videos in question.

This wasn't an obstacle for the Nawaat activists, who were based in Europe. They began curating a collection of Facebook videos, using Storify and other tools to organize the photos and videos into a timeline. Nawaat focused on packaging the footage for international audiences, translating from Tunisia's idiosyncratic dialect of Arabic into standard Arabic, French and English. These packages were ignored by much of the international media, but found at least two willing amplifiers: Radio France Internationale and Al Jazeera.

Al Jazeera's willingness to air footage from Tunisia was particularly important, as the network has a large viewership in the country. Ben Ali never allowed Al Jazeera to operate a bureau in Tunisia, so the network's ability to cover previous protests like the Gafsa marches was extremely limited. But the network gave significant airtime to the protests in Sidi Bouzid, which allowed millions of Tunisians to see an ongoing set of protests and the government's response to the demonstrations.

It would be overly simplistic to credit Tunisia's revolution primarily to Facebook and Al Jazeera. Tunisia's labor unions, lawyers and other professional networks played a major role in spreading demonstrations beyond Sidi Bouzid. And ultimately, the success of the revolution rested – as most do – on the decision of the military to support the demonstrators rather than the sitting government. But one of the major differences between the 2008 Gafsa protests and the 2010 protests was the simple fact that Tunisians had a clear picture of demonstrations through Facebook and satellite television.

Timur Kuran's theory of preference falsification (Kuran, 1989) offers a mechanism for understanding how the visibility of protests in Sidi Bouzid could lead to the unexpected revolution that overthrew Ben Ali. The ability to watch their countrymen demonstrate, day after day, in Sidi Bouzid helped persuade Tunisians in Sfax and Tunis that others shared their frustration with the government, and that they could take to the streets and air their grievances without being immediately arrested or shot. The decision to protest is always a calculus: Will my statement make a difference? What risks am I taking? Video from Sidi Bouzid made clear that something unprecedented – sustained protests increasing in intensity – were taking

place, and that the risks of participating were less than a cautious citizen might imagine.

It's worth asking why the Tunisian government did not block Facebook despite its apparent role in sharing the protests with the citizenry. It's helpful to remember that Ben Ali seemed sure he would retain control of the nation up until the day he left for exile. On January 13th, in his final speech, Ben Ali offered a set of promises to his people. If they'd simply leave the streets and return to their homes: Tunisian security forces would stop firing live ammunition into crowds (a concession to protesters), the price of bread and oil would drop (a concession to the poor) and Tunisia would stop censoring the Internet (a concession to middle-class Tunisians.) It's possible that the government had learned from their experiment in 2008 that blocking access to Facebook angered and alienated the population, and didn't want to create any additional reasons for people to join protests. The night of Ben Ali's speech, the night before Ben Ali fled Tunisia for Saudi Arabia, Nawaat, Daily Motion and hundreds of other sites, routinely blocked in Tunisia, became accessible for the first time in years.

Despite pervasive censorship and surveillance, social media became a powerful tool for the dissemination of information and the documentation of protest in Tunisia. The government's decision to remove the block on Facebook in 2008 suggests a sensitivity to the collateral damage created by overbroad censorship, while the widespread censorship of sites associated with Tunileaks suggests a willingness to censor broadly when online speech is sufficiently threatening to government interests. It is important to remember that social media was heavily amplified by satellite television in Tunisia, and that Nawaat and other activist groups acted as a broker between social media authors and broadcasters to interpret and contextualize what was posted online. It is difficult to posit the role of social media in Tunisia's revolution without broadcast amplification and activist interpretation, but it seems likely that the impacts would have been smaller, and that Kuran's solution to the problem of preference falsification might not have taken hold.

Cute Cats: The China Corollary

While Tunisia was an aggressive and persistent censor of the Internet under Ben Ali, Tunisians were able to access platforms outside the country, like DailyMotion and Facebook, to share their messages. China's censorship regime has put services like these out of the reach of most Chinese. Yet platforms hosted within China, like Sina and Tencent Weibo, are increasingly used for political expression. China's experience suggests that even heavily monitored participatory media platforms can be a space for political discourse, though censorship probably shapes and distorts that discourse.

The Open Net Initiative, a joint project of Internet scholars in the US, Canada and the UK, tracks Internet censorship in more than 40 countries. Nowhere is censorship

more sophisticated, complex and multilayered than in China. ONI began their 2009 report noting, "China has devoted extensive resources to building one of the largest and most sophisticated filtering systems in the world" (ONI 2009). Like Tunisia, China blocks both individual sites it finds controversial (including Human Rights Watch, China Digital Times and other sites critical of the Chinese government) and platforms that allow users to create their own content, like Twitter and YouTube.

Unlike Tunisia, China exerts another layer of Internet control: intermediary censorship, or censorship conducted by the commercial providers of participatory media tools. While platforms like YouTube and Twitter are blocked in China, rival platforms operated by Chinese companies abound. These platforms are aimed exclusively at a Chinese-speaking audience, which may make them easier to use than tools designed in English and localized, and they feature content created by and for Chinese audiences. My colleague Hal Roberts and I have written about the low usage of censorship-circumvention tools in China and concluded that one of the reasons is that many Chinese netizens are reasonably content with the Chinese-language Internet they are able to access without relying on proxies or circumvention tools. (Roberts 2010)

These Chinese-hosted sites are closely monitored by the Beijing government. Reports from Reporters Without Borders suggest that Internet executives attend a weekly meeting with government officials, in which potentially "sensitive" topics are discussed and instructions are offered as to what conversations should be censored. The system of censorship is capable of moving more quickly, when necessary – breaking news stories are often censored within hours or days, not weeks. Enforcement of these guidelines involves a system of rewards and penalties. Companies are given awards for "self-discipline" if they are particularly effective in stifling dissent, and they run the risk of losing their operating licenses if they are insufficiently responsive to government requests. (Reporters Without Borders 2007)

The most powerful tool Chinese companies have for enforcing these guidelines is keyword blocking. An experiment conducted by Rebecca MacKinnon illustrates the method – creating a blog on MSN Spaces in 2008, MacKinnon (a fluent Mandarin speaker) titled her blog "I love freedom, human rights and democracy." The MSN Spaces platform refused her request, with an automated response that read, "The title of your space may not include prohibited language, such as profanity. Please choose another title for your space." (MacKinnon 2009) MacKinnon was able to establish that the process was not consistent between different blogging platforms, by posting over a dozen potentially controversial texts to a wide range of blogging providers. No single text was censored by all providers, and providers ranged widely in their willingness to censor texts, with some censoring almost all, and some only a handful. MacKinnon concludes that each company has its own internal set of rules and uses a set of automatic processes (blocking specific keywords) and manual review to censor controversial material before it appears online.

Censorship in China doesn't just happen at the national border; it happens within the confines of Internet intermediaries, the companies that provide digital public spaces for Chinese users. In describing activist use of popular corporate tools to produce media, past examples have addressed social media platforms located in the US and Europe, where state-based censorship is unlikely to affect political content. Widespread intermediary censorship in China suggests that what worked in Tunisia would be unlikely to work in China. However, evidence from Chinese activist use of tools censored by Chinese corporations suggests that Chinese "netizens" have proven remarkably creative and resilient in their use of Web2.0 tools for political ends.

Netizens have carved out a space for political discourse in Chinese-hosted tools using three strategies, sometimes in conjunction: wordplay, images and speed. Mandarin is a language well-suited to puns and wordplay – homonyms are common, as the same set of sounds spoken using a different set of tones may have an entirely different meaning. When Chinese bloggers discovered that the word "censored" was triggering keyword filters on some blogging platforms, they moved to a colloquialism: "harmonized" (和谐; pinyin: héxié). The term referred to the fact that blog posts were often removed with a message stating that the post had been removed in the interests of social harmony. Not long after, the word "harmonized" began triggering filters, so bloggers moved to a homonym: "river crab", (河蟹; pinyin: héxiè), an amusing innovation, but one that turned into a code of sorts. You could discuss censorship online, but only with people who understood the pun and knew the code.

Next, the blogger codeword for censorship moved from text to image. River crabs are a popular delicacy in parts of China, and bloggers began posting pictures of river crabs served at banquets as a joke about their resiliency in the face of censorship. An unknown blogger expanded the vocabulary by adding a key new term to the lexicon: "the grass mud horse." The grass mud horse, depicted in a remixed online video as a llama, is also a homonym, in this case for a vile insult about one's mother's anatomy. In one video, over footage of llamas a chorus of children sing about the brave and noble grass mud horse and its victory over the evil river crabs. Children innocently singing lyrics that are also the coarsest of insults is a metaphor for the net's uncensorability – through humor, Chinese people will find a way to talk their way around censorship. (Mina, 2012)

Images of river crabs and llamas aren't merely funny – they're another creative way to evade intermediary censorship. While it's easy for software to detect and block words like "censorship" or "harmonize," it's much more difficult to detect and block images. When artist and activist Ai Wei Wei was charged with producing pornography for publishing artistic nudes of himself and friends (a charge many Chinese saw as a form of harassment), Chinese Internet users reacted by posting nude photos of themselves. The photos didn't remain online long – censors manually removed them – but because the content couldn't be automatically

blocked, the trend spread, leading Ai Wei Wei to publish a memorable photo of himself with a stuffed llama covering his genitals. Non-artists participated as well - Li Tiantian, a middle-aged human rights lawyer from Shanghai, surprised supporters when she posted a nude photo of herself in solidarity with Ai Wei Wei. (Mina 2012) Li was one of dozens of netizens who accepted Ai's invitation to participate in a meme, remixing the core idea of a non-pornographic nude into their own personal expressions.

Tommie Shelby's work on "impure", nonconsequentialist dissent in this volume may offer a framework to explain these acts of online protest. It is difficult to celebrate children singing as an offensive song or Ai Wei Wei creating nude images as contributing new ideas or solutions to the Chinese political debate. But given the constraints on online speech in China, the twin messages of a refusal to be silenced and a clever evasion of censorship serve as an unambiguous rejection both of the rules on online speech and the structure of the state that created them.

While some of the online protests use offensiveness as part of their message, others are notable for their subtlety. Chinese netizens recently reacted to the story of Chen Guangcheng's escape from house arrest by posting photos of themselves wearing sunglasses, a tribute to Guangcheng's daring in escaping from house arrest in Dongshigu Village. While online dialog about Chen Guangcheng was rapidly censored (including blockage of the terms "CGC" and "blind man"), the sunglasses meme crossed from online into the physical world, when a flashmob of sunglasses-wearing couples gathered in Linyi city, near the site of the activist's detention and escape. (Branigan 2012)

If humor and remixable images have allowed cute cat memes to thrive on the Chinese Internet, the most important anti-censorship weapon may be speed. A deadly high-speed rail crash in Wenzhou, China, was first reported by survivors on China's microblogging services, known as Weibos. (Two major Weibos, Tencent Weibo and Sina Weibo, provide similar functionality – collectively, they may have as many as 450 million users.) Crash survivors posted about their experience on Weibos, often posting requests for rescue. Some of those early reports were forwarded more than a hundred thousand times, and the Weibo conversations included intensive discussion of the government's response to the crash. (Rapoza 2011)

While some posts about the crash disappeared from the site, Charlie Custer of Chinageeks.com suggests that, "the train crash has proved too big for them to censor. It would be too obvious and dangerous to delete all 10,000,000+ messages about the accident, but deleting individual messages rarely works, as by the time a censor finds them they've been re-tweeted by dozens, hundreds, or thousands of others." (Custer 2011) Because Weibo users discussed the crash in such volume, before censors put in keyword blocks, it became an allowable topic, simply because censoring it fully would be impractical. While the topic was embarrassing to the

government, China Daily reported that the Wenzhou Crash was the most discussed topic on Weibo in 2011.

The challenges of controlling speech on Weibos is leading Chinese authorities to a tactic they previously used to control speech on blogs: real-name registration. As blogs gained popularity in 2006, authorities proposed real-name registration as a way of ensuring that controversial content could be linked to the creator's identity. Pushback from blogging providers, who explained the impossibility of identifying all their existing users, led authorities to limit registration only to users who had standalone blog sites. In 2009, real-name registration came into force for the comments boards for some newsportal websites, though only for new users. (Branigan 2009)

In December, 2011, Beijing authorities said that they would begin requiring microblogging users to register before posting new content. (Because Sina and Tencent are both based in Beijing, the local regulation would have implications for all users of the service.) The regulations include a disturbingly broad list of prohibited behaviors, including spreading rumors or harming the nation's honor or interests. (Lam 2011) The regulations were slated to go into effect in March 2012, but have remained unimplemented. Sina took the step of warning investors that it had not been able to comply with the law, which could lead to serious financial consequences for the company: "Although we have made significant efforts to comply with the verification requirements, for reasons including existing user behavior, the nature of the microblogging product and the lack of clarity on specific implementation procedures, we have not been able to verify the identifies of all of the users who post content publicly on Weibo." (Want China Times, 2012)

It's unclear what degree of compliance with real-name policies Weibo services will ultimately reach. However, it appears the government is willing to expend political capital and cause collateral damage by shutting down Weibos to block political speech. In a disturbing move, authorities showed that they were willing to silence Weibos at a moment of sharp controversy: the ouster of politician Bo Xilai. Commenting on Sina and Tencent Weibo was blocked for 72 hours – users could post new content, but could not react to content others had posted. In addition, sixteen "rumor-spreading" websites were shut down by the government. (Wertime 2012)

The message of such a block is hard to interpret. On the one hand, it suggests that Chinese authorities understand how powerful Weibos can be in spreading controversial content, and are willing to rein services in. However, their unwillingness to shut down the services altogether, even temporarily, or to enforce the real-name registration requirements shows how important Weibo has become to Chinese daily life and how challenging it is for the government to assert control over it.

We might think of the contrast in Chinese response to Weibo and to Twitter as an example of cute cat theory's applicability. Twitter has been blocked in China since June 2009, though a small number of Chinese users – including Ai Wei Wei – access the service through virtual private networks or other circumvention tools. Those who access Twitter enjoy an unfettered environment for speech, though that speech is inaccessible to the broader Chinese audience. Vastly more Chinese users use Weibos, which are aggressively censored, forcing users to speak fast and use their creativity to express themselves. While the space for speech is severely constrained, the online speech can reach hundreds of millions. The frequent appearance of controversial and political content on Weibos suggests the resilience of information dissemination via social media tools in the face of extremely aggressive censorship.

Designer and Internet theorist An Xiao Mina suggests that China represents a speech environment where the only controversial, political speech that's possible is speech that uses image and humor to ensure it's spread. Writing in an article that compares speech in Chinese social media to street art, she offers this formulation: "If I understand Zuckerman's Cute Cat Theory correctly, he creates a dichotomy between people who share pictures of their cats and people who engage in political activism. In other words, cute cats and activist messages leverage the same tools, but they're fundamentally different. **But with Chinese political memes, the cute cats are the activist message**." (Mina 2011)

The Tunisian activists who opposed Ben Ali might have benefitted from secure publishing platforms, hosted outside the country, accessed via virtual private networks, as they used participatory media to share material for broadcast. But Mina suggests that this would be unlikely to work in China. Participatory media like Weibo is both the source of activist ideas and the channel for their dissemination.

As a result, there are strong constraints on what can and will be spread. Messages that are oblique, either because they are encoded or because they use images, survive longer than those in text. Messages that are funny are more likely to be spread, and those that are remixable invite participation and amplification. And since ideas must spread quickly, before censors catch up, breaking news and reports are more likely to spread than in-depth reflection and analysis. Participatory media platforms open a new space for activist discourse, but it's a space with sharp limitations.

Existential Threats to Cute Cats

If recent experiences in Tunisia and China suggests the utility of activist speech using social media tools in the face of censorship, it's worth considering the possible threats to this mode of speech and its prospects for success in the future. What follows is an incomplete list of limits to cute cat methods for online advocacy, and a brief discussion of the challenges of each.

Internet shutdown and slowdown

Egypt, Libya and Syria all responded to Arab uprising protests by sharply limiting access to the Internet, following the lead of China, which limited Internet access from Xinjiang after a series of protests in Urumqi, and Myanmar, which turned off Internet access during the Saffron revolution. Evidence suggests that Iranian authorities slowed access to the Internet during the Green Revolution, possibly to prevent users from watching or posting online video.

Because the Internet has become an essential tool for business communications, it is difficult for most nations to maintain a sustained Internet shutdown. However, it is likely that we will see event-related shutdowns in the future, as governments seek to retain control in the face of domestic unrest. There's little activists can do online using any tools – popular social media tools or otherwise – if a government takes the drastic step of turning the Internet off.

Real-name registration

While China has not been able to fully implement real-name registration, it's important to consider the possible implications of the policy. It's not necessary for authorities to arrest many netizens for spreading political memes: arrest a few and it's likely that others will perceive the dangers of authoring and spreading memes. It's possible for a government to have this effect simply by arresting users through other investigative means – identifying users through IP address or through informants – but real name registration serves as notice to all users that they could be vulnerable if they participate in the spread of controversial content.

Coded speech

While Chinese resilience in the face of censorship is impressive and inspiring, it's important to remember that the sorts of speech permitted through viral images and wordplay is less accessible than uncensored speech. Dialogs about grass mud horses and river crabs is confusing to those who don't know the code, and it's difficult to imagine how a serious political essay could be written to evade censorship using these techniques. One possible implication of the Chinese approach to censorship is that simple ideas may be able to spread through the population, but sustained political dialog may be difficult or impossible through social media. An emergent dialog centered on image and remix may prove to be a rewarding public sphere, but it is likely to be a very different space for expression than those postulated by theorists like Habermas.

Corporate intermediary censorship

By relying on corporate-owned social media platforms, activists are vulnerable to the policies and politics of the platform owners. While platforms like YouTube, Twitter or Facebook may feel like public spaces, in practice, they're private property, controlled by contracts of adhesion users must agree with to participate in the space. Speech on these platforms is less like holding a rally in a public park – it's more like giving a speech in a shopping mall, an idea that has been widely discussed in the US Supreme Court, notably in Lloyd Corp. vs. Tanner and Pruneyard Shopping Center vs.

Robins, with courts finding that private actors have a great deal of control over speech that takes place on their property.

Platforms like YouTube and Facebook have inadvertently censored activist speech due to their limited ability to evaluate content in non-English languages. YouTube removed videos posted by activist Wael Abbas that documented abuses by the Egyptian police, while Facebook removed Wael Ghonim's "We Are All Khaled Said" group, used to help organize the Tahrir Square protests, several times. There's no evidence that either company intended to censor activists, but their policies (now modified and improved) created sharp constraints on speech. Instead of removing content that violates its terms of service against depicting violence, as it did in the case of Wael Abbas's videos, YouTube often allows the content to remain, but warns viewers that they will be seeing content that is "potentially offensive or inappropriate". Facebook, which removed "We Are All Khaled Said" on the grounds that the group's administrator used a pseudonym, has largely remained unbending on the requirement that users be identified by their real names, a significant obstacle for those afraid their activism on Facebook might be grounds for arrest in their local jurisdictions.

As suggested by Rebecca MacKinnon in Consent of the Networked, "Internet freedom" is an idea that cannot be advanced purely by encouraging governments not to censor the Internet. It also requires that users of participatory media platforms pressure the owners of those platforms to ensure that activist and free speech uses of those platforms remain viable. In this volume, Noelle MacAfee suggests that a challenge of distributed public spheres, operated by large corporations, is that they "treat people as beseechers and consumers, not as citizens." These spaces, while more fertile than other public spheres available to activist users, are far from ideal spaces for deliberation, and far from guaranteed to remain accessible and usable.

Attention scarcity

The sharpest limit to the utility of social media as a tool for advocacy may be simple limits to human attention. While access to social media tools provides the ability to publish content, it does not guarantee that anyone will pay attention to the content in question. As more activists become proficient in the use of social media tools to spread their ideas, it becomes more difficult for content to reach a broad audience as the competition for attention increases. While the success of Invisible Children in gaining attention for their campaign against Joseph Kony with the Kony2012 campaign was impressive, we can also think of it as a barrier to attention for other causes seeking audiences at the same time. If, as the Tunisian example suggests, social media operates in part by leveraging the amplification of broadcast media, we are likely to see scarcities of two types of attention: attention from citizens and attention from broadcast amplifiers.

The Ben Ali government kept Facebook accessible both to monitor the activity of activists on Facebook, and in the hopes that Ben Ali could develop good will from online audiences by using the tool. While efforts like this, and the Chinese government's notorious Fifty Cent Party are sloppy, it's possible to imagine a future where authoritarian governments compete for attention in the same online spaces where activists now congregate. The future may be one where social media is not censored so much as it is robustly contested by government propagandists. In such a world, activists will not be fighting censorship, but struggling for an audience against content generated by each other and by the state.

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