# China: The Techno-Politics of the Wall

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The Great Firewall (GFW) is one of the most sophisticated and effective Internet blocking projects, and it functions as a powerful instrument for censorship in China.[[1]](#footnote-1) The existence of the “wall,” as both a technological apparatus and a structure metaphor, is a symptomatic object of the global media network, shattering the myth of borderless global access and foregrounding the regulatory power of the nation-state.[[2]](#footnote-2) But what makes the wall more meaningful is the practice of “wall-crossing” (*fanqiang*). As counterprotocols for tactical media, a series of tools and strategies based on VPNs and proxy servers have been developed by Chinese users to circumvent the Great Firewall and to access blocked media content.[[3]](#footnote-3)

The battle over the GFW reveals the lived experience of (dis)connected global media flow that is marked by constant struggles between restriction and access. By investigating the GFW and the practices used to bypass it, this study aims not just to understand the GFW itself, but to interrogate the discursive meanings and political outcomes of technological knowledge, devices, and infrastructures that formed seemingly invisible, yet deeply prevalent power struggles that affect identities, decisions, and activities. China’s GFW provides an ideal case, because it was envisioned, designed, and operated with such a clear political purpose that the struggle against it would inevitably be implicated with political meanings. The techno-politics of the wall (and wall crossing), therefore, manifests the political fabrics that are embedded in the technical coding of even the most mundane activities in our ever-changing digital life.

## Between the Wall and the Space: A Brief History

A wall, as an architectural structure, a metaphor, or an imaginary, always has certain political connotations that signify uneven power relations. The Great Wall, built at the dawn of a powerful Chinese empire, stood as a monument of hegemony for thousands of years. What makes this mundane object political, however, is not the wall itself, but the complex relation *between the wall and the space around it*, a relation that is marked by division, domination, containment, and control. In the case of China’s Great Firewall, the space it seeks to divide, dominate, and control is obviously cyberspace, whose imagined “unruliness” pronounces both threat and vulnerability.

When computers and the Internet were first introduced to China, they were seen as technological opportunities for economic growth and were highly promoted by the Chinese government. Since the early 1990s, China has invested significantly in network infrastructure, and its Internet user base has expanded at exponential speed. By 2015, China had 668 million Internet users, the largest number in the world, and it is moving toward a fast-growing information society with over 3.35 million websites and 250 million microbloggers (China’s equivalent of Twitter).[[4]](#footnote-4)

Amidst such an eye-catching cyber boom, one of the fastest growing areas is video consumption. Currently, there are 433 million Chinese online viewers. Demand for online videos is so strong that some describe Chinese cyberspace as an “entertainment highway” instead of an “information highway.”[[5]](#footnote-5) The proliferation of video-sharing services, such as Youku, Tudou, Xunlei, LeTV, and Bilibili, further nurtured a dynamic video culture including cell-phone movies, Flash animations, spoof videos, and amateur journalism.[[6]](#footnote-6) What is missing from this vibrant cultural scene, however, is the world’s most popular video-sharing platform, YouTube, which is blocked by China’s Great Firewall. Also blocked are Vimeo, Facebook, Twitter, Google+, Blogspot, as well as many human rights and democracy-related websites, blogs, and forums.[[7]](#footnote-7)

The GFW was built at almost the same time as the space it sought to contain was dramatically expanding. Described as “networked authoritarianism” or “authoritarian informationalism”, the Chinese government’s intertwined efforts to foster and control information networks highlight the fundamental tension in post-Socialist China, which struggles between the economic reform toward free-market neoliberalism and tightening political coercion.[[8]](#footnote-8) In 1996, a list of foreign websites was blocked in China for the first time. In 1997, the government issued the Computer Information and Internet Security Protection Management Regulation, a far-reaching law to dramatically tighten information control online. A comprehensive project was initiated in 1998 and launched in 2003 to systematically monitor, filter, and regulate Internet traffic between China and the outside world. The GFW was soon recognized as the world’s most sophisticated and ambitious system for information control.

The construction of the GFW was never officially announced or acknowledged. Its existence, however, is widely known, because its effects are constantly experienced by hundreds of millions Internet users in China. Whenever they try to get onto YouTube or search for a “sensitive word” (*mingan ci*), a page appears with the error message: “404 page not found”. The interface of blockage is so blatantly confrontational that Chinese users often characterize the GFW as an action instead of an object. Thus the “wall” is sometimes spoken of as a verb and a blocked access attempt is described as being “walled” (*beiqiang*). The ways in which a certain website can be “walled” are diverse and comprehensive. These include DNS pollution, IP blocking, URL filtering, TCP packet inspection, and Man-on-the-side attack.[[9]](#footnote-9)

It is widely believed that the purpose of the GFW is to block foreign content of a political nature – the kind of information sources that Min Jiang describes as “international deliberative spaces”.[[10]](#footnote-10) A closer look, however, reveals that many of the blocked sites are actually coming from inside China, which are nevertheless pushed outside because they deal with sensitive topics such as human rights, democracy, and even the GFW itself. For instance, Bullog.cn, a Chinese blogging site founded in Beijing, was shut down by the government in 2007, forcing the site to be moved to an international server which was then blocked by the GFW. Many popular blogs faced the same fate when the Chinese blogsphere was subjected to tightened control. Thus when people climb over the wall, what they often see is information about domestic affairs from domestic sources.[[11]](#footnote-11) What the wall really achieves is not simply to stop outside contents from coming in, but to purge out the unwanted information from inside. Therefore, by blocking video-sharing sites such as YouTube and Vimeo, what are in fact blocked are not videos from the U.S. but underground films, documentaries and citizens’ reportage *from China*. **The wall, by and large, is an effective weapon for information abjection**.

In China’s enormous information control systems, the GFW is only a small component. But the public response to the GFW is far more pronounced, because its blockage of international portals is tremendously blunt, with entire services such as Google rendered inaccessible. Such bluntness in its denial of access results in a highly visible encounter with void and disconnection (e.g. the “404 Not Found” message), and thus makes the GFW an iconic symbol of network control. The symbolic meaning is highlighted by the popular nickname itself, which is less metaphorical than allegorical. The affective experience generated by the GFW resonates with the widespread feelings of entrapment, suppression, and control in people’s daily life online and offline. Thus the experience with, and the imagination of, the “wall” are often evoked to express the public anger and anxiety toward many different forms of suppression that go far beyond Internet control. “If you are arrested, your freedom curtailed, your posts deleted, these can also all be cases of being ‘walled.’”[[12]](#footnote-12)

The construction of the GFW is both technical and discursive. It is not only a technological project but also a cultural and political one. Its formation has to be mapped in the broader landscape of Chinese popular media forms that have transformed dramatically in the past decades from state propaganda to commercial entertainment. A huge gap thus emerged between the market and content-controlled official media, a cultural void that has to be filled by illicit activities. In film culture, for instance, piracy created an alternative public sphere that functions as a powerful underground circuit to evade censorship.[[13]](#footnote-13) In a similar fashion, an illicit practice was quickly developed and popularized among Chinese netizens to circumvent the Great Firewall and to create an alternative cultural space outside it.

## Crossing the Wall

Ever since the GFW was built, there have been efforts to bypass it. Countless circumvention tools based on proxies, VPNs, and encryption technologies were developed and adopted. They are described as “ladders” (*tizi*). Popular ladders include Tor (The Onion Router), FreeGate (a proxy network system), Ultrasurf (a freeware based on proxy servers and encryption protocols), I2P (the Invisible Internet Project, a free, open-source program for pseudonymous information transfer), Psiphone (a combination system developed by the Citizen Lab at the University of Toronto), and GoAgent (a cross-platform software). Other new weapons are constantly emerging, including VPN Gate (a free public-minded VPN service), Lantern (a P2P network where users share bandwidth), Pritunl (a enterprise distributed VPN server), Shadowsocks (a socks5 server), FreeBrowser( a free Internet browser for Android systems), and Fqrouter (a circumvention router for Android systems).

The battle between the wall and wall crossing is fierce and continuous, and all these tools have to be updated frequently in order to remain functional. New technological developments such as cloud computing and IPv6 also pose challenges to the GFW and provide more ladders for wall crossing. Information about how to circumvent the GFW, where to download the tools, and how to use them is abundant on the Internet, though some of this information is censored in China. Since many of these circumvention tools are free, open-source projects, they are often hosted at GitHub, a source code management network where programmers collaborate and share information. Most users obtain circumvention software through email or P2P file sharing, and the latter proves to be particular effective because of its highly distributed structure. Many local vendors even sell computers and cellphones with pre-installed circumvention programs.

Due to the underground nature of wall crossing, it is difficult to estimate how many Chinese users practice circumvention. There have been conflicting reports about the size and impact of the wall-crossing community. In 2014, Globalwebindex reported that there are 93 million Chinese VPN users, which amounts to 20% of total Internet users in China and is the largest number in the world.[[14]](#footnote-14) The actual impact of circumvention, however, cannot be simply measured by its popularity. Since the GFW has become so visible and ubiquitous, circumvention talk is also widespread in everyday life. Online popular culture is full of references to the GFW, mostly in the form of jokes or spoofs. The public awareness of, and the widespread antagonism toward, the GFW is reflected in the popular anger toward its claimed creator, Fang Binxing, the former president of Beijing University of Posts and Telecommunication who is widely known as the “father of GFW”.[[15]](#footnote-15) Fang’s university website was often hacked by angry netizens and was once replaced with “Angry Shoes,” a video game that imitates *Angry Birds* and features Fang as a villain to be attacked by flying shoes.

## The Right to Look: Popular Video Cultures Inside and Outside the Wall

The impact of the wall and wall crossing is especially visible in Chinese video culture, because the government is particularly wary of photo- and video-sharing sites such as Flickr and YouTube.[[16]](#footnote-16) This emphasis on visual culture continues the Chinese Communist Party’s longtime belief in the propaganda function of images, which is manifested in its especially harsh censorship over cinema that remains the most tightly regulated medium in China. As moving images become increasingly digitized and net-based, the control over looking inevitably leads to tightened restriction of video-sharing platforms, especially when the proliferation of portable and affordable digital devices resulted in a flourish of amateur journalism that radically challenges official media. With the recent rise of mass demonstrations, dubbed “public incidents” (*gonggong shijian*) in China, the images produced and shared by citizen journalists play an important role in recording, publicizing, and mobilizing such events. Thus, it is not accidental that the GFW’s first blockage of YouTube in 2007 coincided with the aftermath of the mass protest in the city of Xiamen against the construction of a chemical plant. Cellphone videos recorded at the Xiamen protest were widely circulated on the Internet, generating heated public debate about China’s environmental problems. Months later, YouTube was walled.

The GFW’s tight control over video access generated popular upheaval in Chinese cyberspace, which was largely shaped by the collective sentimentality of the so-called post-80s generation. Born in the 1980s when China just began its economic reform, the post-80s generation came of age amidst the skyrocket boom in both economy and popular media. They are the first generation to witness the spread of television, computers, and the Internet in Chinese households, and thus became the first group of avid media consumers in China. Growing up in the age of globalization, this generation is also decidedly cosmopolitan. Their increasing desire for global media is the major force that drives the fierce battle against the GFW. This is also a generation who is most familiar with a wide variety of illicit digital practices, such as piracy, hacking, P2P file sharing, and jail breaking, which form a rich cultural and technological environment for practicing alternative media access against various forces of restriction.

The cultural sensitivity of the post-80s generation determines that their challenge to the GFW often takes the form of popular, lowbrow entertainment, including pornography. In fact, the crusade against pornography is frequently the official excuse to tighten censorship. To access to pornographic videos, therefore, often becomes the reason to breach the GFW. For instance, when Japanese porn star Aoi Sora encouraged her Chinese fans to follow her on Twitter, many did so despite Twitter being blocked. She was thus credited for “having brought down China’s Great Firewall.”[[17]](#footnote-17) Sometimes, such a seemingly benign desire for obscenity can deliver quite subversive messages. In 2009, the Chinese government launched a dramatic “anti-smut” campaign, whose true purpose however was to censor information about a pro-democratic online petition. Right in the middle of the campaign, an imaginary creature named “Grass Mud Horse” (*cao ni ma*) became a huge Internet phenomenon after a series of widely circulated online videos attracted millions of viewers. The videos feature cute images of an alpaca-like animal as the embodiment of the homophone of a sexually charged profane curse, which expresses public anger toward censorship in a hilarious manner. Although the videos were quickly banned in Chinese cyberspace (but can be accessed on YouTube), the phenomenon continued in countless Internet memes, video games, toys, and even clothing lines that all referenced the lovely animal.



Fig 1: The Grass Mud Horse became a popular expression of resistance to internet censorship source: (CC BY-SA 2.0/chumsdock)

Equally provocative is the animation series *Kuang Kuang*, which was created by artist Pi San and his independent studio Huxiao Animation. The first installment of the series, *Bombing the School* (*Zha Xuexiao*), was released in 2008 on the Chinese video-sharing site Youku and became an instant hit that attracted millions of views. Combining youthful cuteness with rebellious violence, the video creates a dark, humorous metaphor of the oppressive social intuitions in China. Despite (or because of) its popularity, the video was banned from domestic sites and had to be re-posted on YouTube, requiring viewers to bypass the GFW to watch it. To avoid further trouble from the censors, subsequent videos in the *Kuang Kuang* series were divided into two groups: the seemingly benign ones were released on Chinese domestic sites for general viewers and the politically challenging ones were posted on YouTube for those who know how to cross the GFW. Such a practice reflects a popular strategy taken by Chinese artists and filmmakers who use the GFW (and wall crossing) as a shield from censorship. The GFW, in this regard, functions as the political division among different content, platforms, and target audiences.

The division between what is inside and outside the GFW is marked by the peculiar function of YouTube as an effective distribution channel for Chinese underground films and videos that are barred from domestic release. Widely regarded in China as a “free” space beyond the control of censorship, YouTube has become a popular platform for Chinese independent filmmakers to publish those works that are considered “sensitive”, most of which are documentaries about political issues and historical subjects. Artist Ai Weiwei’s critically claimed documentary *Disturbing the Peace* (*Lao Ma Ti Hua*, 2009) was primarily circulated through YouTube. Ai and his studio also established their own YouTube channel to distribute a series of documentaries that they produced as part of “citizens’ investigation” (*gongmin diaocha*), which probed China’s human-rights abuse with in-depth reportage. Similarly, filmmaker Ai Xiaoming’s investigative documentary series on the Sichuan earthquake and Hu Jie’s historical documentaries on the Cultural Revolution all rely on YouTube as the crucial, if not the only, distribution platform. For Chinese filmmakers and audiences, to release, share, and consume these underground documentaries is to challenge the wall, the existence of which is both the pre-condition for and the obstacle to evade censorship. It is disconnection and blockage, instead of connection and access, that highlight the intermediary function of YouTube as a political platform.

The wall-crossing tools have also increasingly been used to access peer-to-peer file-sharing portals that recently became the new targets of the GFW. For the most part, the Chinese government expressed little concern with online piracy despite the continuous pressure from foreign rights-holders. But in recent years, websites for several major P2P networks established by fansubbing communities (dubbed *zimuzu* in Chinese) began to be blocked. One of the first fansub networks blocked by the GFW was doulan.net, run by a group of Chinese fans who translate, subtitle and share documentaries made by the Japanese TV network NHK. Some of these documentaries are about Chinese history and politics, which made many suspect that the true purpose of such blockage was less copyright protection than information censorship. In fact, P2P networks have long functioned as a powerful underground channel for cultural circulation that evades not only the corporate ownership of copyright but also state censorship of content. The GFW’s blockage of P2P networks signals the government’s growing effort to suppress this otherwise unruly domain that used to operate outside the system of culture control.

## The Techno-Politics of the Wall and (Re)politicization of the Space

Neither YouTube or fansub is in itself political. Nor is the practice of wall crossing. In most cases, the GFW is bypassed simply to access apolitical content and services. However, the discursive formation of the wall, as well as the subsequent cultural imagination of it, inevitably politicize almost every notion and activity that interacts with it. As the wall becomes a symbol of political oppression, crossing the wall is thus taken as a practice of political activism regardless of individual purpose and motivation. The concentration of Chinese underground documentaries on YouTube, for example, suggests a popular imagination of a free, open space of political resistance outside the wall, despite the fact that this outside space is itself a discursive construction. Although YouTube fashions itself as a transparent, neutral, and apolitical service, its blockage by the GFW exposes the unseen struggle between access and restriction.[[18]](#footnote-18) Similarly, we are now seeing a conscious gathering of like-minded Chinese activists on Twitter and Google+, the social networks blocked by the GFW and thus imagined as oppositional spaces. In fact, the most famous and widely followed Chinese Twitter accounts, such as Isaac Mao, Michael Anti, Hexie Farm, Rebel Pepper, and China Digital Time, all belong to well-known activists and dissidents, who took the social network as an organization platform for political resistance. For these activists, to access Twitter is to cross the wall, which is an action of political transgression.

For those who are not engaged with political activism, the decision of whether, why, or how to circumvent the GFW is no less political, because the discursive formation of the wall has profoundly politicized almost all aspects of Chinese cyber life. We can see this in many technology-related online forums, most of which discuss wall-crossing tactics. One prominent example is the famous blogger Program Think (*biancheng suixiang*), who initially set up his blog mainly to discuss computer techniques. The blog took a radical turn in 2009 when its hosting site, BlogSpot (owned by Google), was blocked by the GFW. The blogger thus began to share and promote circumvention strategies, and posted in-depth political discussions on such issues as democracy, authoritarianism, corruption, and even revolution. The blog posts quickly became more political than technical.[[19]](#footnote-19)

The politicization comes as a surprising turn after two decades of massive de-politicization in China since the Tiananmen Massacre in 1989. The daily encounter with the wall, I would argue, plays a significant role, because it discloses the hidden contradiction in the imaginary network that is supposed to promise a transparent, effortless, and limitless delivery of information. The network, managed by the principle of protocols, is as much an apparatus of control as a distributive platform.[[20]](#footnote-20) The Great Firewall is precisely such a controlling apparatus based on protocols. As a structure and a metaphor, however, the wall makes what is invisible visible. It embodies the power of control in its structural function, graphic connotation, and cultural imagination. The wall enables a precious space for political struggle precisely because it opens up visible gaps and disconnections. As Alexander Galloway and Eugene Thacker argue: “Protocological struggles do not center around changing existent technologies but instead involve discovering holes in existent technologies and projecting potential change through those holes.”[[21]](#footnote-21) The wall generates those holes through missing links, blocked contents, and error messages. And that is where counterprotocols­­ —the wall-crossing tactics— emerge and exploit, politicizing our mundane technological life of searching, browsing, and networking.

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