

## **HOW CHINA REGULATES ONLINE CONTENT: A POLICY EVOLUTION FRAMEWORK**

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### **ABSTRACT**

This paper describes the evolution of China's online content control (censorship) policies from the mid-1990s through 2011. This paper reports the results of an ongoing research project employing content and citation analysis to examine the implementation of Internet censorship policies promulgated by the Chinese government over nearly two decades. We find that content control in China is not an isolated set of policies, but is situated in a context of Internet regulation and history of media censorship in China. Between 1994 and 2011, the regulatory foci shifted from peripheral control of the Internet infrastructure to direct control of information content and then to indirect control of new online services and the market. The policy paradigm adopted by the Chinese government to regulate the Internet is expected to evolve as more stakeholders participate in Internet activities and the market assumes greater importance to the Chinese economy.

### **KEYWORDS**

China, Internet, censorship, content control, information policy.

## **1. INTRODUCTION**

The context for Chinese information policy extends back to the 1970s (Du et al. 2004; Ma et al. 2012). It is not, however, until the 1990s, that China's information policies emerge publicly and begin to "receive scrutiny" (Mueller and Tan 1997). Since the mid-1990s, the Chinese government has adopted a large number of Internet content control (censorship) policies (we use "content control" and "censorship" interchangeably). "Content control" or "content regulation" refers to all aspects of authority over the creation (production), processing (transportation, distribution, storage, preservation, destruction), and access to and use (seeking, communication) of information by the state. By virtue of these policies, Zittrain and

Edelman (2003) have argued, China has established the most pervasive, sophisticated, and effective online censorship system in the world. China's Internet content regulation plays a particularly important role in governing society, advances the power of the state over the online world inside the country, and provides the government with economic benefits from the Internet industry.

Most previous studies on the topic of China's online content control have been, to some extent, temporal, cross-sectional, and limited in scope. In contrast, the current study employs policy documents as a lens to examine the implementation of China's Internet content regulatory regime over nearly two decades from the development of the Internet environment in the mid-1990s, when regulations were first promulgated to create its infrastructure and provide online services, to the recent evolution of regulations that define the role of business operators and use of cybercafés and online games.

We make three contributions to research on China's policies that control online content. (1) We focus on the evolution of Internet content regulation and its interdependence with the dynamically changing Internet environment. (2) We create a three-dimensional policy evolution framework to show that China's Internet content regulation should be considered part of a larger strategy of Internet regulation and one aspect of the historical context of media and information control in the society. (3) We apply content and citation (network) analysis as methodological strategies to examine Internet content policy in the context of related Internet and mass media policies.

The next sections briefly summarize the policy and methodological frameworks that organize our study (Part 2); describe how the data (policy documents) were collected and methodologies that we applied (Part 3); report the results of some of the analysis that we have carried out (Part 4); and discuss the usefulness of the theoretical and methodological frameworks that we have applied to understand the evolution of Internet content policy by the Chinese government (Part 5)..

## **2. PAPER RELATED THEORIES AND POLICY EVOLUTION FRAMEWORK**

Sabatier's (2007) discussion of multiple theoretical lenses that have been employed to explain the policy process has sensitized us to the complexity of policy design and change during the evolution of Chinese Internet content regulation. However, we have found that the New Institutionalism approach is especially helpful because it emphasizes the role of rules, historical factors that influence the evolution of policy, governance structures and the concentration or distribution of power in government and non-governmental (interest) groups, and non-market factors that influence policy change (Ciarney 2012; Liu and Jayakar 2012; T. S. Wu 1997). The Advocacy Coalition approach emphasizes the role of multiple actors (Sabatier and Jenkins-Smith 1993). The Network Approach offers a potent metaphor for examining "governance structures," "potential patterns of interaction among the policy subsystems" and applying a "quantitative approach to examine social network analysis" (Adam and Kriesi 2007, p. 130). Similarly, information and media policy scholars like Trauth (1986), Braman (2006), and Browne (1997a, 1997b) sensitize us to the complexity of the information policy regime. Trauth's Input-Process-Output conceptualization informs us of process and life cycle in the production of information in an adaptive systems model: its

processing, transportation, distribution, storage, destruction, and seeking. As with Braman, we recognize the power of the state. And following Browne, we focus our attention on the political and social contexts of information policy and the opaque quality of the policy process. The trajectory of our work follows an argument made by Braman: that “laws and regulations from diverse areas of the law are now understood to commonly populate the domain of information policy” (p. 4).

Three organising perspectives have been applied to China’s Internet content regulation policy. First, different policies address content control in different ways. Some regulations target information content directly to decide if certain information should be presented or not, whereas other regulations affect Internet content indirectly by restricting user behaviour, physical network connections, market orders, technological standards, and other ancillary affairs (Feir 1997; Hong 2001; Qiu 1999; Stone 1983). Second, Chinese Internet regulations can be divided into different subject areas. The methodology of classifying policies in several categories is helpful for identifying the functional structure of its content regulatory regime (Wu 1996; Sohmen 2001; Gomez 2004). The third perspective adopts a stage perspective. The changing history of Chinese Internet content regulation reveals the evolutionary features of the entire regime and its interactions and developments in relation to the Internet environment, including technology, online services, and user communities (Harwit & Clark 2001; Endeshaw 2004; Cheung 2005). Our analysis of China’s Internet content regulatory regime and its evolution integrates these three perspectives.

We created a three-dimensional policy evolution framework to provide a better understanding of the history of China’s Internet policy regime. The first dimension (R dimension) is a relevance hierarchical scheme, to evaluate the relevance of a particular policy to online content control, thereby answering the question of what Chinese Internet content regulations were in place. The second dimension (C dimension) is a policy subject category typology, to identify the functional structure of the regime. The third dimension is time (T dimension), to reveal the evolutionary features of the entire regime and its interactions and developments in relation to the Internet environment.

This paper is a first step: to provide empirical evidence about relationships that have not been historically investigated in the context of China’s information policy regime. We note that space limitations prevent us from expanding on the application and utility of the policy and organizing frameworks.

### **3. METHODOLOGY**

Content regulation permeates all policies that cover diverse Internet issues. In this study, content regulation is not considered a set of particular policies that only addresses online content, but one type of regulative function found in many policies. Because these policies target more issues than content, the strategy adopted here is to collect as many Internet regulations and policies as possible and then to evaluate the extent to which a policy has or relates to the function of content regulation.

The policy documents were downloaded from Chinalawinfo.com (<http://www.Chinalawinfo.com>) on 5 March 2012 for the period 1994 through 2011. Chinalawinfo.com is an online database that contains nearly all Chinese national laws, administrative regulations and policies, and other types of regulations of various facets of

Chinese public administration issued by authoritative organs in both the Chinese legal and governmental systems. Search terms were specified and noise was then filtered from the retrieval outputs using both Java programs and human judgment. One hundred and ninety-five national policy documents constitute the sample data set S1. Data mining techniques were applied to analyse the policy data both quantitatively and qualitatively (Elo and Kyngäs 1989). Based on the content analysis (coding was done independently by two researchers and differences resolved), a three-tiered hierarchical scheme was developed to describe a policy's relevance to online content regulation. Table 1 Panel 1 shows the hierarchy criteria as well as distribution of policies for each relevance category. Also, the policy text was classified into 14 content-related categories according to their subject areas. The categories are shown in Table 1 Panel 2 and ranked in descending order of the number of policies in each category. In the context of Chinese public policy, policies always cite laws and other policies to supplement some requirement or to regulate some issue in the context of other issues. Thus the citation relationships constitute a network among policies. Citation analysis (MacRoberts and MacRoberts 1989; McCain 2008) was applied to the policy documents to examine the relationships between policy subjects, describe the core part of the regime that were most likely to be cited by other policies, and describe how those citation links have evolved in the history of the Internet content policy regime.

Table 1. Content regulation classification.

Panel 1. Relevance of Internet Policy in Content Regulation			
<i>Relevance Hierarchy</i>	<i>Meaning</i>	<i>Description</i>	<i>Quantity</i>
R=3	Directly Related	Policies with clear requirements in the texts on certain online content, often presented as a list of the types of forbidden content	60
R=2	Indirectly Related	Policies that do not regulate the content directly, but restrict content by influencing the conditions, approaches, agencies, implementation, and other affairs of content regulation	81
R=1	Peripherally Related	Policies that are not related to Internet content regulation but provide ancillary limits and services on hardware and software as basic needs of Internet regulation, including content control	34
Panel 2. Category Description			
<i>Category</i>	<i>Code</i>	<i>Description of Regulations</i>	<i>Quantity</i>
Domain Names	A	Registration, disputes, and management of domain names	29
Cybercafe	B	Cybercafés	25
Website & Network Connection	C	Website architecture, IP address, and network connection	24
Online Games	D	Online games	21
Security & Confidentiality	E	Information system security, data resource security, and national secrets	18
Internet Information Services	F	Online news, BBS, e-mail, weblog, online publications, and other online information services	16
Health	& G	Information related to medicine, physical and mental health,	15

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Medicine		drugs and chemicals	
Online Videos & Broadcasts	H	Online videos and broadcasts	15
Pornography	I	Online pornography	11
Intellectual Property	J	Intellectual property, copyright, right to communicate	7
Online Culture	K	Online cultural products and activities	7
Maps & Mapping	L	Geographical mapping and use of maps on Internet	4
Education & Public Welfare	M	Protection of minors, information application in schools, public networks	2
Executive Affairs of Regulation	N	Coordination of regulating departments, interpretation of policies, and organization of regulatory activities	1

### 4. RESULTS

Figure 1 shows the evolving history of policy distribution in the R (relevance to content control) and C (policy category) dimensions using different colors to represent different relevance values and categories. Panel (a) shows the number of policies issued each year which fluctuate with different R values. There are four large increases of policy promulgation in 1996, 2000, 2004, and 2009, respectively. Panel (b), which confirms that indirect as well as peripheral control was the primary way that online content was regulated, shows the changing percentage of policies with each R value in the 18-year regulation history. During the early years of China's Internet era, most content regulation policies had a relevance value of 1 or 2. The number of policies with an R=3, which indicates the need for direct control of online content, began to increase around 2000.

Although there are some fluctuations, the proportion of R=3 roughly increased along the time axis. By about 2008, the percentage of each R value became stable and equal. Panel (c) shows the history of the accumulated number of policies as well as the proportional distribution of each category in the entire policy set during the 18-year period. The total number increases with an average of almost 11 policies per year. The historical percentage distribution in Panel (d) shows that the proportion of each category converged in 2004, after fluctuating in earlier years. The first category that appears is Security & Confidentiality (E), while the last one is Maps & Mapping (L). China's Internet content regulation, initially focusing on information system security, network connections, and domain names, became more diverse in recent years in response to content services such as online games, online videos, online medical information services, and the presentation and use of online maps.

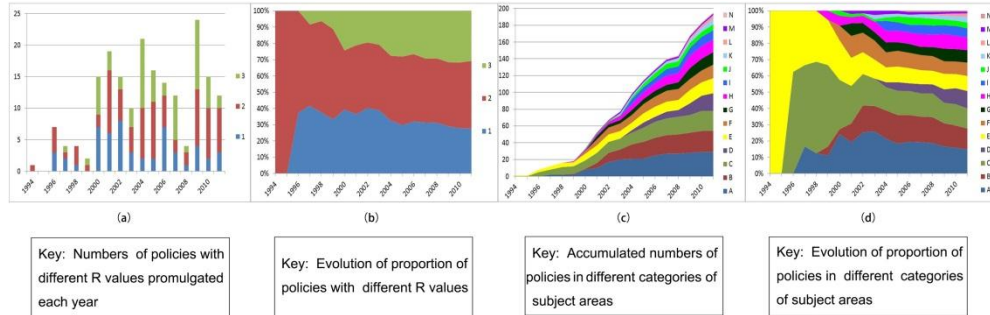


Figure 1. Policy distribution in R (relevance) and C (categories) dimensions over time.

In the earlier years, policies that regulated network connections (C) and domain names (A), which by and large shared an R value of 1 or 2, were the principal components of the content regulation regime. Several of the basic regulations on Internet information services (F), such as the 2000 Regulation on Internet Information Service of the People's Republic of China, were issued around the period from 2000 to 2003, to provide guidelines to the Internet industry as a response to the increase in various online services. Policies regulating the cybercafés (B) have been the principal aspects of indirect content control (R=2). Direct content regulations (R=3) emerged largely from 2004 to 2007 and targeted online pornography. The number of direct content control policies declined after 2008, whereas regulations on special and new online services such as online games (D) and medical information services (G) became the principal set of policies that were promulgated.

By combining the R and C dimensions, we see that the foci and approaches of China's online content regulation moved from peripheral and indirect control of regulation of network infrastructure and domain names to direct content regulation, and then again to indirect regulation of various novel online services and markets. Most of these six frequent categories experienced a downward trend over time, especially in recent years, suggesting that new regulations for new online services such as online games (D) began to occupy the policy regime's attention.

Figure 2 shows the structure of the policy regime in terms of the relationships among policy categories and the regulatory foci as well as their strength. This figure illustrates how the Chinese regime has restricted online content and how different policy categories interact with each other. The R value and category that a policy belongs to are labeled by different node shapes and colors (using diamonds, squares, and triangles to represent R= 1, 2, and 3, respectively). Each node in the graph represents one policy, while the arcs represent citation links from an older cited policy to a newer citing one. Larger nodes have greater out-degree, meaning a higher frequency of being cited.

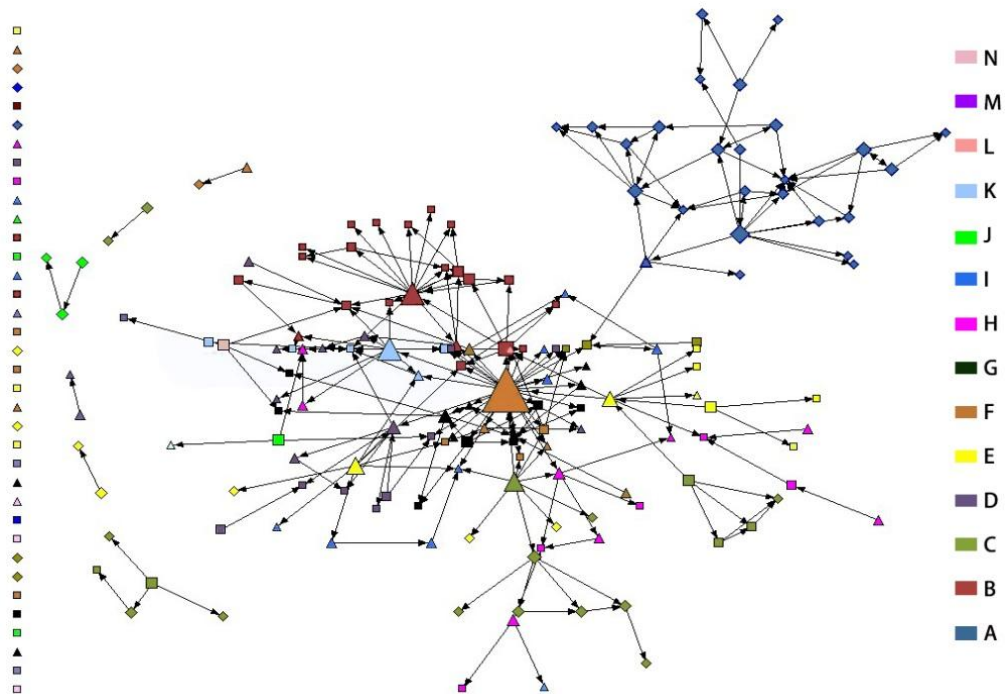


Figure 2. Policy distribution in citation network.

Applying the centrality measure to the policy citation network, the out-degree and in-degree network centralization is 16.962% and 3.491%, respectively; thus, the differences between the nodes out-degree are relatively significant, whereas the in-degree among all nodes is likely to be similar. In fact, the nodes out-degree, which reflects the cited frequency and the importance of a policy in the entire regime, ranges from 0 to 34 in this 195-node network. Only four policies have an out-degree greater than 10, however, implying that only a few policies serve as the foundation for the entire regime. The 2000 Regulation on Internet Information Service of the People's Republic of China has the greatest out-degree of 34 in the entire network and is thus at the core of the regime's regulatory interest.

Table 2 presents the cited and citing frequency of the categories, as well as the self-citation frequency among policies in the same category. The policies that regulate Information Services (F), Network Connection (C), Information Security (E), and Online culture (K) are often cited by other categories, making these the central policies for the entire regime. Policies that regulate Online Games (D), Cybercafés (B), Medical Information (G), and Pornography (I) are more likely to cite other categories to complete more specific policy tasks. Policies that concern Online Culture (K) have both relatively higher out-degree and in-degree figures, implying that K has significant interactions with other categories. This may be due to the terminology of Online Culture that is used only by the Ministry of Culture to describe diverse types of online products and services that interact with other subjects such as online games and online videos and broadcasts. Most citations take place in the same category. Policies regulating Domain Names (A), Cybercafé (B), Network Connection (C), and Medical Information (G) have strong inner citation relationships in their category, implying that these

policies are a relatively independent functional subgroup. In addition, there are 36 isolated nodes in figure 2 that function independently in special policy issues. Most isolated policy nodes belong to Internet Information Services (F) and Security & Confidentiality (E), whereas the main measure adopted by them is indirect control (R=2).

Table 2. Citation frequency among policy categories.

Category Code	Category Name	Cited Frequency	Citing Frequency	Self-Citation
A	Domain Names	1	0	49
B	Cybercafé	3	12	33
C	Website and Network Connection	10	5	21
D	Online Games	2	13	10
E	Security and Confidentiality	10	3	8
F	Internet Information Services	35	6	8
G	Health and Medicine	0	12	13
H	Online Videos and Broadcasts	2	7	11
I	Pornography	2	10	3
J	Intellectual Property	3	0	2
K	Online Culture	10	9	6
L	Maps and Mapping	0	3	0
M	Education and Public Welfare	0	2	0
N	Executive Affairs of Regulation	4	0	0

This analysis of policy evolution and citation network reveals that between 1994 to 1999, new policies and explicit punishment based on existing laws and regulations were the principal features of the first stage of China's Internet age. Between 2000 and 2003, online services and regulations rapidly developed; the relatively high percentage of citations implies that the online content regulation regime experienced an important renewal in this period: more Internet-specific policies established the foundations for subsequent regulations. Citations between 2004 and 2007 suggest the requirement of direct content control (R=3) during that period. By 2008, novel Internet services and phenomena called for the development of new policies and new regulatory approaches.

China's online content regulation appears to manifest cyclical features in a larger scale evolutionary history, where the reliance on old policies and the emergence of new policies, as well as strict and looser regulation, in turn replace each other. More services have brought more stakeholders into the arena of online content control making it thornier for Chinese government to balance each party's interest. Furthermore, our study also seems to suggest that the policy system institutions are fragmented (results not shown), which may lead to a more fragmented policy-making process (Rowlands 1996).



## 5. DISCUSSION

T. S. Wu (1997) has offered two paradigms to better understand the global online content regulation: (New) Institutional Theory, which treats regulation as collective action by a rational state actor, and Liberal Theory, which considers regulation as the state's preference for a compromise that results from the interaction among different society stakeholders. Wu contended that Institutional Theory appeared to be more applicable in those states that took an instrumentalist view toward the Internet, viewing it mainly as a technical service that served an economic purpose. If the Chinese government is seen as a "sole source regulator" that has reduced the policy goals of content regulation to the simple requirements of economic growth as the context for social stability, the country's online content regulation has certainly and without a doubt become more successful and mature in recent years.

However, things are changing in China and with Internet services, in general. New policies "chase" issues that emerge as the technology and services evolve. This suggests that these policies may be ad hoc tools for solving specific issues, rather than levers that provide intelligent and farsighted solutions that are compatible with the entire regulatory strategy. The Internet industry also confronts the large costs of self-regulation that have been required by government agencies. Meanwhile, different government departments and agencies consider regulation to be a lucrative project because it provides local benefits. So, were we to adopt T. S. Wu's Liberal Theory or Sabatier and Jenkins-Smith's (1993) Advocacy Coalition perspective to take account of other stakeholders such as different government departments, IT companies, and Internet users that are advocating for different and competing policies, we might conjecture that China's Internet content regulation policies may not only be ineffective but also harmful to the growth of the Internet industry.

However, a paradigm change for understanding and regulating Internet content is clearer than ever before because novel online services have recently emerged in China. Indeed, to some extent, the Chinese government has already manifested a tendency to respond with a looser and more flexible regulatory approach. More openness about competition and cooperation between various policy-making institutions will help deepen our understanding of the dynamics of the evolution of the Chinese content control regime. Looking at our future work on theoretical frameworks that can usefully explain the evolution of China's content regulation regime, Cherry and Bauer (2004) may offer a useful theoretical perspective, Adaptive Regulation, about the policy making process in complex social systems. Cherry's (2007) Paradigm of Adaptability extends Liberal Theory to interpret the behaviour of different actors as they relate to a regulatory regime.

The diffusion of communication networks and the convergence of information technologies have intensified China's modernization and have also contributed to accelerating globalization that has characterized nation-state economies. We see the origins of the first information laws and policies for the Internet and also, reflected in the development of policies from the mid-1990s forward, the dilemmas that China confronts as a function of its political and economic systems: increasing domestic demands, cultural tensions, and an international arena dominated by Western market economies. Recent regulations are also evidence of the lucrative nature of content regulation projects and how deeply involved government agencies and groups in the private sector are in the high stakes of Internet use and regulation. Although in the current environment an Institutional theoretical perspective coupled with an Advocacy Coalition perspective supported by a Network Approach appears to

be a good explanatory “fit” for the Chinese government’s regulation of the Internet, we can expect the government to rethink the future of content regulation. The state will need to confront emerging stakeholder concerns and needs as the Internet develops in China.

## 6. CONCLUSION

By illuminating practices over time, we provide evidence of the continuity in content regulation that also animates further exploration of how various contextual factors inform the development of Chinese government Internet content policy. By classifying policies according to their content and visualizing the citation (networked) relationships among the policies, we explain the meaning of content regulation, differentiate content control policies in various subject areas, and describe the evolutionary features of the regime.

To our knowledge this study represents the first analysis of the evolution of China’s Internet content control policies. Although not developed in this paper, policy process theoretical frameworks developed by U.S. policy theorists have sensitized us to understand China’s policy regime. Future research needs to examine the adequacy of theoretical frameworks of the policy process that have been developed in a Western context.

## ACKNOWLEDGEMENT

This research has been made possible through financial support by the National Science Foundation of China under grant number 70833005.

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