Shallow, Narrow, Deep and Wide: Issue Crawling for Chinese Adoption

Dr Stan Ruecker
Assistant Professor
Humanities Computing Program
Department of English and Film Studies
3-5 Humanities Centre
University of Alberta
Edmonton AB T6G 2E5
CANADA

Dr Sara Dorow
Assistant Professor
Department of Sociology
5-21 Tory Building
University of Alberta
Edmonton AB T6G 2H4
CANADA

Heather Jiang
PhD Candidate
Department of Sociology
5-21 Tory Building
University of Alberta
Edmonton AB T6G 2H4
CANADA

Zachary Devereaux
Rogers Doctoral Fellow
Joint Program in Communication and Culture
Ryerson University – York University
350 Victoria Street,
Toronto, Ontario, M5B 2K3
CANADA

Christopher Moore
MA Candidate
Humanities Computing Program
Department of English and Film Studies
3-5 Humanities Centre
University of Alberta
Edmonton AB T6G 2E5
CANADA
ABSTRACT
The purpose of this project is to investigate the changing contexts of meaning and practice in Chinese adoption by mapping online networks of adoption-related groups and issues in Canada. The resulting data set contributes to scholarly knowledge in the areas of transnational identity formation, comparative social and national contexts of adoption, and methodological developments in participatory research and web interface technologies. In this paper, we discuss the preliminary results of the online mapping activity, addressing in particular the variations in data obtained by adjusting the settings of the crawler in two significant dimensions: depth and iterations. By providing readings of the crawler’s hyperlinkage maps from three different perspectives—naïve reader, domain expert, and mapping expert—we suggest the value of this approach to researchers examining a topic from various levels of expertise. We also point out the usefulness of doing comparative mappings of this kind, as a means of triangulating in on the significant features of each crawl.

KEYWORDS
Issue Crawling, Chinese Adoption, Dynamic Mapping, Visualization

INTRODUCTION
This report is part of a larger project that addresses current debates about multicultural citizenship—the limits and possibilities of “global identities”—in Canada and the United States (Bannerji 2000; Newfield and Gordon 1996), while also contributing to knowledge about adoption. The project builds on and extends Dorow’s (2006) comprehensive study of the global circuits of China-US adoption in several crucial ways. First, it starts from the perspectives of children themselves. Second, it situates children’s experiences in the overlapping but distinct national cultures of Canada and the United States. Finally, and most importantly, the project employs innovative methods and tools appropriate to learning from, with, and about transnational childhoods. The social issues and discourses of online networks discussed in this paper provide one entrée to the context in which Chinese adoptees forge their poly-vocal identities, and are a potentially rich source of information (including new questions) about the relationships among key sub-areas of transnational adoption: health, law, social work, market forces, and cultural/racial identity.

LITERATURE REVIEW
Internationally adopted Chinese children, 95% of whom are girls, currently constitute the largest and fastest-growing migration of adoptees in the world. Now that the oldest cohorts of Chinese adoptees are in primary and middle school, we have a unique opportunity to establish a comprehensive baseline of knowledge about the familial, cultural, and transnational identity contexts of this unique group of immigrants. Their stories form one of the latest chapters in trans-Pacific migration to Canada and must be included in policies directed to a multicultural Canada made up of immigrants and non-immigrants, whites and non-whites, children and adults, biological and social kin (Intercountry Adoption Services 2004).

The case of Chinese/Canadian adoption promises to extend knowledge about the conditions under which citizenship is forged, and the salient issues through which transnational adoption is practiced and narrated. These issues are constituted in online networks, and also
in the “spaces of affinity” (Young 2000) that mark adoptees’ everyday lives. New technologies facilitate local and transnational social networks and resource exchange (Nyberg-Sorensen et al. 2002; Tan 2000). The Chinese-North American adoption community provides a rich example of such networks. In just one decade, adoptive parents and adoption agencies have formed online support networks for sharing cultural information and resources, organizing charitable remittances to China, and participating in ‘homeland tours’ and ‘culture camps’ in China. These practices bring an important element to the extant literature on transnational networks because they involve, at their heart, Euro-Canadian non-immigrants. Through and because of their children, some white Canadian citizens imagine and practice new kinds of economic and political exchange with China. It is important to better understand the factors that cause adoptive parents to contribute to or opt out of these new networks, including how their charitable practices correlate with their approaches to the cultural and kinship identities of their children.

METHODS
We produced a set of hyperlinkage maps of the network environment, using the IssueCrawler from govcom.org. This software is a server side tool which crawls the web and returns a network visualization map from a set of starting points chosen by the researcher. Linkage relevance to the network is rendered by the size of the node, while nodes are graphically dispersed in a search for symmetry by the program that is not connotative of meaning in a strict sense, although linkage density will be reflected to the centre of the visualization. Domain suffixes, indicated by colour, differentiate site types from one another.

Issue crawling relies for its success on the principled selection of starting points for the crawl. For our maps, we chose URLs that represented three communities: the international community, with the U.S. as the hub; and two focal points in Canada—Chinese adoption in Ontario/Toronto; and Chinese adoption in Alberta/Edmonton. We called the series of issue maps the China Adoption Issue Network (CAIN).

ANALYSIS AND RESULTS
Our analysis involves three separate but related readings of the issuecrawler results, as shown in the CAIN.1 map (Figure 1). The first reading is from the perspective of a content expert in Chinese adoption issues, the second by an analyst naïve in terms of these issues, and the third by a reader who has experience in the application of Issue Crawler to a variety of issues, examining details of specific nodes and clusters on the map. Having examined the CAIN.1 map from these three perspectives, we conclude with comparisons of CAIN.1 with the other two maps.
Figure 1. The CAIN.1 map shows the results from a crawl two iterations out and two deep.

The CAIN.1 Map (two iterations out, two deep)
CAIN.1 is a first attempt at a snapshot of the two Canadian locations (represented by one agency and one adoptive family support group each) in relation to the main “international” site serving families from China and its three main links to adoption resources, China resources, and commercial resources. The output of this crawl was based on the parameters of two iterations “out” and two layers deep from the starting points (which were not privileged).

Content Reading of CAIN.1
CAIN.1 is in the shape of a star, its points representing what my research experience would suggest are domains in Chinese-North American adoption that are accessed by the issue network but are not central to the cycle of its knowledge and resource production, and in fact are not linked back into the network; these are mainly government sites, and some commercial sites (selling products ranging from pro-adoption pins to country-specific jewelry and clothing). The dense middle of the CAIN.1 map is mostly occupied by organizations that provide information and resource support to adoptive families of all kinds, both pre-adoption and post-adoption. From the perspective of adoptive parent, these types of organizations would indeed be the hub through which adoption issues were accessed and engaged; they would serve as the gateway to more specific sets of issues represented in other sites in the network: medical, cultural, professional practice, country-specific, and legal/policy information. (The salience of these issues sets was reinforced when an initial coding-by-hand of selected sites in the network was conducted.)
The strength of one issue in the network was not anticipated, and that is health and medical information and concern. Chinese adoptions have been mythologized as involving almost exclusively healthy kids, at the same time that parents worry about attachment disorders and the “unknowns” that preceded adoption.

One “weakness” of the network, from the perspective of the theoretical impetus of the project, is the dearth of sites specific to adoption from China (especially commercial, cultural, charitable, and news sites). As discussed below, these issues were more prominent in maps 2 and 3, both of which set ‘deeper’ parameters for the crawl. A few other country and region specific sites appeared in the network (Eastern Europe, U.S.), but the absence of Korean adoption is surprising, given the way that, in practice, families with children from China often look to the stories and experiences of older Korean adoptees.

It was important to the adoption researcher that url extensions indicating domain, such as .edu, .gov, and .com be subject to careful scrutiny, since they do not necessarily reflect the actual activities of the site.

Naive Reading of CAIN.1
From the perspective of someone unfamiliar with the various agencies and issues involved in Chinese adoption, there are several features of this visualization that stand out.

Commercialization
There are quite a number of commercial or .com sites that are selling products or services in this area. It might be possible to think of adoption as primarily relating to the activities of government agencies and individual families, but here it becomes clear that the network of interests that focus their attention on adoption include a range of organizations with a profit motive.

Health
More than one site is present that suggest concerns about health. In thinking it over, this makes sense, but it was nonetheless a bit surprising at first viewing to see a URL called “orphandoctor.com.” The health concerns themselves are also surprising; one site is called “attachmentdisorder.net.”

Federal and provincial
Sites appear from agencies at both levels of government, although not all the provinces are represented. There would appear to be some jurisdictional division of labour or interest, and perhaps an element of regionalism in terms of which provinces support or encourage this kind of adoption.

Education
The virtual absence of educational sites is another striking feature of this crawl result. The only educational sites showing are Tufts and Minnesota. Perhaps a different set of starting URLs would draw out more in this area, but from this visualization it would seem that the academic interest in this area is not widespread.

Selected Site Details of CAIN.1: focus on government sites
The following analysis is based on further investigation of individual nodes and node clusters in the CAIN.1 map.

US governmental sites outnumber Canadian sites, and yet our starting points were predominantly Canadian. In investigating the governmental (.gov) network, the CAIN.1 map leads us first to US domestic adoption, and upon deeper linking to international adoption. It is a logical enough progression, but it does prioritize both US governmental involvement and US domestic adoption. This brings to the fore questions regarding US importance to the CAIN issue network, as well as an argument often made by new media researchers regarding the eroding barrier between US domestic and International politics as a unit of analysis for international relations. The government site receiving the most inbound links from the CAIN was a U.S. government site (National Adoption Information Clearinghouse) that gives out information about all forms of adoption. Another important government site in the map—again in the U.S.—was that of the Center for Disease Control. The issue of Chinese adoption is not readily apparent on the home page of the cdc.gov, although it is clear that governmental jurisdiction regarding disease prevention would be a factor in adoptive situations.

Taking a quick look at legislation resources around the CAIN.1 map, legislation is also a listed theme on the adoption.ca site, and relevant legislation is also available on the child.gov.ab.ca site. Therefore the CAIN.1 map gives some good evidence of the Internet acting as a resource to help potential adoptive parents negotiate relevant statutes in both Canada and the United States.

Census.gov is a .pdf census document from the US census service dating from October, 2003 that explains US census taking has not incorporated with statistical rigour the relationships beyond kinship such as adoptive parent. Thus we are presented with a trace in the international Chinese adoption online network of an expansion of the definition of parenthood in relation to demographic developments of the type typified by Chinese adoption. The document has resonated past its 2003 date, and is linked to by adoption.ca, fwcc.org, adoptivefamilies.com, and adoptioninstitute.org. Since .ca, .org and .com are presented in this linkage network to the census, one could consider this census change fairly well linked across representative corporate and NGO actors.

NGOs also outnumber governmental sites, thus the CAIN.1 map indicates a significant involvement of civil society in the adoption issue. However, while this document has emphasized an analysis of the governmental matrix in the CAIN map, the preponderance of NGOs in the map raises other questions. Namely, .ca suffix nodes/sites were both governmental and NGO in type. Although there are clearly more .org sites in the map, (the url suffix most often associated with NGO activity) .net and .com nodes may also be NGOs as in the case of http://www.quebecadoption.net/ (12 o'clock line, upper quadrant) and http://www.bcadoption.com/ (Adoptive Families Association of BC, 11:30 line, upper quadrant) respectively. Therefore, while it is safe to conclude that the NGO activity in the CAIN map is strong and well linked to both governmental resources and corporate sites, the nodes in the map, when analyzed by url suffix (.ca, .com, .net) do not break down into hard and fast categories. Such as .ca = governmental or .com = corporate, or .net = university. Questions regarding the nature of civil society organizations involved in the CAIN map
come to mind, and a diversity of organizational structure, interest groups, governmental jurisdictions and funding sources is indicated.

It is worth noting that a number of .gov sites could not be reached directly from the CAIN.1 .svg map; there is a problem of Issue Crawler access versus browser access, which may have to do with the “www” preceding urls.

**Comparison of Maps 1 and 2**

In comparing our first two maps, CAIN.1 (two iterations out, two deep) provides a picture of the range of places/actors involved in the professional, state, and resource networks in adoption (a snapshot of the surface), while CAIN.2 (Figure 2–one iteration out, three deep) is closer to what we would expect to see in terms of the ongoing practices/interests of adoptive families (e.g., more Chinese cultural news, resources, opportunities for charitable involvement, and objects for consumption, as well as paths leading to sub-groups in which families might become involved). This change in emphasis is also exemplified by the “de-centering” of large American adoption agencies and advice sites. What is centered is the main international support organization for families with children from China. Educational/research sites remain scarce.

![Figure 2. The CAIN.2 map shows the results from a crawl of one iteration out and three deep.](image)

**Comparison of Maps 2 and 3**

Is it fair to theorize the shifting focus of issues from CAIN.1 to CAIN.2 as a function of going “deeper” into the network? What happens when we go “wider” as well? In CAIN.3
(Figure 3—two iterations out, three deep), the network begins to take on a form that is representative of the larger international scene, i.e. the place of Chinese adoption within a nested spectrum of social issues and institutions. We have not only the professional and resource networks (health, adoption expertise, law and policy), but also the secondary activities taken on by adoptive families (country-specific consumer, charity, and cultural activities). CAIN.3 is the most satisfying of the maps in terms of reflecting the issue network, clusters, and densities that the adoption research would have expected for adoptive families.

Figure 3. The CAIN.3 map shows the results from a crawl two iterations out and three deep.

**FUTURE RESEARCH**

Extending our employment of database and mapping tools, the next stage of this project will be the performance of a content analysis of websites in our issue network. In particular, we will map the appearance of such concepts as citizenship, culture, immigration and Chinese adoption and how these terms are employed rhetorically and within what sort of proximity within individual sites.

Also, a repetition of all three CAIN issuecrawler maps using the same search criteria but performed as simultaneously as possible may prove advantageous, deepening our understanding of the differences between the various depth and iteration choices of our network maps by ruling out changes that may have occurred between searches that were initiated over a period of time, as were CAIN.1, CAIN.2 and CAIN.3.
ACKNOWLEDGEMENTS
The authors wish to thank the Prairie Centre of Excellence for Research on Immigration and Integration (PCERII) for their support of this project, and the Govcom.org Foundation for its development of the Issue Crawling technology.

REFERENCES


STARTING POINTS

http://www.adoptionsoptions.com
<StartingPoint URL="http://www.fcctoronto.org" />
<StartingPoint URL="http://www.fwcc.org/chinanetsources.html" />
<StartingPoint URL="http://www.fwcc.org/internetsources.html" />
<StartingPoint URL="http://www.fwcc.org/resources.html" />
<StartingPoint URL="http://www.iafa.ca" />
<StartingPoint URL="http://www.open-arms.com"