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## Chapter 14

# Beyond the Digital Divide: Language Factors, Resource Wealth, and Post-Communism in Mongolia

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### ABSTRACT

*This chapter explores the interplay between society and Internet technology in the context of the developing former socialist country of Mongolia. This chapter goes beyond questions of access to the Internet and explores three factors of the global digital divide. First, this chapter explores how language factors such as non-Roman domain names and the use of the Cyrillic alphabet exacerbate the digital divide in the impoverished country of Mongolia. ICANN's initiation of international domain names is an initial development toward achieving linguistic diversity on the Internet. Second, this chapter explores how post-communist settings and foreign investment and aid dependency afflict Internet development. A rapid economic growth in Mongolia has increased access to mobile phones, computers, and the Internet; however, the influx of foreign capital poured into the mining, construction, and telecommunication sectors frequently comes in non-concessional terms raising concerns over the public debt in Mongolia.*

### INTRODUCTION

The discrepancy in Internet use between developed and developing countries is referred as the “global digital divide.” In recent years, developing countries have exponentially increased their use of information and communication technology, especially mobile phones, and this increase has contributed to the rhetoric of the closing of the global digital divide. The World Bank (2012) reports that the number of mobile phone subscribers in developing countries rose by 1500 percent

from 2000 to 2010, from 4 persons per 100 to 72 in 2010 (p. 11). In some developing countries, more people have access to a mobile phone than to a bank or clean water (World Bank, 2012, p. 3). Yet, only 12.7% of the population in Sub-Saharan Africa and 9.4% of the population in South-Asia used the Internet in 2011, whereas in Europe 73.4% of population used the Internet (World Bank, 2013). Though the Internet is increasingly accessed on mobile phones, the rhetoric surrounding the closing the global digital divide based on increasing mobile phone use in developing

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countries does more harm than good because this rhetoric reinforces the access-centered approach that oftentimes translates into policies that benefit multinational corporations (MNC) helping them tap into markets in developing countries. The access-centered and western-focused digital divide research has not deeply explored the language, political and cultural factors of the global digital divide.

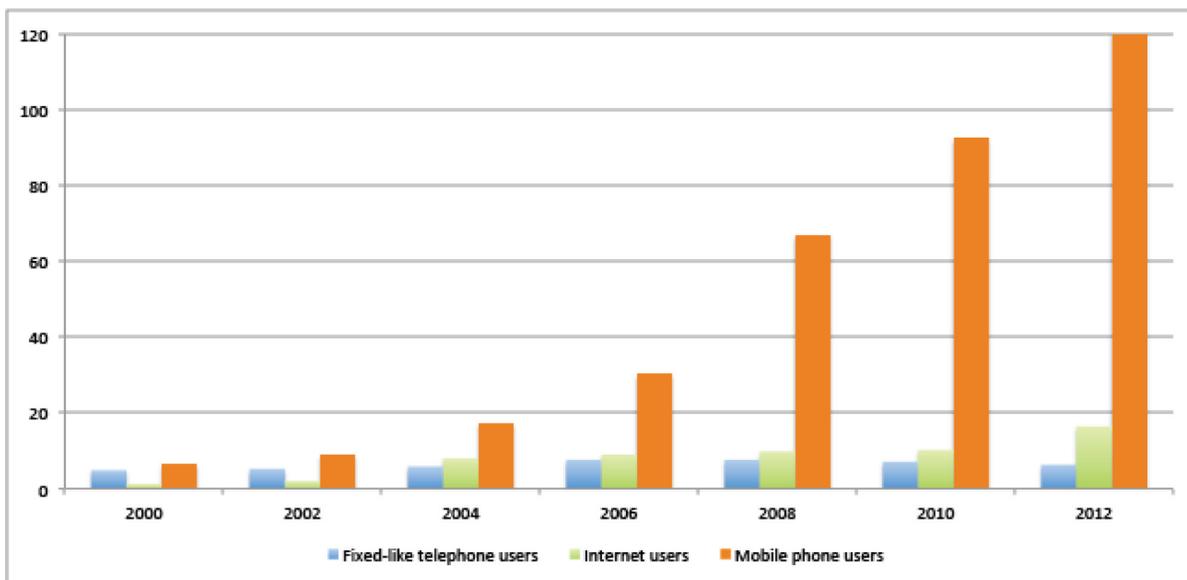
Unlike mobile phones, Internet development directly reflects social and cultural settings and existing inequalities. In this chapter, I strive to explain the interplay between society and Internet technology in the context of the developing former socialist country of Mongolia. This chapter goes beyond questions of access to the Internet and explores three factors of the global digital divide. First, this chapter explores how language factors such as non-Roman domain names and the use of the Cyrillic alphabet exacerbate the digital divide in the impoverished country of Mongolia. Second, this paper explores how post-communist settings and foreign investment and aid dependency afflict Internet development.

## THE CASE STUDY OF THE GLOBAL DIGITAL DIVIDE: THE INTERNET IN MONGOLIA

The Mongolian case demonstrates challenges typical to developing countries with unexploited natural resources and also has similarities to other former socialist countries with a communist past. A mining boom in the last decade, which lured foreign investment into Mongolia, brought a GDP growth of 17% in 2011 (“Before the gold rush,” 2013, Feb 16). With a nomadic culture, a Buddhist tradition, and a communist past, Mongolia has a unique struggle with the digital divide. Mongolia is a Central Asian developing country landlocked between Russia and China with a small population of 2.7 million. Like many other developing countries, Mongolia has an emerging economy indicated by the GNI per capita of US\$ 2,310. Internet use has grown steadily, yet only 16.4 individuals per 100 persons use the Internet in 2012 (ITU, 2013a).

Though access to the Internet has steadily been increasing as shown in Figure 1, for many

Figure 1. The growth in the percentages of Internet users, fixed phone users and mobile phone users in Mongolia



Mongolians the Internet is still a distant priority as shown by the 16.4 percent of people using the Internet in contrast to the use of mobile phones, which has almost saturated the market. The vastness of the territory and the underdeveloped infrastructure especially in the provinces of Mongolia have hindered access to the Internet for many Mongolians. The International Telecommunications Union (ITU) (2013b) showcases Mongolia as a country that made a great stride in increasing access to information communication technology. While the liberalization of the market in telecommunications services, especially in mobile phone services, has lured Korean and Japanese investors into the mobile phone services in Mongolia, the number of Internet users as can be seen in Figure 1 above has not caught up with the mobile phone services. While mobile phone services have rapidly improved along with the mining boom in Mongolia of the last decade, socially beneficial Internet applications such as e-government, e-health and online education still lag far behind.

The Mongolian case clearly shows the challenges of the global digital have-nots, and especially it helps us to understand the language factors of the global digital divide. Despite the relatively high literacy rate of 96% common to former socialist countries, Internet use is still low partly due to the low degree of English knowledge among Mongolians (Baasanjav, 2012). The Mongolian version of the Cyrillic alphabet, which has two extra vowels,  $\Theta$  and  $Y$ , that do not exist in the Russian Cyrillic alphabet have caused many challenges for Mongolians until Microsoft released a Windows system incorporating the Unicode standard. Unicode standards are international standards for interchange, processing, and the display of multilingual characters sets and diverse written languages by providing “a repertoire of code points used in different scripts, including various classifications of character properties, and normalization rules” (ICANN, 2012, Feb 20, p.10). When a user types, for example, a Chinese ideograph for “hill” 山, a browser or search engine

software uniquely renders a Unicode code point of (U+5C71) regardless of the differences in platforms, software and language employing the Unicode standard. Digital divide scholars acknowledge the “symbolic power” of English, and refer to the great discrepancy of language representation on the Internet as one of the contributing factors to the global digital divide (Hobsbawm, 1996; Norris, 2001; Warschauer, 2003). The predominant use of English in the management of critical Internet resources (i.e., Internet domain names) limited non-English speaking Mongolians from fully benefiting from the Internet. The Internet Corporation for Assigned Names and Numbers (ICANN), the governing body of the Internet, approved in 2009 a new standard for fully internationalized domain names that use characters outside the range of the capital and small Roman letters from A to Z, the Arabic numbers of 0 to 9, and hyphens as used in the English language. Theoretically, international domain names consisting entirely of native character sets tend to benefit local companies and people who only speak their local languages and improve access to the Internet. Global digital divide research has rarely explored language factors like domain names, and this chapter strives to explore these factors.

Second, this chapter strives to locate the global digital divide within a context of Mongolian polity and economy. A recent mining boom in Mongolia fleshed out the tension between multinational corporations tapping into the country’s natural resources and the relatively weak institutions of Mongolia, which have been transitioning since the democratic revolution of 1991. *The Economist* (2013, Feb 16), for instance, mentions how “resource nationalism” advocating the local control of mines is popular among politicians in Mongolia. Even though Mongolia is one the three legitimate democracies in Asia along with Japan and South Korea, Mongolia’s relatively young liberal constitutional democracy is tested in connection to its commitment to a neo-liberal market economy which is guided by privatization and liberaliza-

tion with a “hands-off” approach. The country’s biggest mining project Oyu Tolgoi (Turquoise Hill) copper-and-gold mine is 66% owned by Rio Tinto, the British-Australian mining giant, and another lucrative coal mine Tavan Tolgoi was two-third owned by Canadian Ivanhoe mines (“Before the gold rush,” 2013, Feb 16). Corruption is still widespread typical to developing countries with untapped natural resources, and the socialist legacy is still evident similar to Eastern European and former Soviet Union countries, which threw off both external domination by the Soviet Union and the repressive communist party control in the 1990s (Holmes, 1997, p. 14). According to the new Constitution of 1992, Mongolia is a democratic country characterized by the rule of law and the freedoms of speech, press, and information.

The role of media and the Internet in post-communist and developing countries has been debated among scholars. Some emphasize that media’s and the Internet’s democratic potential in expanding the public sphere (Zassoursky, 2004; Coleman & Kaposi, 2006), while others see a “marked degree of continuation” of old propagandistic media (Sparks & Reading, 1998). UNESCO (2007) reports that leaders in Mongolia strive to control information as they did during the socialist time, and media often serve as “a propaganda mouthpiece of political and business interests” due to their financial dependence (p.1). Even though access to the Internet and mobile phones is increasing, the communication policy in Mongolia for closing the digital divide is not comprehensive.

## **THE GLOBAL DIGITAL DIVIDE IN DEVELOPING AND POST- COMMUNIST COUNTRIES**

The definition, the causes, and the consequences of the global digital divide are explained variedly. The term “digital divide” tends to dichotomize “haves,” who have knowledge and resources to

use the Internet, and “have-nots,” who do not possess such knowledge and resources. On the global scale, the disparities in access to information technology and in the use of the Internet between developed and developing countries have been defined as the global digital divide (James, 2013; Norris, 2001; Stevenson, 2009; Qureshi, 2012; Warschauer, 2003).

The theoretical views on the global digital divide vary from the modernization and diffusion approach to the social equality perspective and the world society approach. The first perspective sees the Internet as a change agent in modernizing developing countries in the footsteps of developed countries and claims that the unlimited information available via the Internet and its two-way communication possibilities enrich and strengthen societies. In this perspective, technology like the Internet is adopted by different groups of societies over a certain period of time creating a trajectory of adoption. This trajectory of adoption starts slowly by earlier adopters, who have better social economic status (SES), better education and more resources than the general public, and after a certain period of time, the critical mass of people adopts the technology (Rogers, 2000). Then the rest of the society jumps on the bandwagon of adoption. However, it should be noted that developed nations reached the critical mass thanks to a great deal of policies that facilitated the diffusion of the Internet, and in many developing countries, the adoption pattern slowed down earlier than the trajectory of diffusion of radio and TV (James, 2007, 2013; DeMaggio et.al, 2004; Hargittai, 2003).

The opposing school of thought, under the broad umbrella of social constructivism and the social inequality perspective, claims that the relationship between society and technology is co-constitutive. The political, and social context in which technology is embedded tends to shape Internet development, and the scholars coming from this perspective tend to argue that new technology like the Internet exacerbates existing

disparity in an already unequal society. Therefore, they suggest that Internet studies should go beyond the narrowly defined access issue to a broader context of social settings, local languages, literacy levels, as well as the existing disparity in media development (Carey, 2005; Slevin, 2000; Bellamy & Taylor, 1998; Van Dijk, 2006; and Warschauer, 2003). The great discrepancy of language representation on the Internet, and the geographical imbalance in Internet content production are the most complex issues of the global digital divide. “Global English” is a lingua franca in international communication and on the Internet, and it has become a new barrier to equal opportunity in developing countries because unequal access to learning English coincides with other social inequalities (Baasanjav, in press; Warschauer, 2003). The difference in language representation on the Internet reflects an existing asymmetry in content creation in old media between developed and developing countries (Hargittai, 2004), since new media production is oftentimes “repackaged,” or “remediated” from traditional media onto the Internet. Since there are fewer textbooks and other forms of written knowledge in less developed countries like Mongolia, the global digital divide is exacerbated by the poorly developed old media and the lack of written knowledge available in print and other non-digital media in local languages. The issue of the lack of printed and produced knowledge is even more important in a former socialist country where information was censored because of communist party ideology.

The third perspective, the world society approach, in general derives from the political economy perspective and is critical of the underlying structural and ideological differences in the north-south divide. Researchers arguing from this perspective point out that global digital divide studies have been moving away from the inequality perspective toward the rhetoric of new market opportunities as the role of multinational corporations (MNC) rose in global media governance (Hamelink, 2002; O’Siochru, Girard, &

Mahan, 2002; Stevenson, 2007). The scholars of the world society perspectives criticize the modernity approach and the dominance of multinational corporations in international governance that reinforce the existing north - south divide. Dominated by MNC, international organizations tend to push forward the access-centered approach in developing countries that translates into a neo-liberal economic agenda when used without discretion. This agenda assumes that 1) economic development is accelerated with information technology; 2) the growth of ICT needs the investment of foreign companies; and 3) foreign companies invest when the market is liberalized. Since the majority of global technological research and development is concentrated in a few developed countries in order to solve the concerns and problems of rich countries, new technologies bring western technological domination and ideology (Hamelink, 2001; James, 2013). When developing countries follow the patterns of consumption of developed nations in an effort to catch up, the only people who benefit are the corporations in the developed countries (Hamelink, 2001). Furthermore, an access-centered and western-focused approach to the digital divide leaves unexamined specific social, and cultural aspects, and actual Internet content in developing countries (Hamelink, 2000; Slevin, 2000; Warschauer, 2003; Van Dijk, 2006).

The global digital divide should use a different discourse that takes into account the existing power dynamics between developed and developing countries, local social and political settings, cultural and linguistic diversity, and the influences of international aid and organizations. This chapter provides the analysis of these factors.

### **The Global Digital Divide in Transitioning Counties of the Former Second World**

Media scholars are just now beginning to study the social and political consequences of the Internet in so called “third wave democracies”

(Coleman & Kaposi, 2006). The few studies that have examined Internet development in former socialist countries (Dimitrova & Beilock, 2005; Ifinedo & Singh, 2011; Kolko, Wei & Spyridakis, 2003; Herron, 1999; Boje & Dragulanesu, 2003; Walton, Yaacoubi & Kolko, 2012) mostly focus on access or lump together countries that are very different politically, economically and culturally. Digital divide studies have predominantly been access centered by asking: "How many people or households have access to the Internet?" Geographical location, income, age, race, and gender are often seen as the factoring variable of the digital divide.

In former socialist countries, information was tightly controlled and censored in all political, social and economic spheres of society. The communist parties built state-surveillance systems through democratic centralization, the nomenklatura system and various secret police institutions (Spark & Reading, 1998, p.32). The one party ideology, a centrally planned economy, and a preference for a certain type of cultural product all were expected. The repressive party-states purged counter-revolutionaries, religious and capitalist elements, and critical intelligentsia, yet brought somewhat egalitarian social service networks with free higher education and a social welfare system.

Though patterns of democracy development and new media adoption in these countries vary widely, some similar residual patterns seem to persist. In Mongolia, the leaders' desire to retain control of information, and to use the media to "agitate the masses" remains strong despite achievements such as the dismantlement of the censorship authority, the adoption of a new Law on Media, and a boom of independent media outlets (Munkhmandakh & Nielsen, 2001; UNESCO, 2007). Similarly, media perpetuate infused communist taste and nostalgia for communism in the Czech Republic (Klvana, 2004). The Czech Republic, Estonia, Slovenia, Hungary and Poland are among the most successful transitional economies

(TE) that are changing from a centrally planned economy to a market economy. These countries are characterized by "rapid economic liberalization, legal and institutional reforms, restructuring and privatization, and macroeconomic stabilization" (Ifinedo & Singh, 2011, p. 4). In these successful post communist countries the Internet is embraced and new media has contributed to open and free societies indicated by their democracy indexes (Coleman & Kaposi, 2006; Dutta, 2007; Ifinedo & Singh, 2011; Klvana, 2004). The situation is very different for other former socialist countries in Central Asia and Russia that reverted back to the authoritarian regimes. In these countries the Internet is tightly controlled. Ifinedo & Singh (2011) explored the determinants of the maturity of E-government projects in transitional economies in Eastern and Central Europe and point to factors such as national wealth, human capital, transparency indexes, and government efficiency as the determinants for successful E-government. Even though Mongolia did not revert to the authoritarian regime, the corruption index in Mongolia is high, and that lead to an ambiguous evaluation by the Transparency International (2010). New found wealth, relatively literate human capital, and a low level of transparency make the Mongolian case of the global digital divide similar to the Eastern and Central European countries. A burgeoning number of civil society institutions, an increasing information flow with more than 340 media outlets including online media (UNESCO, 2007) and the government's priority for the development of information and communication technologies (ICT4D) would suggest a conducive environment for the bridging of the digital divide in Mongolia (Baasanjav, 2011). Yet, communication practices in impoverished nations call for a different methodological approach, which takes into consideration different communication practices such the use of the Internet in public cafes, centers, and at work. Like in many other developing countries, the majority of Internet users in Mongolia are business subscribers. Furthermore, the social divide

that exists between rural and urban areas and the institutional divide that exists between government organizations and educational institutions are the most evident forms of the digital divide in Mongolia (Baasanjav 2012). While government organizations, especially agencies in the capital, tend to have better Internet access, educational institutions like libraries and secondary schools, especially in the countryside, constitute obvious “have-nots” (Baasanjav, 2012). In former communist developing countries, where consumption was suppressed and the statistical data used to be fabricated for ideological reasons, discrepancies exist between the official numbers of Internet users and the actual number of users (Kolko, B, Wei, C. & Spyridakis, J.H, 2003; Warschaur, 2003). Since digital divide theory in general posits that those who use the Internet tend to be better educated and socially better off than those who do not use the Internet, people in remote places and less powerful organizations need to have policies to help them overcome these disparities. In the sections to follow, I’ll discuss how the language factors, post-communistic settings, and foreign investment dependency factor into the global digital divide in Mongolia:

### **MONGOLIAN CYRILLIC ALPHABET USE AND CYRILLIC SCRIPT DOMAIN NAMES .MOH**

The symbolic power of global English is explored in this chapter by examining the use of domain names and the challenges relating to the use of the Cyrillic alphabet in Mongolia. Historically, Mongolians used the *uighur alphabet* of an Arabic origin from thirteenth century until 1941. The first Mongolian literary text written in the *uighur* script is *The Secret History of the Mongols* and depicts Chinghis Khan’s (Genghis Khan) conquests. This *Uighur* script is written vertically and had twenty four letters, each letter having three different forms in the beginning, in the middle and at the

end of a word. In 1941, mostly due to pressure from Russia, the traditional Mongolian alphabet was abandoned and was replaced by the Cyrillic alphabet used in the Soviet Union. Because the Mongolian language is not related to Slavic languages, depicting, rendering, and interpreting the Mongolian language in Internet browsers, search engines and other apps in the Cyrillic script have been challenging problems for Mongolians. After the collapse of the Soviet Union, in 1991 the Mongolian Parliament attempted to revert back from the Cyrillic alphabet to the *uighur* script; however, this effort was proven to be unfeasible due to the economic downturn of the country. Since 1991, the *uigur* script is taught in schools in Mongolia, but Cyrillic remains the official written script in Mongolia. The Mongolian version of the Cyrillic alphabet has two extra vowels, Θ (barred O) and Y (straight Y), that do not exist in the Russian Cyrillic alphabet, and these two letters are often distorted on the Internet (Baasanjav, 2011). Even today, Mongolian Twitter users, for example, use different representations of these two characters. The initiation of Cyrillic script domain names invokes a couple of questions relating to the language factors of the global digital divide in Mongolia as discussed below.

The domain name system is an important part of global Internet governance, and the Internet Corporation for Assigned Names and Numbers (ICANN) ensures the stability of the current development of the Internet by issuing pro-competitive and legitimate domain names without violating trademarks and intellectual property rights. Domain names, textual names of web resources on the Internet, are descriptive markers with corresponding numerical addresses called Internet protocol (IP) addresses. When an end user types a web address or an email address, the domain names system (DNS) on the Internet resolves the entered web address into the IP address of the requested web host or email user addresses (Zook, 2000). Special computers on the Internet, called name servers, resolve a web resource address (e.g. www.

mol.mn) into an IP address (202.131.0.3 or an IP address block starting with 202.131). Domain names consist of top-level domain names placed at the very end, and sub-domain names separated by dots. Top-level domain names are also divided into generic top level domain names (gTLD) such as .com, .edu, .gov, .mil, .net, .org, .int, .asia, .africa and country code top level domain (ccTLD) names assigned to certain countries and territories such as .cn (China), .ru (Russia) and .mn (Mongolia) (Baasanjav, in press).

In 2009, ICANN approved a new standard for fully internationalized country-code domain names (IDN ccTLD) in different scripts other than the Roman alphabet, and since then has been approving and delegating IDN ccTLDs to local domain name registries and registrars through its fast-track process. Mongolia's two big neighbor states-- China and Russia--have played vital roles ICANN's initiation of internationalization of domain names, and have taken full control over the registration of their country-code domain names with .中国 and .рф suffixes respectively (Baasanjav, in press). The Mongolian Cyrillic script country-code top-level domain name .мон as of April 2014 is pending to be delegated by ICANN to Datacom Company, the only private domain name registrar of the .mn suffix. The initiation of IDN ccTLDs consisting entirely of native character sets unquestionably increases business opportunities for local businesses.

One of the major challenges of implementing IDNs has been the introduction of different character sets in the domain name systems (DNS). Two relevant technical standards—Unicode and punycode -- need to be explained in relation to IDN ccTLDs. International standards for interchange, processing, and the display of multilingual characters sets and diverse written languages have resulted in Unicode standards, which provide “a repertoire of code points used in different scripts, including various classifications of character properties, and normalization rules” (ICANN, 2012, Feb 20, p.10). Cyrillic script characters in

general occupy code points ranging from U+0400 to U+04FF in the Unicode 6.2 standard, and the Mongolian language share the most of the Cyrillic characters with other languages written in Cyrillic. However, not all Cyrillic alphabets including two extra letters  $\Theta\theta$  (Unicode points U+04E8 and U+04E9) and  $Yy$  (Unicode points U+04AE and U+04AF) in the extended Cyrillic can be used in international domain names. These two vowels are frequently used in Mongolian and the limitation on the use of these characters in the Mongolian domain names might considerably limit the range of possible strings.

Furthermore, while country-code domain registries might recognize IDNs, the root file, a single and globally consistent list of top-level domain name assignments with pointers to authoritative name servers (NSs), do not recognize Unicode characters and still work only in the LDH (letters, digit and hyphen used in the Roman character set) characters (Froomkin, 2011; Mueller, 2002, 2010). Because of this hierarchical nature of the DNS, a standard called the International Domain Names in Applications (IDNA) was developed which converts Unicode character sets (U-label) to a “punycode” string in LDH characters sets (A-label) prefixed by ‘xn.’ For example, the Cyrillic name of Mongolia's IDN ccTLD .мон is represented in the string ‘(xn--11acc).’ The IDNA protocol also specifies rules for determining whether a code point can be included in a domain name (ICANN, 2012, Feb 20, p.10). The latest version is the IDNA2008 standard which incorporates more variances of IDNs (Baasanjav, in press). Variants are usually defined as visually identical domain names, and there is no script-wide variant in Cyrillic. Cyrillic shares many visually similar glyphs with the Roman, Greek, and the Perso-Arabic alphabets invoking security concerns surrounding spoofing, impersonation, and homograph attacks. That is why ICANN strongly cautions against mixed characters and confusable collisions due to visual similarities in IDNs (ICANN, 2011, Oct 6; ICANN, 2012,

Feb 20). One of the major stability and security concerns raised by the internationalized domain names has been the “spoofing” of domain names (Sithigh, 2010). The citibank.com web site can be impersonated by replacing the Roman letter c (Unicode character U+0107) with the Cyrillic letter c (Unicode character U+0301) thus luring bank customers to a false site. The two letters look alike and are homographs, and redirecting with malicious intents is called a homograph attack. IDNs make it easier for criminals to impersonate or spoof web sites by mixing different scripts leading to homograph attacks, phishing, and redirects in order to steal money, information, or goods. Variant issues arise mostly at the level of language in Cyrillic. Since the root cannot use language-sensitive rules in Cyrillic, domain names need to share aggregate defined variant rules (Baasanjav, in press; ICANN, 2012, Feb 20).

Non-western characters in domain name systems will unquestionably increase participation possibilities for non-western developing countries in Internet governance, which has historically been marginal. In the past, television and radio industries in the US bought .tv and .fm country code domain names from the developing nations of Tuvalu and the Federation of Micronesia and exploited these ccTLDs for businesses unrelated to those developing countries (Hrynyshin, 2008). Less developed countries like Mongolia tend to use ccTLDs almost three times more than gTLDs (Baasanjav, 2012). Even though Mongolian organizations seem to prefer to use .mn domain names partly due to the ease of working with the local domain name registrar and partly due to the perceived legitimacy of the nation-state in media governance in the country, they frequently use English words and acronyms in domain names (Baasanjav, 2012). These textual URL addresses are tailored for an audience with knowledge of the English language. In 2006, 74.5% of the sample of Mongolian web sites used English words or the acronyms in their textual URL addresses (Baasanjav, 2012). English remains a necessity

for Internet users and an amplifying factor of the global digital divide.

Furthermore, though the addition of Cyrillic domain names will allow for a more inclusive approach to bridging the digital divide for Mongolians who use the Cyrillic alphabet, it will also highlight a problem associated with the use of the Cyrillic alphabet. These problems range from digitizing Mongolian language library resources onto computer systems to a lack of Cyrillic alphabet possibilities in synchronous online chat environments. There is no software that recognizes the Mongolian Cyrillic alphabet, therefore the indexing of library resources falls behind in the digital form. In addition, when government officials try to take advantage of online chat features for discussing public issues with citizens, they tend to use the Roman alphabet which makes communication cumbersome for Mongolians who use the Cyrillic alphabet (Baasanjav, 2008). Initiating non-western alphabets domain names and setting culturally inclusive non-western alphabet standards have been important steps in achieving linguistic diversity on the Internet and overcoming the global digital divide in countries like Mongolia. This process requires deliberate efforts by international organizations and multilateral bodies to initiate and carry out new policies, otherwise small developing countries and people with diverse cultural heritages will be excluded.

## **THE INFLUENCE OF FOREIGN INVESTMENT THE SOCIALIST LEGACY ON MEDIA AND INTERNET DEVELOPMENT**

The role of new media in Mongolia needs to be explored within the broader context of the economy and polity rather than specific problems pertaining to the use of the Internet. Mongolia is one of the fastest growing economies with a GDP growth of 17% in 2011 and 12% in 2011 thanks to its new found wealth in coal, gold and copper

mines and the influx of foreign capital into the country (World Bank, 2013; “Before the gold rush,” 2013, Feb 16). The mining boom seems to test Mongolia’s 23-year-old democracy by asking whether or not the government will spend the new wealth on dealing with inequality and the poverty of its citizens, or fall into the “resource curse” that has afflicted many developing countries (“Steppe in an ugly direction,” 2012). The International Monetary Fund reports that the number of people living below the poverty level fell by 10% in 2011 due to the government distribution of money from mining (“Before the gold rush,” 2013, Feb 16). Yet, the mining industries in foreign countries are cautious of “resource nationalism” among politicians in the government and parliament of Mongolia that pushed a “strategic entities foreign-investment law” in November 2013 that tightened and delayed the mining deals of foreign companies. Mongolians strive to cope with drastic economic changes and navigate the complexities of rapid growth within a semi-open media environment, which still shows a marked degree of continuation of socialist media. People worry that big foreign investment will aggravate widespread corruption, as happened in the 1990s because of hasty privatization of state-owned businesses after the fall of communism (“Nomads no more,” 23 Oct 2010). Below I discuss how the dependency on foreign aid and investment and the communist past of the country factor into the digital divide in Mongolia.

Dependency on foreign aid and investment has been a recurring concern for Mongolia. Prior to the democratic revolution, in the 1980’s, aid from the Soviet and COMECON (an economic bloc of the former communist countries) made up one third of the gross domestic product of Mongolia. Between 1991 and 2002, international aid money provided by donor countries amounted to 2.9 billion US dollars according to the Economic Intelligence Unit (2005). By the year 2003, foreign aid per capita was \$100 comprising some 20 percent of the gross national product, placing Mongolia in the category of the fifth most aid-dependent country

in the world. By 2012, Mongolia’s economy was around six billion and GDP per capita was around 2,300 US dollars. The World Bank (2013) reports that public debt reached around 63% of GDP and alarmingly, the share of commercial external debt increased to 43 percent in 2012 from 0.2 percent in 2011, while the loans on concessional terms from multilateral creditors (e.g., WB, ADB and IMF) significantly dropped to 26 percent (World Bank, 2013, p. 24).

International donor aid money prior to the mining boom helped Mongolia to have a burgeoning number of civil society institutions and media outlets, and to initiate socially beneficial programs including programs that helped to close the digital divide (Baasanjav, 2011). International and donor organizations such as (UNDP), the Soros Foundation, the Canadian International Development and Research Center helped government, non-government and educational institutions in Mongolia, as well as the “have-nots” in rural Mongolia to increase access to information. Around 2000-2005, many non-governmental organizations and international non-government organizations created and maintained their web sites thanks to donor aid money and support (Baasanjav, 2012). The executive offices of government institutions of Mongolia- the Prime Minister’s Cabinet, and ministries - established their online presence in many cases thanks to donors such as the United Nations Development Program UNDP, the Asian Development Bank, and the World Bank. The Parliament first established an Internet connection and created its web site in 1997 with the support of the Open Society Institution or the Soros Foundation, a philanthropic organization based in New York. Reflecting the immense role of international organizations, many institutions maintained their web sites in two languages - Mongolian and English – in order to provide the “right” information for donors.

The second wave of these projects focused on the “have-nots” in the countryside of Mongolia and educational and research institutions with

little resources. The Citizens Information Centers funded by the UNDP and the Community Information Centers and Internet Schools in the provinces both supported by the Soros Foundation were examples. The sustainability of these projects raised questions due to the high cost of rural communication and the low purchasing power of people in rural Mongolia and in the institutions with less resources such as schools, and libraries. The geographical digital divide between the capital city and the rest of the country, as well as the institutional divide between organizations with political and economic power and the less powerful are evident in the Mongolian case. Government organizations in the capital, which are already “better-off” in Mongolia, benefit more from these international organizations’ support than the other organizations. Rent-seeking behaviors of public officials and the opaqueness of using aid money sometimes led to actions which benefitted only the factional or private interests of politicians such as those selling computers at a lower rate, not the general public (Baasanjav, 2008). Yet, this donor aid money was instrumental in increasing access to information and the Internet in and created some socially beneficial programs for the digital have-nots in Mongolia.

The mining boom in Mongolia in recent years has changed the economy drastically influencing other sectors such as construction, service sectors and telecommunications. The International Telecommunications Union applauds Mongolia’s great strides in increasing the percentage of household with a computer (from 24 per cent in 2011 to 30 per cent in 2012) and Internet access (from 9 per cent in 2011 to 14 per cent in 2012) (ITU, 2013b, p. 32). It seems that government policy focuses on access to information and communication technology, and pours international loans and investment into infrastructure and technologies that are rapidly changing and may soon be obsolete. The fact that the public debt reached 63% of GDP and the percentage of non-concessional term loans from foreign private investors are

increasing in the investment structure raises concerns over Mongolia’s debt in the long run. This heavy investment in infrastructure and access to telecommunications services was the reason for Hamelink’s (2001) warning that developing countries should not try to follow the pattern of consumption observed in developed countries. In the case of Mongolia, the government is investing loan money borrowed from foreign investors in ways that benefit some businesses more than the rest of society. Privatization and liberalization with the “hands-off” approach by the government in the 90’s after the collapse of socialism created some competition and brought foreign ownership by Korea and Japan into the telecommunications sectors of Mongolia. And access to technology and the Internet is undoubtedly increasing following the economic boom; yet there seems to be little evidence for policies and programs that benefit Mongolian citizens beyond the “hands-off” market-driven and access centered approach.

Although Mongolian institutions are striving to use the Internet for social and political purposes, these processes are also being molded by old institutional routines and the challenges inherent in newly established institutions when dealing with rapid economic changes. Checks and balances between the key legislative and executive branches are still in flux, and when faced with new challenges, people’s attitudes and organizational routines inherited from socialist institutions often persist. In 2001, the first Mongolian e-government web site *Open-Government* ([www.open-government.mn](http://www.open-government.mn)) was created to facilitate dialogue on economic reform issues, but the project quickly shifted its focus to the legislative process by placing pending legislations, bills and other legislative documents on its web sites, and soliciting feedbacks from citizens using discussion forums (Baasanjav, 2008). The executive branch takeover by replicating the functions of *The Mongolian State Great Khural* (the Parliament) on the Internet indicated the fusion of legislative and executive powers that are typical in post-communist

countries. The Mongolian Parliament, which once used to unanimously approve the bills created by the communist party apparatchiks, is transitioning to a law making institution and a representative governing branch. Furthermore, key organizations like the Parliament and political parties emphasize traditional media and in some cases this preference for traditional media is a reason for the weaker efforts to develop the Internet by Mongolian organizations. Traditional media--television, radio and newspapers, still seems to play a huge role in Mongolian society due to its nation-wide mass audience, which was cultivated by the ubiquitous socialist media. During the socialist time, government controlled information via television and newspapers had the function of propagandizing first, and controlling and censoring information second. Since there was no need to produce and create information, government institutions did not have professionals who could provide information for the public. The environment from the socialist past segued into "the information flow problem," that is "the difficulties in obtaining information" in Mongolian organizations (Baasanjav, 2008). Even though everyone - the government officials and the media - talk about the importance of openness of information, people are uninformed. Public officials in ministries are wary even of providing information to the e-Government web site team, using the excuse that "a draft is not finalized." A web master in the ministry has created a "black list" of departments and officials who "would not give information to be posted to the web site." The information flow problems are also coupled with the overall lack of library resources and educational materials. An acute shortage of funds for educational and research institutions also encourage media institutions to "recycle" information and content from socialist times. The shaping of Internet technology is not simply "a process of free and conscious choice" (Bellamy & Taylor, 1998, p.151), rather the use of the Internet is shaped and constrained by existing routines of organizations and by the uncertainty

of rapid economic changes. The Mongolian case shows that post-communist settings are impeding Internet development because of traditional ways, slow information flow, uninformed people, and a preference for traditional media.

## **CONCLUSION**

This chapter aimed at bringing evidence of the global digital divide in the developing country of Mongolia to contribute to the global digital divide scholarship that goes beyond Internet access. A remote country like Mongolia is affected by the decisions made by global Internet governing organizations, as well as by foreign investment and multinational corporations. The world society approach to the global digital divide underlining the structural and symbolic power differences between developed and developing countries seems to suggest the necessity for deliberate steps to bridge the global digital divide by creating inclusive Internet governing practices and promoting linguistic diversity on the Internet. ICANN's initiation of international domain names is an initial development toward achieving linguistic diversity on the Internet. Developing international standards that are inclusive of Mongolia's Cyrillic alphabet into browsers, search engines, domain names and mobile applications help Mongolians use the Internet to communicate with each other more fully, and benefit from participating globally in Internet governance.

A rapid economic growth in Mongolia has also increased access to mobile phones, computers, and the Internet. However, the influx of foreign capital poured into the mining, construction, and telecommunication sectors frequently comes in non-concessional terms raising concerns over the public debt in Mongolia. The decline in international aid by multilateral organizations like the World Bank, the International Monetary Fund, and the Asian bank, and the increase in foreign private investment (Mining and telecommunica-

tions multinational corporations) might benefit foreign corporations more than Mongolians. The Mongolian government's economic policy though relatively *laissez-faire*, and resource and access centered, still shows a fusion of economic and political power in managing international investment and resource wealth. The lack of information, the paternalistic approach by the government, and the secrecy in society inherited from the socialist time, also amplifies "the difficulty of obtaining information" at all levels of Mongolian society.

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## ***Beyond the Digital Divide***

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## **KEY TERMS AND DEFINITIONS**

**Cyrillic Content on the Internet:** Internet content written in the Cyrillic alphabet.

**Domain Names:** Textual names of web resources on the Internet, are descriptive markers with corresponding numerical addresses called Internet protocol (IP) addresses.

**Global Digital Divide:** The discrepancy in Internet use between developed and developing countries.

**International Domain Names:** Fully internationalized domain names that use characters outside the range of the capital and small Roman letters from A to Z, the Arabic numbers of 0 to 9, and hyphens.

**Linguistic Diversity on the Internet:** The inclusion of all languages in cyberspace including diversity in the naming and numbering system of the Internet.

**Post-Communist Characteristics:** Characteristics such as the rise of nationalism, the revival of religion, the boom of independent media outlets, and institutional routines that were prevalent in former socialist countries and continue after the fall of communism.

**Socially Beneficial Internet Applications:** Services and information on the Internet provided by government and non-government organizations, as well as by individuals that benefit the general public.

**Uighur Alphabet:** A script of an Arabic origin written vertically and had twenty four letters, each letter having three different forms in the beginning, in the middle and at the end of a word.

**Unicode Standard:** International standards for interchange, processing, and the display of multilingual characters sets and diverse written languages.