

The Power of Social Media in Developing Nations: New Tools for Closing the Global Digital Divide and Beyond

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I. INTRODUCTION

On January 28, 2011, Egypt's President, Hosni Mubarak, took the drastic and unprecedented step of shutting off the Internet for five days across an entire nation. His reason for doing so was simple: to halt the flow of communication and coordinated assembly taking place over social media platforms, like Facebook and Twitter. That Mubarak took this desperate step — which cost Egypt an estimated \$90 million² and outraged the international community³ — demonstrates the incredible power of social media.

Mubarak's decision to shut off the Internet took place after three days of demonstrations by tens of thousands of Egyptians. Although the demonstrations were centered in Cairo's Tahrir Square (or "Liberation Square"), there were also substantial demonstrations in Alexandria, Mansoura, and Suez.⁴ The protesters expressed outrage over several issues, including state corruption, police brutality, and economic oppression.⁵ Their demand was clear: President Hosni Mubarak must leave the country.⁶

Various groups, including April 6 Youth Movement, We Are All Khaled Said, National Association for Change, and Kefaya led a coordinated effort⁷ using social media platforms, including Facebook and Twitter, to spread a revolutionary message.⁸ Prior to the first day of protest, 85,000 Egyptians

1. Harvard Law School, J.D. 2011. I would like to thank Yochai Benkler, Kathryn Marshall, Michelle Katz, Hrishikesh Hari, and Sara Zampierin for their thoughtful comments throughout the process of writing and editing this piece.

2. Christopher Noble, *Communications Block Cost Egypt \$90 Million - OECD*, WALL ST.J., Feb. 3, 2011, <http://online.wsj.com/article/BT-CO-20110203-718927.html>.

3. See *infra* notes 14–17 and accompanying text.

4. *Egypt protests escalate in Cairo, Suez and other cities*, BBC NEWS (Jan. 28, 2011), <http://www.bbc.co.uk/news/world-middle-east-12303564>.

5. Ben Wedeman & Amir Ahmed, *3 dead after thousands protest in rare Egypt outpouring*, CNN.COM (Jan. 26, 2011), <http://edition.cnn.com/2011/WORLD/africa/01/25/egypt.protests/index.html>.

6. *Id.*

7. *Who is behind the Egyptian protests?*, GUARDIAN, Feb. 2, 2011, <http://www.guardian.co.uk/commentisfree/2011/feb/02/who-is-behind-egyptian-protests>.

8. See Scott Shane, *Spotlight Again Falls on Web Tools and Change*, N.Y. TIMES, Jan. 29, 2011, <http://www.nytimes.com/2011/01/30/weekinreview/30shane.html>.

pledged on Facebook to attend “Revolution Day.”⁹ Similarly, April 6 Movement had over 90,000 members during the protests,¹⁰ and We Are Khaled Said had over 40,000 Facebook fans.¹¹ In the two weeks leading up to and including the first few days of the protest, Egyptians created 32,000 Facebook groups and 14,000 Facebook pages.¹² It is likely that a substantial number of the five million Facebook users in Egypt¹³ were in some way encouraged to attend the protests.

Mubarak’s decision to unplug Egypt’s Internet drew strong criticism from the international community, which recognized that this was an attack on social media. In the wake of the blackout, President Obama declared, “[W]e stand for universal values, including the rights of the Egyptian people to freedom of assembly, freedom of speech, and the freedom to access information. Once more, we’ve seen the incredible potential for technology to empower citizens and the dignity of those who stand up for a better future.”¹⁴ On the same day that Mubarak blocked access, Secretary of State Hillary Clinton told reporters, “We support the universal rights of the Egyptian people including the rights to freedom of expression, association, and assembly. And we urge the Egyptian authorities not to prevent peaceful protests or block communications, including on social-media sites.”¹⁵ Some U.S. officials turned to social media themselves to express concern. For instance, Press Secretary Robert Gibbs tweeted: “Very concerned about violence in Egypt - government must respect the rights of the Egyptian people & turn on social networking and internet.”¹⁶ U.S. Department of State spokesman Phillip Crowley tweeted, “[w]e are concerned that communication services, including the internet, social media and even this #tweet, are being blocked in #Egypt.”¹⁷

Predictably, Mubarak’s desperate move invigorated the domestic protests. Following the blackout over one million Egyptians joined demonstrations across the country, up to a tenfold increase in the number of

9. See Abigail Hauslohner, *Is Egypt About to Have a Facebook Revolution?*, TIME, Jan. 24, 2011, <http://www.time.com/time/world/article/0,8599,2044142,00.html>.

10. See *Misconceptions about the Egyptian crisis*, WASH. POST, Jan. 31, 2011, <http://www.washingtonpost.com/wp-dyn/content/article/2011/01/31/AR2011013104517.html>.

11. *We Are Khaled Said*, FACEBOOK, <http://www.facebook.com/elshaheed.co.uk> (last visited Feb. 4, 2011).

12. Geoffrey A. Fowler, *Facebook Sees Egypt Usage Spoke*, WALL ST. J., Feb. 2, 2011, <http://online.wsj.com/article/SB10001424052748704775604576120474247618578.html>.

13. See *id.*

14. Press Release, The White House, Remarks by the President on the Situation in Egypt, Feb. 1, 2011, available at <http://www.whitehouse.gov/the-press-office/2011/02/01/remarks-president-situation-egypt>.

15. Hillary Rodham Clinton, Remarks With Jordanian Foreign Minister Nasser Judeh After Their Meeting (Jan. 26, 2011), available at <http://www.state.gov/secretary/rm/2011/01/155388.htm>.

16. Robert Gibbs (EOP) (PressSec) on Twitter, TWITTER (Jan. 28, 2011, 11:31:03 AM), <http://twitter.com/PressSec> (last visited Feb. 4, 2011).

17. Phillip J. Crowley (PJCrowley) on Twitter, TWITTER (Jan. 27, 2011, 10:24:12 PM), <http://twitter.com/pjcrowley> (last visited Feb. 4, 2011).

participants.¹⁸ The day the Internet was restored, Facebook experienced its highest number of active users from Egypt ever.¹⁹ As the demonstrations continued, some of the nation's most prominent public figures came out in support of the demonstrations. On the sixth day of the protests, a group of Egypt's senior judges violated Mubarak's emergency curfew to join the demonstrations in Tahrir Square.²⁰ Two days later, Egyptian Preacher Amr Khaled, one of the most influential people in the World according to Time Magazine,²¹ broadcasted in Arabic to his two-million Facebook followers:

I'm in Tahrir Square in the morning and so far, and [sic] I have seen the wonderful view of civility among young people and the army, and to summarize what I have seen in two phrases: these young people are the hope of Egypt, and this army is the security of Egypt.²²

Tens of thousands of Egyptians responded to Khaled's posts during the protests.²³ On the eleventh day of protests, Amr Moussa, Egypt's former Foreign Minister and one of the most popular political figures in Egypt, entered Tahrir Square to join the protests.²⁴ On the same day, "Mohamed Rafah Tahtawy, the public spokesman for Al Azhar — the center of Sunni Muslim learning and Egypt's highest, state-run religious authority — said he was resigning to join the revolt."²⁵

After eighteen days of relentless protest, the unthinkable happened: putting to an end thirty years of authoritarian rule, President Mubarak heeded the demand of the Egyptian people and resigned from office.²⁶

The role that social media played in the Egyptian uprising is striking. Social media brought to the Egyptian people a sense of self-empowerment — through the capacity to speak and assemble — that was previously not there. Recently, social media had a similar impact in Tunisia, Libya, and Iran. This moment in history serves as a prompt to think critically and broadly about the role that social media can and should play in developing

18. *Protesters flood Egypt streets*, AL JAZEERA (Feb. 2, 2011), <http://english.aljazeera.net/news/middleeast/2011/02/20112113115442982.html>.

19. See *supra* Fowler, note 12.

20. Sara A. Carter, *Egyptian judges who fought corruption join protest*, Jan. 31, 2011, WASH. EXAMINER, <http://washingtonexaminer.com/news/world/2011/01/egyptian-judges-who-fought-corruption-join-protest>.

21. Asra Nomani, *The TIME 100*, TIME, May 3, 2007, http://www.time.com/time/specials/2007/time100/article/0,28804,1595326_1615754_1616173,00.html.

22. *Amr Khaled*, FACEBOOK (Feb. 1, 2011, 9:42 AM), <http://www.facebook.com/AmrKhaled> (last visited Feb. 4, 2011) translated by Google Translate.

23. See *id.*

24. Robert Mackey, *Latest Updates on Day 11 of Egypt Protests*, THE LEDE: N.Y. TIMES NEWS BLOG (Feb. 4, 2011), <http://thelede.blogs.nytimes.com/2011/02/04/latest-updates-on-day-11-of-egypt-protests/>.

25. *Id.*

26. Jack Shenker, *In Tabrir Square of Cairo freedom party begins*, GUARDIAN, Feb. 12, 2011, <http://www.guardian.co.uk/world/2011/feb/11/tahrir-square-cairo-freedom-party>.

nations. What advantages does the proliferation of social media offer citizens of developing nations? Should international policymakers and organizations concerned with economic development and human rights embrace social media as tools for achieving those ends? If so, how should social media fit into the broader context of promoting information and communication technologies (ICTs)?

This paper explores the role that social media might play in addressing what has been coined “the global digital divide.” The global digital divide describes the unequal distribution of information and communication technology across nations, commonly described as the “gap between the information haves and have-nots.”²⁷ The contours of the global digital divide are complex and, although the “digital divide” has become a common political catchphrase, popular discourse has, for the most part, failed to capture all of the dimensions of the divide. Within academic circles it is well established that the digital divide encompasses more than physical access to ICT. It also a function of how ICT is used.

For this reason, it is crucial for those developing policies and programs designed to bridge the global digital divide to consider what uses of ICT to incentivize. In other words, they must ask for their purposes: what constitutes “meaningful use” of ICT? Although there has been limited discussion of the boundaries of meaningful use, it is clear that wherever the boundaries lie, they must continuously evolve as new technologies emerge, and as we learn more about the forces driving the divide and the growing list of benefits that deprived countries are precluded from enjoying. Traditional discourse surrounding the global digital divide centers on economic integration and access to education and healthcare information. This paper advocates for a conception of meaningful use that extends further, and challenges policymakers and international development organizations to consider the capacity of social media on the Internet to empower individuals in developing nations. In particular, the popularity and the generative nature of social media empower individuals in developing nations to combat some of the main obstacles to bridging the digital divide. Furthermore, social media empower individuals to express themselves, which in many cases has meant that individuals are able to make known the human rights abuses that they suffer from in their nations.

Part II of this paper revisits the discourse surrounding the digital divide as it has surfaced in popular debate and evolved in academic circles, and emphasizes the importance of locally relevant content in any attempt to promote adoption of the Internet. Part III examines the development of the Internet in three nations — Sri Lanka, Peru, and Egypt — each of which has faced very different obstacles in achieving widespread integration of ICT. Part IV of this paper draws on the stories from these nations and

27. Peter K. Yu, *Bridging the Digital Divide: Equality in the Information Age*, 20 CARDOZO ARTS & ENT. L.J. 1, 2 (2002).

observes that social media have the capacity to overcome many of the obstacles to ICT adoption and can empower individuals to expose serious human rights abuses. The challenge is then for policymakers and international development organizations to harness the power of social media to further bridge the digital divide and empower individuals to bring attention to human rights violations taking place in their country.

II. CONTOURS OF THE GLOBAL DIGITAL DIVIDE

The Internet has revolutionized the way most people in the Western world live. It has become an integral part of our economic, political, and social lives, altering the way we purchase goods, the way we bank, and the way we communicate with one another. It has altered not only how we deliver the news, but also *who* delivers the news. It has changed our vocabulary²⁸ and it has changed how we check the weather. There should be little surprise, then, at the incredible rate at which the Internet has grown. The number of Internet users grew from ten million in 1993, to approximately forty million in 1995, to more than 670 million in 2002.²⁹ Today, the Internet has an estimated 1.97 billion users.³⁰

However, despite these astonishing numbers, the Internet's growth, and the corresponding benefits, have not been distributed equally across nations. For instance, in 2007, approximately 67% of people living in what were then the 27 high-income OECD member states — the world's most developed, post-industrial nations³¹ — had access to the Internet.³² In comparison, only 24.5, 15.9, and 3.8% of the populations in Latin America, the Middle East, and Sub-Saharan Africa, respectively, had access to the Internet.³³ In total, Sub-Saharan Africa housed only 2% of all In-

28. For instance, "Google" is now widely used and understood as a verb.

29. *World Development Indicators Database*, WORLD BANK, <http://databank.worldbank.org/ddp/home.do> [hereinafter *World Development Indicators Database*] (select "World Development Indicators & Global Development Finance" database and click "Next"; then select "World" aggregate variable and click "Next"; then select "Internet Users" as series variable and click "Next"; then select "1993," "1995," and "2002," as time variable and click "Next"; then, under scale option of Format Report select "Units" and under precision option select "0" and click "View Data").

30. *World Internet Usage Statistics News and World Population Stats*, INTERNET WORLD STATS, <http://www.internetworldstats.com/stats.htm> (last visited Jan. 6, 2011).

31. See *Country and Lending Groups: Data*, WORLD BANK, http://data.worldbank.org/about/country-classifications/country-and-lending-groups#OECD_members.

32. *World Development Indicators Database*, *supra* note 29 (select "World Development Indicators & Global Development Finance" database and click "Next"; then select "High Income: OECD" aggregate variable and click "Next"; then select "Internet Users" and "Population" as series variables and click "Next"; then select "2007," as time variable and click "Next"; then, under scale option of Format Report select "Units" and under precision option select "0" and click "View Data," then click "Excel" to calculate percentages).

33. *Id.* (select "World Development Indicators & Global Development Finance" database and click "Next"; then select "Latin America & Caribbean (all income levels)," "Middle East & North Africa (all income levels)," and "Sub-Saharan Africa (all income levels)" aggregate variables and click "Next"; then select "Internet Users" and "Population" as series variables and click "Next"; then select "2007,"

ternet users even though it accounted for 12% of the world's population.³⁴ Meanwhile, 96% of the secure Internet servers in the world were located in high-income OECD countries, even though those countries comprised less than 15% of the world's population.³⁵ These disparities have led commentators to conclude that "a large segment of the world population misses out on the tremendous political, social, economic, educational, and career opportunities created by the digital revolution."³⁶ The "global digital divide" refers to this inequity in the distribution of information technology across nations.³⁷

A. *The Significance of the Digital Divide*

Although there is a general consensus that some divide exists across nations, scholars have differing views with respect to the significance of that divide. Many scholars have suggested that the digital divide is an important issue that needs to be addressed. In the words of one scholar, "As the networks and the equipment attached to them become the preferred mode of political participation, lifelong learning, employment and commerce, as well as personal expression, nonaccess and nonconnection could become tantamount to 'nonexistence.'"³⁸

These scholars have suggested that the Internet has the potential to level the playing field between nations and post-industrial societies for various reasons. First, the Internet reduces traditional barriers to trade and commerce, allowing small businesses in developing nations to sell products directly to the United States and other developed countries.³⁹ Second, the informational capacity of the Internet allows developing nations to skip

as time variable and click "Next"; then, under scale option of Format Report select "Units" and under precision option select "0" and click "View Data," then click "Excel" to calculate percentages).

34. *Id.* (select "World Development Indicators & Global Development Finance" database and click "Next"; then select "Sub-Saharan Africa (all income levels)" aggregate variable and click "Next"; then select "Internet Users" and "Global Population" as series variables and click "Next"; then select "2007," as time variable and click "Next"; then, under scale option of Format Report select "Units" and under precision option select "0" and click "View Data," then click "Excel" to calculate percentages).

35. *Id.* (select "World Development Indicators & Global Development Finance" database and click "Next"; then select "High Income: OECD" aggregate variable and click "Next"; then select "Internet Users" and "Global Population" as series variables and click "Next"; then select "2007," as time variable and click "Next"; then, under scale option of Format Report select "Units" and under precision option select "0" and click "View Data," then click "Excel" to calculate percentages).

36. Yu, *supra* note 27, at 2.

37. *Id.* at 4. To be sure, the term "digital divide" has also been used to describe disparity in access to telecommunications *within* nations. See e.g., Nat'l Telecomms. and Info. Admin., U.S. Dep't of Commerce, *Falling Through the Net: Defining the Digital Divide* (1999), available at <http://www.ntia.doc.gov/ntiahome/fttn99/FTTN.pdf> (describing disparity in access to telecommunications in America among blacks, Hispanics, those in rural areas, and women); Neil Selwyn, *Reconsidering Political and Popular Understandings of the Digital Divide*, 6 *NEW MEDIA & SOC'Y* 341, 344 (2004).

38. Allen S. Hammond, IV, *The Telecommunications Act of 1996: Codifying the Digital Divide*, 50 *FED. COMM. L.J.* 179, 185 (1997).

39. PIPPA NORRIS, *DIGITAL DIVIDE: CIVIC ENGAGEMENT, INFORMATION POVERTY, AND THE INTERNET WORLDWIDE* 7 (2001).

ahead in improving basic services. For instance, the introduction of the Internet will lead to dramatic improvements in the field of education because the Internet “allow[s] a teacher . . . in Ghana or Calcutta access to the same database information as one in London or New York,”⁴⁰ and “[d]istance learning can widen access to training and education, via open universities in India, Africa, and Thailand, and language websites for schools.”⁴¹ Further, access to healthcare will improve as “[n]etworks of hospitals and health care professionals in the Ukraine, Mozambique, and Stockholm can pool expertise and knowledge. . . .”⁴² Finally, scholars argue that the Internet has independent civic value — “[t]hose who have computers and Internet communications find themselves better trained, better informed, and better able to participate in democracy.”⁴³ In a similar vein, access to the Internet provides members of developing nations with the opportunity to bring global exposure to their concerns and to unite with other disparate social movements.⁴⁴

It is largely on these grounds that international development organizations have emphasized the importance of addressing the digital divide. For instance, during his tenure as UN Secretary General, Kofi Annan emphasized the need to “bridge the digital divide.”⁴⁵ During a speech at a telecom conference in Geneva in 1999, Annan emphasized the importance of bringing telecommunications to the developed world: “People lack many things: jobs, shelter, food, health care and drinkable water. Today, being cut off from basic telecommunications services is a hardship almost as acute as these other deprivations, and may indeed reduce the chances of finding remedies to them.”⁴⁶ Annan later published online to the UN’s website:

The new information and communications technologies are among the driving forces of globalization. They are bringing people together, and bringing decision-makers unprecedented new tools for development. At the same time, however, the gap between information “haves” and “have-nots” is widening, and there is a real danger that the world’s poor will be excluded from the emerging knowledge-based global economy.⁴⁷

40. Pippa Norris, Abstract, *Paper for the Annual Meeting of the Political Studies Association of the UK 2* (2000), available at <http://www.hks.harvard.edu/fs/pnorris/Acrobat/psa2000dig.pdf>.

41. NORRIS, *supra* note 39, at 7.

42. *Id.*

43. Mark N. Cooper, *Inequality in the Digital Society: Why the Digital Divide Deserves All the Attention It Gets*, 20 *CARDOZO ARTS & ENT. L.J.* 73, 73 (2002).

44. See NORRIS, *supra* note 39, at 8–9.

45. *Annan calls for digital bridges*, BBC NEWS (Nov. 16, 2005), <http://news.bbc.co.uk/2/hi/technology/4443392.stm>.

46. NORRIS, *supra* note 39, at 40.

47. Kofi Annan, *On the Digital Divide* (Nov. 5, 2002), <http://www.un.org/News/press/docs/2002/sg-5nov-2002.htm>.

Annan's successor, Secretary-General Ban Ki-moon, has also highlighted the divide as a major issue in need of redress.⁴⁸ The leaders of the World Bank have followed suit: former World Bank President James D. Wolfensohn described the divide as "one of the greatest impediments to development"⁴⁹ and current President Robert B. Zoellick urged that the digital divide "must be addressed before Africa can be connected to the globalized economy and use ICT to improve public services, overcome poverty, and enable regional integration."⁵⁰ At the Okinawa Summit of 2000, the G8 similarly announced a commitment to tackling the digital divide.⁵¹

Yet, not all agree that the digital divide deserves special attention. The significance of the digital divide has been challenged on many grounds. First, some commentators contend that the digital divide deserves no special attention because it is simply a symptom of economic disparity across nations, and thus the lack of access to information technologies in developing nations merely reflects the impoverishment of those nations. This position is perhaps best represented by the comments made by former Chairman of the FCC, Michael Powell, as he addressed the domestic digital divide in the United States:

I think the term [digital divide] sometimes is dangerous in the sense that it suggests that the minute a new and innovative technology is introduced in the market, there is a divide unless it is equally distributed among every part of society, and that is just an unreal understanding of the American capitalist system . . . I think there's a Mercedes divide, I'd like one, but I can't afford it . . . I think it is an important social issue . . . but it shouldn't be used to justify the notion of essentially, the socialization of the deployment of infrastructure.⁵²

Other public figures have expressed similar skepticism over the significance of the digital divide. For instance, at a conference centered on the digital divide, Bill Gates echoed Powell's metaphor, stating that "most of the world doesn't have cars, but we don't talk about the auto divide."⁵³ Steve Jobs, cofounder of Apple, has said as much, calling the digital divide

48. Press Release, United Nations Conference on Trade and Development, Report Warns of Widening Broadband Divide But Sees Strong Mobile Phone Growth Despite Economic Crisis, UNCTAD/055 (Oct. 22, 2009), <http://www.unctad.org/Templates/webflyer.asp?docid=12271&intItemID=1528&lang=1>.

49. NORRIS, *supra* note 39, at 40.

50. *Connecting Africa: How ICT is Transforming a Continent*, THE WORLD BANK (Oct. 29, 2007), <http://go.worldbank.org/PCSYW4H6T0>.

51. Chris Alden, *Let Them Eat Cyberspace: Africa, the G8 and the Digital Divide*, 32 MILLENNIUM: J. OF INT'L. STUD. 457, 457 (2003).

52. Nicholas W. Allard, *Digital Divide: Myth, Reality, Responsibility*, 24 HASTINGS COMM. & ENT. L.J. 449, 468 n.54 (2002).

53. Susanna Frederick Fischer, *The Global Digital Divide: Focusing on Children*, 24 HASTINGS COMM. AND ENT. L.J. 477, 502 (2002).

“just a new sticker we use to cover up a more important word: poverty. . . We invent terms like digital divide to distract us from the real problem that must be solved in the world, and that’s poverty.”⁵⁴

Second, critics have challenged the *relative* significance of the divide. This argument posits that access to information technology pales in significance when considered in light of the other needs of poor nations, such as food, water, education, and healthcare. Here, Bill Gates, again, has been outspoken:

Do people have a clear view of what it means to live on \$1 a day? . . . There are things those people need at that level other than technology. . . About 99 percent of the benefits of having [a PC] come when you’ve provided reasonable health and literacy to the person who’s going to sit down and use it . . . People with elephantiasis aren’t going to be using their PCs. I’m suggesting that if someone’s interested in equity, you wouldn’t spend more than 20 percent of your time talking about computers. It’s almost criminal more money isn’t spent on curing malaria, which kills 1 million children a year.⁵⁵

Third, commentators have challenged the urgency of the digital divide, claiming that the divide is only a temporary phenomenon that will disappear over time.⁵⁶ This argument points to the rapidly decreasing cost of information technology, the increasing quality of service, and forecasts that developing nations will catch up to developed countries on their own.⁵⁷

There is no shortage of responses to these criticisms. Namely, challenges to the relative importance of the digital divide seem to ignore the possibility that providing access to information technologies might empower developing nations to solve these larger problems. Proponents of addressing the digital divide argue that economic depravity, poor education, and deficient healthcare might be addressed on a structural level by providing developing nations with infrastructure and skills to compete in the national economy, in which ICT is undoubtedly an essential tool. Furthermore, while Mr. Gates is surely correct to point out other symptoms of impoverished nations that should be taken seriously, this does not in itself negate the importance of the digital divide.⁵⁸ The Internet has revolutionized our social, political, and economic lives and impoverished nations have much to gain from the opportunities it brings.⁵⁹

54. *Id.*

55. *Id.*

56. See Yu, *supra* note 27, at 20 n.107.

57. See *id.* at 20, n.108.

58. *Id.* at 35 (“There are a lot of different divides, and the digital divide is only one of them. . . Nonetheless, just as we should not dismiss the racial divide by noting the existence of the education divide, we should not dismiss the digital divide by noting the existence of other divides.”)

59. *Id.* at 2.

In this way, the development of ICT is inextricably linked to the right to development that has been recognized by the United Nations. The right to development is “an inalienable human right by virtue of which every human person and all peoples are entitled to participate in, contribute to, and enjoy economic, social, cultural and political development, in which all human rights and fundamental freedoms can be fully realized.”⁶⁰ The majority in the UN Declaration of the Right to Development accepted this definition in 1986⁶¹ and it was accepted unanimously in the Vienna Declaration and Programme of Action in 1993.⁶² Realization of this right requires states to pursue

an integrated process . . . based on comprehensive development programs using all the resources of output, technology and finance, through national and international policies. The realization of human rights is the goal of the programs, and the resources and policies affecting technology, finance and institutional arrangements are the instruments for achieving this goal.⁶³

In today’s global economy, where computers and the Internet are so fundamental to production and participation, it is clear that if the right to development is to be taken seriously, that right must encompass the development of ICT infrastructure and skills.

In a related vein, it is important to consider the support that closing the digital divide might provide to human rights organizations worldwide. In fact, many scholars have identified human rights organizations as some of the chief beneficiaries of the ongoing discourse surrounding the digital divide.⁶⁴ As one scholar observes, “[a]ccurate and timely information is an indispensable tool and an essential precondition for effective responsive action and the promotion of human rights.”⁶⁵ “In the South, the past few decades have seen the rapid expansion of such groups and their growing importance as national and domestic actors. . . . For these groups, [ICTs] . . . are seen as a useful tool for organizing and communicating their message.”⁶⁶ In addition to the ease of communication and information dissemination, human rights NGOs have benefitted from the difficulty of state

60. Declaration on the Right to Development, G.A. Res. 41/128, U.N. Doc. A/RES/41/128 (Dec. 4, 1986).

61. *Id.*

62. See Vienna Declaration and Programme of Action, ¶10, U.N. Doc. A/CONF.157/23 (June 25, 1993).

63. Arjun Sengupta, *On the Theory and Practice of the Right to Development*, 24 HUM. RTS. Q. 837, 874 (2002).

64. See, e.g., Brendan Luyt, *Who Benefits From the Digital Divide?*, FIRST MONDAY, VOL. 9, NO 8 (Aug. 2, 2004), <http://firstmonday.org/htbin/cgiwrap/bin/ojs/index.php/fm/article/viewArticle/1796/1676>; Jamie F. Metzl, *Information Technology and Human Rights*, 18 HUM. RTS. Q. 705 (1996).

65. Metzl, *supra* note 64, at 706.

66. Luyt, *supra* note 64.

supervision of the Internet.⁶⁷ As a result, ICTs “have rapidly become key tools of the human rights movement.”⁶⁸

For instance, organizations like Amnesty International and Human Rights Watch now rely heavily on the Internet to communicate with and collect information from regional contacts, and for “[m]obilization of [their] members in order to deal with particular cases of human rights abuses.”⁶⁹ In a project entitled “Eyes on Darfur,” Amnesty International disseminates high-resolution satellite imagery on the Internet of the atrocities committed in Darfur.⁷⁰ Scholars have identified countless examples of ICT being used to pursue human rights progress in nations across the world, for instance in Burma,⁷¹ East Timor,⁷² and Indonesia.⁷³ The success of this utilization of ICT has led scholars to conclude that ICT has had “enormous consequences for the international human rights movement as an aid to its efforts to collect, interpret, and disseminate information and to push for appropriate action in response to violations.”⁷⁴

Finally, even assuming that the gap in accessibility to information technology will solve itself over time, waiting for that to happen is an undesirable solution. As scholars have observed, the longer that these nations are left out of the divide, the more difficult it might be for them to integrate, as they will be entirely left out from setting the standards and designing the architecture of ICT.⁷⁵ However, if ICTs are to be used meaningfully within developing nations, the larger flaw with the sit-back-and-wait approach is that addressing the digital divide concerns more than just providing physical access and affordability; it also involves overcoming a cultural gap. The following two subsections describe how this preoccupation with merely providing physical access to the Internet has been pervasive in popular discourse and how content and culture are vital aspects of the divide.

B. *The Digital Divide and Physical Access*

Popular discourse and early scholarship have defined the digital divide almost exclusively in terms of a gap in physical access to ICT.⁷⁶ “[M]arketers, media, and governments often report only the number of

67. See Peter Brophy & Edward Halpin, *Through the Net to Freedom: Information, the Internet and Human Rights*, 25 J. INFO. SCI. 351, 354 (1999).

68. *Id.* at 353.

69. Luyt, *supra* note 64; see also Brophy & Halpin, *supra* note 67, at 354.

70. See Amnesty Int'l, EYES ON DARFUR, <http://www.eyesondarfur.org> (last visited Feb. 4, 2011).

71. Luyt, *supra* note 64.

72. *Id.*

73. Brophy & Halpin, *supra* note 67, at 354.

74. Metz, *supra* note 64, at 713.

75. Yu, *supra* note 27, at 20–21.

76. See GEORGE SCIADAS, UNVEILING THE DIGITAL DIVIDE 4 (Statistics Canada, Connectedness Series Catalogue No. 56F0004MIE, No. 7, 2002) available at <http://www.statcan.gc.ca/pub/56f0004m/56f0004m2002007-eng.pdf> (last visited Apr. 10, 2010) (collecting sources that focus mainly on actual connectivity).

people who have access to the Internet”⁷⁷ in conveying the problem to the public. Take for instance, the U.S. Department of Commerce’s description of the digital divide in 2000:

[Some individuals] have the most powerful computers, the best telephone service and fastest Internet service, as well as a wealth of content and training relevant to their lives . . . Another group of people don’t have access to the newest and best computers, the most reliable telephone service or the fastest or most convenient Internet services. The difference between these two groups is . . . the Digital Divide.⁷⁸

International development organizations have followed suit in their representations of what constitutes the digital divide. For instance, the United Nations has frequently defined the digital divide exclusively in terms of connectivity and access.⁷⁹

This paper emphasizes that physical access is only one aspect of the digital divide. The preoccupation with physical access in discourse and scholarship can be explained by various factors. First, providing physical access is undoubtedly an essential step in creating an inclusionary digital society.⁸⁰ Put simply, if the “have-nots” are to become “haves,” then they must have physical access to technology that can connect them to the Internet. Second, physical access is an attractive feature to focus on at least in part because the metrics used to measure physical access — possession of computers, number of Internet users, connection speed — are among the easiest to measure and, therefore, the most readily available. Third, although the term “digital divide” was coined well after the development of the Internet, the problem has its roots in earlier efforts to measure the disparity in the distribution of technology, for which metrics tied to physical access were sufficient. As far back as 1970, Hans Singer coined the phrase “international technological dualism,” which he used to describe “unequal developments in the area of science and technology, between rich and poor countries.”⁸¹ In studies measuring the disparity in the use of older technol-

77. Wenhong Chen & Barry Wellman, *Charting Digital Divides: Comparing Socioeconomic, Gender, Life Stage, and Rural-Urban Internet Access and Use in Five Countries*, in *TRANSFORMING ENTERPRISE: THE ECONOMIC AND SOCIAL IMPLICATIONS OF INFORMATION TECHNOLOGY* 467, 468 (William H. Dutton et al. eds., 2005).

78. Selwyn, *supra* note 37, at 344.

79. For instance, the World Summit on the Information Society defined the digital divide almost entirely in terms of access-related statistics. See WSIS, *The Digital Divide at a Glance*, U.N. ITU, <http://www.itu.int/wsis/tunis/newsroom/stats/> (last visited Oct. 23, 2010) (defining the digital divide completely in terms of access-related metrics). See also Press Release, United Nations Conference on Trade and Development (Oct. 22, 2009), <http://www.unctad.org/Templates/webflyer.asp?docid=12271&intItemID=1528&lang=1> (also defining the digital divide solely in terms of access).

80. Cf. Cooper, *supra* note 43, at 76 (“possession and command of technologies (the obsession of the technology counters) are not only critical indicators of the digital divide, but they are also the primary tool of economic production, civic participation and political involvement”).

81. JEFFREY JAMES, *INFORMATION TECHNOLOGY AND DEVELOPMENT* 11–12 (2004).

ogies, like telephones, it was sensible to use physical access as the chief indicator of use because the telephone had a single clearly defined use — communicating with the person on the other end. Because the telephone had a single use and the benefits stemming from that use were straightforward, physical access and use could more reasonably be treated as synonymous. In contrast, however, the Internet has many possible uses — communication, research, commerce, social networking, etc. — and the benefits of surfing the Internet may be far less obvious to people in developing nations than in the case of making telephone calls. For this reason, physical access is distinct from actual use in the context of the Internet.

The discourse surrounding the physical access problem has been rich, spawning debate over the best way to deliver information technologies to developing nations that lack the requisite infrastructure, and to the rural populations within those nations. Further, in positing solutions to the gap in access, scholars have addressed how ICT can be made more affordable for individuals in those nations⁸² and wrestled with the extent to which such development should be driven by private competition or by government programs.

These solutions have not gone unheeded. Hundreds of initiatives have attempted to develop infrastructure to connect developed nations to the rest of the world. As Professor Yu acknowledged, one of these efforts to bring connectivity was Africa One, a project that “aim[ed] to put a 32,000 kilometer optical fiber necklace around the entire continent [of Africa] by 2002.”⁸³ Although the Africa One project dissolved by 1997, the primary goals of the project were realized by SAT3/WASC/SAFE, which placed 27850 km of fiber optic cable around Africa, connecting western Africa and South Africa to Portugal, Spain, India, and Malaysia.⁸⁴ The success of SAT3/WASC/SAFE has led to the East Africa Submarine Cable System (EASSy), funded in part by the World Bank, which will directly connect eastern Africa via fiber optic cable.⁸⁵ EASSy, one of three submarine fiber-optic cables slated to become operational between 2009 and 2010,⁸⁶ completed construction in April 2010.⁸⁷ Numerous other projects have attempted to further the goal of providing physical access to developing countries by making ICT more affordable in those countries. For instance

82. Yu, *supra* note 27, at 19.

83. *Id.*

84. Stephen Frempong, *The Submarine Communications Cable Ring in Africa, 2007-1974* Am. Soc’y for Engineering Educ. Annual Conference & Exposition, at 3 (2007), available at http://www.icee.usm.edu/icee/conferences/asee2007/papers/1974_THE_SUBMARINE_COMMUNICATIONS_CABLE_RING_.pdf (last visited Jan. 6, 2011).

85. Press Release, World Bank, \$215 Million Central Africa Backbone Program Will Bring Low Cost, High Speed Internet to the Region (Oct. 6, 2009), <http://web.worldbank.org/WBSITE/EXTERNAL/NEWS/0,,contentMDK:22340869~menuPK:34466~pagePK:34370~piPK:34424~theSitePK:4607,00.html>.

86. *Id.*

87. EASSY MILESTONES, <http://www.eassy.org/milestones.html> (last visited Jan. 6, 2011).

India's Simputer,⁸⁸ MIT Media Lab's One Laptop Per Child,⁸⁹ and Brazil's People's Computer⁹⁰ were all efforts to bring affordable ICT access to developing nations.

Although the importance of providing ICT infrastructure should not be discounted, it is important to recognize that it addresses only one piece of the global digital divide. "For a great number of countries, in order to realize many of the objectives related to the right to development, making more effective use of existing resources may be more important than the additional flow of resources."⁹¹ As developing nations build such infrastructure and become physically connected to the rest of the world, it becomes crucial to consider how that technology is and should be used within those nations.

C. *The Digital Divide and Use*

More sophisticated accounts of the digital divide have distinguished between formal access to ICT and effective use of that technology.⁹² "Although in theory the formal provision of ICT facilities in community sites means that all individuals living locally have physical access to that technology, such access is meaningless unless people actually feel able to make use of such opportunities."⁹³

Mark Warschauer, Professor of Education and Informatics at the University of California, Irvine, has given perhaps the most comprehensive analysis of the social factors that lay beneath the digital divide in *Technology and Social Inclusion*.⁹⁴ Professor Warschauer emphasizes the tendency among scholars to reduce the digital divide to a binary division between those who have access and those who do not.⁹⁵ As Professor Warschauer observes, the divide is better viewed as a gradation:⁹⁶ There are distinct differences between the American professional who uses high-speed Internet as part of his daily life, the Korean who accesses social networking sites in local cyber-café's, and the Indonesian who receives Internet printouts from a local NGO.⁹⁷

This way of distinguishing between access and use is useful not only because it makes clear that the divide is about more than mere access, but also because it makes clear that the end goal need not be equal distribution

88. MARK WARSCHAUER, TECHNOLOGY AND SOCIAL INCLUSION 66–69 (2003).

89. *One Laptop Per Child (OLPC): Mission*, ONE LAPTOP PER CHILD, <http://laptop.org/en/vision/mission/index.shtml> (last visited May 10, 2010).

90. WARSCHAUER, *supra* note 88, at 65–66.

91. Sengupta, *supra* note 63, at 877.

92. See, e.g., Selwyn, *supra* note 37 at 347.

93. *Id.*

94. WARSCHAUER, *supra* note 88.

95. *Id.* at 6–7.

96. *Id.*

97. *Id.*

of physical access. The digital divide “overlaps with the concept of socio-economic equality but is not equivalent to it. There are many ways that the poor can have fuller participation and inclusion even if they lack an equal share of resources.”⁹⁸ Viewed through this lens, the question is transformed from “how do we increase the speed of connections to match the high-speed connections of developed nations?” to “how do we encourage local communities in developing nations to participate meaningfully using their current connections?”

D. *The Centrality of Content*

Central to encouraging the adoption of the Internet in developing nations is ensuring that content that is useful to people in those nations exists and is accessible. Although this may seem obvious, early discourse surrounding the digital divide almost entirely neglected the centrality of content to use of the Internet.⁹⁹ In 2000, the Children’s Partnership, a nonprofit organization, studied the barriers to Internet adoption among low-income and underserved Americans.¹⁰⁰ Their report concluded that there were four significant barriers to Internet adoption: lack of local information, literacy barriers, language barriers, and lack of cultural diversity of content.¹⁰¹ Low-income users wanted information that was relevant to their communities, their social issues, and their values.¹⁰² They also wanted content that was in their native tongue.¹⁰³ The study urged government, community leaders, and private investors to develop and incentivize the creation of content that serves the needs of users in unique and particularized communities.¹⁰⁴

The same problems — and solutions — surround the digital divide on the global level. Those who have studied the success of ICT access points in developing nations have heavily emphasized the need to involve local communities in the design process,¹⁰⁵ cater ICT solutions to specific needs unique to those communities,¹⁰⁶ and keep content relevant to local needs and concerns.¹⁰⁷ This section focuses on two features that have been major

98. *Id.* at 8.

99. Bart Cammaerts & Leo Van Audenhove, *Dominant Divide Discourses: A Short Introduction*, in *BEYOND THE DIGITAL DIVIDE: REDUCING EXCLUSION, FOSTERING INCLUSION* 7, 9 (Bart Cammaerts et al. eds., 2003).

100. WENDY LAZARUS & FRANCISCO MORA, *THE CHILDREN’S PARTNERSHIP, ONLINE CONTENT FOR LOW-INCOME AND UNDERSERVED AMERICANS: THE DIGITAL DIVIDE’S NEW FRONTIER* 7 (2000).

101. *Id.* at 8.

102. *Id.*

103. *Id.*

104. *Id.* at 31–33.

105. *See, e.g.*, Chris Rothschild, *Incorporating Predictors of Success for Telecenter Projects: A Qualitative Analysis of 17 Developing Countries* 12 (2008) (unpublished Masters thesis, University of Washington) (on file with Technology and Social Change Group, University of Washington); LAZARUS & MORA, *supra* note 100, at 9–10.

106. Rothschild, *supra* note 105, at 13.

107. *Id.* at 14–15.

barriers to Internet use even where physical access exists: the availability of content in local languages and the availability of content that is relevant to the local culture.

1. *Language*

English is the unofficial language of the Internet. A 2002 report by the World Economic Forum found that three-quarters of all websites are in English.¹⁰⁸ An obvious result of this language disparity is that the Internet is more accessible to English-speaking people.¹⁰⁹ One study conducted by Emlyn Hagen examined fifty-four African countries over a span of twelve years¹¹⁰ and found a positive and significant correlation between the prevalence of the English language and Internet development.¹¹¹ Another study found that the strongest positive influence on dial-up Internet subscription across nations is the presence of English as an official language in a country.¹¹²

In contrast, the lack of online content in languages other than English has limited Internet development in nations where English is not the primary language. Hagen's study of African nations revealed that the predominance of French and Arabic has a negative influence on the Internet development of a country.¹¹³ Another study found that the lack of content in native languages discourages use of the Internet in South Asia.¹¹⁴

There are multiple reasons why communities might be reluctant to embrace the Internet as an English dominant technology. Communities may see the dominance of English as a threat to their local culture. This has been a major trend in Islamic countries where, despite having relatively rich communications infrastructure, development of the Internet has been stagnant.¹¹⁵ Although there have been many explanations provided for this reluctance to embrace the Internet, the official reasons given have been a desire to protect Islamic culture and prevent "immoral" information from entering the country.¹¹⁶ A more fundamental reason for the reluctance to embrace the Internet as an English technology is that many people in these nations do not understand English. People will not use the Internet if they

108. World Economic Forum, ANNUAL REPORT OF THE GLOBAL DIGITAL DIVIDE INITIATIVE 36 (2002), available at http://www.weforum.org/pdf/Initiatives/Digital_Divide_Report_2001_2002.pdf.

109. Cf. EMLYN HAGEN, THE DIGITAL DIVIDE IN AFRICA: CROSS-SECTIONAL TIME SERIES ANALYSIS OF THE AFRICAN DIGITAL DIVIDE FACTORS 48 (2007).

110. *Id.* at II.

111. *Id.* at 50.

112. Trevor R. Roycroft & Siriwan Anantho, *Internet Subscription in Africa: Policy for a Dual Digital Divide*, 27 TELECOMMUNICATIONS POLICY 61, 71 (2003).

113. HAGEN, *supra* note 109, at 49.

114. See Madanmohan Rao et al., *Online Content in South Asia: Opportunities and Realities*, 34 ECON. & POL. WEEKLY 3321 (1999).

115. See HAGEN, *supra* note 109, at 32.

116. *Id.*

cannot understand its content, and even those who can understand multiple languages are more comfortable surfing the web in their native language.¹¹⁷

As a result, the development of content in local languages is central to successful ICT adoption.¹¹⁸ “Helping a nation develop its own website contents in the local languages and supplying software and instructions, might boost the acceptance of internet technologies in non-English speaking nations, as well as saving and promoting the cultural heritage of Africa’s original languages.”¹¹⁹ Initiatives focused on the adoption of ICT in developing communities must then consider innovative strategies that involve creating content that is in that community’s native tongue.

To the extent that online web page translators — such as Google Translate or Yahoo! Babel Fish — have been offered as a solution, they are likely inadequate. In many cases webpage translation does not exist for the local language spoken in developing nations. For instance, while these services now offer free full-webpage translation from English to Arabic and Swahili,¹²⁰ there is no comparable service available for less prevalent languages like Singalese or Tamil. Second, while the quality of automatic translation has certainly improved, the experience of surfing the web by relying on automatic translators is still suboptimal. There are still many inaccuracies in these services and many concepts are lost in translation. Finally, even if these translation services offered perfect translation, the solution would likely still be inadequate because the content rendered — although fully understandable — might not be culturally relevant to communities in developing nations.

2. *Cultural Relevance*

Today, Internet traffic is highly concentrated on a small number of websites.¹²¹ Private companies create and sort much of the content on the Internet and these companies target their content at a particular audience.¹²² Pippa Norris writes, “[T]he pioneering and cooperative spirit of alternative politics characteristic of the chat rooms, bulletin boards, and MUDs found in the university community of online users in the early 1990s may have been overtaken by a more commercially dominant corporate-interest shopping-mall Web of eBay and Amazon.com today.”¹²³ The result has been a “commodification of attention,” where the major players in Internet content and search “play[] a pivotal role in channeling users’ attention toward

117. Chen & Wellman, *supra* note 77, at 476.

118. HAGEN, *supra* note 109, at 50.

119. *Id.* at 93.

120. Google Translate currently offers these services. See GOOGLE TRANSLATE, <http://translate.google.com> (last visited Oct. 23, 2010).

121. Paul DiMaggio et al., *Social Implications of the Internet*, 27 ANNU. REV. SOC. 307, 313 (2001).

122. See Yu, *supra* note 27, at 6.

123. NORRIS, *supra* note 39, at 201–02.

some contents and away from others.”¹²⁴ As a result, the interests of communities in developing nations, which generally do not provide attractive markets,¹²⁵ go unheeded and, even with physical access to ICT, they lack access to content that is relevant to their lives.

Professor Warschauer has pointed to a few initiatives that have successfully delivered relevant content to developing communities, such as the M. S. Swaminathan Research Foundation’s efforts in communities in southern India.¹²⁶ This Foundation has attempted to assist rural farmers by collecting data relevant to small-scale farmers, translating it into local languages, and making it available at various kiosks¹²⁷ known as “village knowledge centers.”¹²⁸ Susan O’Donnell has suggested a similar approach to promoting Internet adoption among disabled people and women in Europe. She suggests that civil society organizations have a key role to play in the digital divide.¹²⁹ Because these organizations understand the needs and interests of the underdeveloped community, they can play a role in narrowing the digital divide by filtering content relevant to members of the community.¹³⁰ They can also help to ensure that information that is relevant to disadvantaged communities is published online.¹³¹ As O’Donnell observes, this can expand awareness of and trust in ICTs among the underdeveloped population.¹³²

These approaches reflect the importance of creating content that is relevant to developing communities in order to foster use of ICTs. However, as I point out later in this paper,¹³³ the centralized nature of M.S. Swaminathan’s and O’Donnell’s models suffers from two flaws: limitations in the scale at which content can be created and requiring a centralized determination of what is “relevant.” Creative solutions are needed to empower individuals in underdeveloped communities to develop their own content.

124. DiMaggio, *supra* note 121, at 313 (citing Eszter Hargittai, *Open Portals or Closed Gates? Channeling Content on the World Wide Web*, 27 *POETICS* 233 (2000)).

125. See Ana Maria Fernandez-Maldonado, *Satisfying the Demand for ICT Connectivity of Low-Income Groups*, in AKHTAR BADSHAH ET AL. eds., *CONNECTED FOR DEVELOPMENT: INFORMATION KIOSKS AND SUSTAINABILITY* 57, 58 (2003).

126. See WARSCHAUER, *supra* note 88, at 168.

127. *Id.* at 85.

128. *Id.* at 168.

129. See Susan O’Donnell, *Civil Society Organisations and an Inclusive Information Society in Europe*, in Bart Cammaerts, et. al. eds., *BEYOND THE DIGITAL DIVIDE* (2003).

130. *Id.* at 81–82.

131. *Id.* at 82–83.

132. *Id.* at 84–86.

133. See *infra* notes 228–231 and accompanying text.

III. ACCESS, CONTENT, AND USE IN PRACTICE

A. *E-Sri Lanka and the Nenasala*

The e-Sri Lanka program is perhaps the best example of an initiative that has adopted a holistic approach that fosters community level involvement. The e-Sri Lanka program is administered by the Government of Sri Lanka and aims to promote ICT within the country. The project has been funded in part by \$53 million in loans from the World Bank.¹³⁴ An integral part of e-Sri Lanka is the “1000 Nenasala Programme.”¹³⁵ This program aims to develop one thousand Nenasalas — or “knowledge centers”¹³⁶ — across all parts of Sri Lanka to introduce ICT to rural and semi-urban populations.¹³⁷ These Nenasalas “are multi-service community information centres, providing internet access, telephone and other key services such as photocopy, faxes, scanning,”¹³⁸ and ICT literacy training¹³⁹ to communities. Although there are multiple models for these centers, in general, those who want to open Nenasalas apply to the government for support. If selected, the government provides the operator with computers and free Internet for two years, followed by two years of subsidized access, and the operator covers all other costs.¹⁴⁰

As of 2010, there are over 600 Nenasalas in operation.¹⁴¹ According to a report prepared on behalf of the World Bank, Sri Lanka’s Nenasala program “is one of the largest and most sophisticated programmes for supporting public access to ICTs in the world.”¹⁴² However, this report also found that despite working Internet connections, a relatively low cost of access, and a voucher-system that subsidizes Internet use by the poor, public use of the facilities for Internet remains lower than expected.¹⁴³ Among the causes of the low usage rates identified in the report, social issues were predominant. One of the most pressing issues identified was the lack of local content and applications available to visitors of the Nenasalas.¹⁴⁴ Additionally, the report highlighted a lack of awareness of relevant online resources¹⁴⁵ and language difficulties because Sinhalese and Tamil, the languages spoken by

134. Press Release, World Bank, Sri Lanka: Connecting the Unconnected: World Bank to Support E-Sri Lanka (Sept. 21, 2004), <http://go.worldbank.org/ALJR3JSD50>.

135. Premila Gamage, A Critical Examination of the ‘1000 Telecentre Programme of the e-Sri Lanka Initiative’ and its Impact on Reducing Digital Inequalities, Prato CIRN Community Informatics Conference 2009: PhD Colloquium 2 (2009).

136. MIKE JENSEN, NENASALA REVIEW ON BEHALF OF THE WORLD BANK 5 (2007), <http://nenasala.lk/pdfdoc/WB%20survey%20report%20on%20Nenasalas%20-%20Nov%202007.pdf>.

137. Gamage, *supra* note 135, at 2.

138. *Id.*

139. JENSEN, *supra* note 136, at 6.

140. *Id.* at 5.

141. Nenasala Official Web Site, <http://www.nanasala.lk/> (last visited Oct. 31, 2010).

142. JENSEN, *supra* note 136, at 5.

143. *Id.* at 6.

144. *See id.* at 16.

145. *Id.* at 18.

most Sri Lankans, are not in widespread use on the Internet.¹⁴⁶ The report found that some Nenasalas lacked browsers with support for Sinhalese and Tamil fonts.¹⁴⁷ Another study conducted shortly after the opening of the 500th Nenasala found “the numbers of visitors to the centers [] to be low” and recommended that the government “encourage Nenasala operators to create awareness about Nenasala activities in the community level.”¹⁴⁸

The relevant development indicators are consistent with these studies. Despite the successful construction of hundreds of Nenasalas, the country’s most recent nationwide computer literacy report showed only minor increases in computer literacy.¹⁴⁹ Further, the number of Internet users in Sri Lanka has increased only marginally, from 1% of the population in 2000, to 6% of the population in 2008.¹⁵⁰ This puts Sri Lanka behind the average growth rate of South Asian countries and other countries of comparable income.¹⁵¹

In the wake of these studies, e-Sri Lanka has placed new emphasis on developing locally relevant content. Sri Lanka’s Minister of Science and Technology has publicly acknowledged that ICT in Sri Lanka continues to suffer due to lack of relevant content.¹⁵² In 2009 and 2010, e-Sri Lanka hosted the e-Swabhimani awards, which honored content developers across the country.¹⁵³ The awards focused on various categories, including e-business and commerce, e-culture and entertainment, e-learning and education,

146. *See id.* at 19.

147. *Id.* at 20.

148. INFORMATION & COMMUNICATION TECHNOLOGY AGENCY OF SRI LANKA, NENASALA INTERIM SURVEY 34 (2008), <http://www.icta.lk/en/get/category/3-p.html?download=22%3Ap>.

149. *See* DEPARTMENT OF CENSUS AND STATISTICS SRI LANKA, COMPUTER LITERACY SURVEY 2 (2009), http://www.statistics.gov.lk/CLS/BuletinComputerLiteracy_2009.pdf (“Computer literacy reported in 2009 in Sri Lanka is 20.3 percent and shows a 25 percent increase from 16.1 percent reported in 2006/07.”).

150. World Development Indicators Database, *supra* note 29 (select “Education Statistics” database and click “Next”; then select “Sri Lanka” country variable and click “Next”; then select “Internet Users” as series variable and click “Next”; then select “2000” and “2007” as time variable and click “Next”; then, under scale option of Format Report select “Units” and under precision option select “0” and click “View Data”).

151. According to World Development Indicators Database, the average percentage of people with access to Internet in South Asia grew from below 1% in 2000 to 5% in 2007. The “lower middle income” group of countries, in which Sri Lanka has been classified, experienced growth from 1% to 14% in the same time period. *See id.* (select “Education Statistics” database and click “Next”; under “List” sidebar, select “South Asia” country variable and click “Next”; then select “Internet Users” as series variable and click “Next”; then select “2000” and “2007” as time variable and click “Next”; then, under scale option of Format Report select “Units” and under precision option select “0” and click “View Data”; repeat process with “lower middle income” income variable rather than “Sri Lanka” country variable).

152. *See* Cheranka Mendis, *e-Content Developing, Drive for Economic Growth*, INFO. & COMM’N TECH. AGENCY OF SRI LANKA (Nov. 9, 2009), <http://www.icta.lk/index.php/en/icta/89-e-society/742-e-content-developing-drive-for-economic-growth>.

153. *See About the Award*, E-SWABHIMANI: NATIONAL BEST E-CONTENT AWARD, http://www.eswabhimani.lk/index.php?option=com_content&view=article&id=1&Itemid=17 (last visited Mar. 23, 2011).

and e-inclusion.¹⁵⁴ Furthermore, the government has recently rolled out LankaGate, a country portal available in Tamil, Sinhalese, and English.¹⁵⁵ LankaGate functions essentially as a customizable homepage, where users can log in and add various “portlets,” or widgets, that display information such as the news, weather, and holidays in these local languages.¹⁵⁶ This newfound emphasis on developing local content provides reason to be optimistic about Sri Lanka’s Internet development going forward.

B. Cabinas Públicas in Peru, and Lan Houses in Brazil

The framework for access to ICTs in Brazil and Peru differs substantially from that in Sri Lanka. Both of these nations have had substantial success with the cybercafé model. In Peru, users access the Internet via *cabinas públicas de Internet*, thousands of access points across the country that have emerged without any support from the State.¹⁵⁷ The *cabinas* were originally conceived of by a Peruvian journalist who came up with a profitable model for operating Internet access points and taught people how to open them.¹⁵⁸ Over 100,000 people attended his classes, and “[a]ny attendee who could afford the capital expenses and could arrange for the DSL lines could start one.”¹⁵⁹ Today, these *cabinas* “are available all along Peru, even in small towns in the Andes and the Amazon region.”¹⁶⁰ In 2005, *Organismo Supervisor de Inversión Privada en Telecomunicaciones*, a Peruvian regulatory authority, estimated that there were 33,635 *cabinas* across Peru.¹⁶¹

Access-related statistics provide some evidence of just how successful the *cabinas* have been. According to World Development Indicators, the number of Internet users in Peru increased from about 800,000 in 2000 to approximately 7.1 million in 2008.¹⁶² More than eighty-five percent of users in Peru access the Internet in *cabinas*.¹⁶³ World Bank officials have

154. *Award Categories*, E-SWABHIMANI: NATIONAL BEST E-CONTENT AWARD, http://www.es-wabhimani.lk/index.php?option=com_content&view=article&id=31&Itemid=4 (last visited Mar. 23, 2011).

155. See SRI LANKA COUNTRY PORTAL, <http://www.srilanka.lk/> (last visited Oct. 23, 2010).

156. See Online User Documentation and Help System Requirements, SRI LANKA COUNTRY PORTAL, http://www.srilanka.lk/documents/help/help_en.html (last visited Oct. 23, 2010).

157. Fernandez-Maldonado, *supra* note 125, at 59.

158. Tony Salvatore & John Sherry, *Taking the Internet to the People*, IEEE SPECTRUM (Oct. 2005), <http://spectrum.ieee.org/computing/hardware/taking-the-internet-to-the-people/0>.

159. *Id.*

160. Eduardo Villanueva, *Accidental open access and the hazards involved: Preliminary experiences on Internet-based publishing in a Peruvian university*, FIRST MONDAY (Jun. 5, 2006), <http://firstmonday.org/htbin/cgiwrap/bin/ojs/index.php/fm/article/view/1333/1253>.

161. *Peru technology: Overview of e-commerce*, ECONOMIST INTELLIGENCE UNIT (July 21, 2006), <http://www.ebusinessforum.com/index.asp> (search “Peru technology”).

162. World Development Indicators Database, *supra* note 29 (select “World Development Indicators & Global Development Finance” and click “Next”; then select in “Country” “Peru” and click “Next”; then click in “Series” “Infrastructure” and “Communications”; select “Internet Users” and click “Next”; select “2000” and “2008” and click “Next”; Click “View Data” box).

163. Fernandez-Maldonado, *supra* note 125, at 59.

deemed Peru's *cabinas* "the most viable model" for universal access to ICT in developing countries.¹⁶⁴

The *cabinas* cater to various audiences. Unlike the traditional cybercafé found in other developing countries, the *cabinas* are largely a center for domestic consumers,¹⁶⁵ primarily young adults who flock to *cabinas* in order to use social networking sites or play video games, such as "World of Warcraft."¹⁶⁶ Since the development of the *cabinas* in Peru, the use of computers and Internet in schools has become common and has been credited for improving the quality of education.¹⁶⁷ Additionally, Peruvians are much better connected to the outside world, and the *cabinas* have evolved into community centers that offer training and other important services, such as tax payment assistance.¹⁶⁸

The Peruvian government — which had previously taken a completely hands-off approach — has recently turned its attention to the *cabinas* because of their popularity.¹⁶⁹ In 2005, the government passed a law "guaranteeing that people with disabilities have equal access to *cabinas* públicas."¹⁷⁰ In response, owners of *cabinas* have set up their own association.¹⁷¹ Scholars have called for the government to implement developmental policies surrounding the *cabinas*.¹⁷²

The story of ICT development in Brazil is similar to that in Peru; however, in Brazil, the government has already taken an active approach in regulating privately run Internet access points. Out of a population of approximately 195 million, over 72 million Brazilians have Internet access.¹⁷³ This makes the Brazilian people the largest population of Internet users in Latin America and the fourth largest in the world.¹⁷⁴ Of these users, almost half access the Internet through privately run facilities, called *lan houses*.¹⁷⁵

164. *Id.* at 60.

165. Udo Richard Averweg & Eduardo Villanueva, *Peruvian Cabinas Públicas: Does Policy Provide Practice or Does Practice Produce Policy?*, 19 INFO. TECH. IN DEVELOPING COUNTRIES 15, 17 (June 2009), available at <http://www.iimahd.ernet.in/egov/ifip/jun2009/jun2009.pdf>.

166. *Id.*

167. Fernandez-Maldonado, *supra* note 125, at 59 ("Teachers express that the use of computers by students is improving the quality of education.")

168. *Id.*

169. Averweg & Villanueva, *supra* note 165, at 18.

170. *Peru: Better Connected*, ECONOMIST INTELLIGENCE UNIT (June 12, 2007), http://globaltechforum.eiu.com/index.asp?layout=rich_story&channelid=4&categoryid=28&title=Peru%3A+Better+connected&doc_id=10920.

171. *Id.*

172. *See, e.g.*, Averweg & Villanueva, *supra* note 165, at 18.

173. Caroline d'Essen, *On the Social Media Campaign Trail in Brazil*, RADIO NETH. WORLDWIDE (Apr. 30, 2010) <http://www.rnw.nl/english/article/social-media-campaign-trail-brazil>.

174. World Development Indicators Database, *supra* note 29 (select "World Development Indicators & Global Development Finance" and click "Next"; then click "Select All Countries" and click "Next"; then click in "Series" "Infrastructure" and "Communications"; select "Internet Users" and click "Next"; select "2008" and click "Next"; then click "View Data" box) (according to WDI, only China, U.S.A., and Japan exceed Brazil in Internet users).

175. Data obtained from the Centre for Studies on Information and Communication Technologies, *see Tic Domicílios e Usuários 2009 — Total Brasil*, CENTRO DE ESTUDOS SOBRE AS TECNOLOGIAS DA

The *lan houses* are very much like the *cabina pública* of Peru: privately run access points, featuring a cluster of computers that are networked together and connected to the Internet.¹⁷⁶ The *lan houses* offer Internet access for rates as low as \$0.40 per hour.¹⁷⁷ As a result, like the *cabinas*, the presence of *lan houses* is widespread, and they have provided access points for poor communities living in Brazilian favelas (shantytowns).¹⁷⁸ For instance, in Rio de Janeiro's Maré favela, which has a population of approximately 130,000 people, there are an estimated 150 *lan houses*.¹⁷⁹ "A quick stroll around Rocinha, one of the biggest favelas in the world, will allow one to count around 130 lan-houses."¹⁸⁰

The demand for *lan houses* is large, and users gather in *lan houses* largely to play video games and access social networking sites like MySpace and Orkut.¹⁸¹ The success of *lan houses*, then, has been accompanied by an explosion in the use of social media among Brazilians. "Global surveys of internet use tend to place Brazilians at or towards the top of country rankings for time spent online, use of social network sites, reading and writing blogs or uploading photos or videos."¹⁸² For instance, Orkut was visited by twenty-one million users in Brazil in a single month in 2008, with each visitor spending an average of over eight hours on the website over the span of that month.¹⁸³ Similarly, Brazil is ranked second in the world in terms of Twitter subscribers, with more than 10 million accounts.¹⁸⁴

The Brazilian government has responded to the *lan house* revolution with strict regulation. For instance, some states in Brazil require that *lan house* owners record the name and address of every user and require parental consent for youths.¹⁸⁵ In another state, a bill was introduced to ban *lan houses*

INFORMAÇÃO E DA COMUNICAÇÃO (Sept. 2009), <http://www.cetic.br/usuarios/tic/2009-total-brasil/rel-int-04.htm>.

176. See Ronaldo Lemos & Paula Martini, *LAN Houses: A New Wave of Digital Inclusion in Brazil*, PUBLIUS PROJECT (Sept. 21, 2009), http://publius.cc/lan_houses_new_wave_digital_inclusion_brazil/091509 (stating that LAN houses are "computers assembled together to allow people to play multi-player games," started by "small-time entrepreneurs [who] contract a broadband connection, and resell it through their computers").

177. *Id.*

178. *See id.*

179. Tori Holmes, *Local Content in Brazil: Conceptual Framework and Methodological Implications*, 11 DIGITUM 12, 13 (2009).

180. Lemos & Martini, *supra* note 176.

181. *See New Media Practices in Brazil, Part IV: Gaming*, FUTURES OF LEARNING (Mar. 9, 2009) http://futuresoflearning.org/index.php/Firda_08/comments/new_media_practices_in_brazil_part_iv_gaming/. *See also* Holmes, *supra* note 179, at 13; Lemos & Martini, *supra* note 176.

182. Holmes, *supra* note 179, at 13.

183. Press Release, ComScore, Eighty Five Percent of Brazilian Internet Users Visited a Social Networking Site in September 2008 (Nov. 19, 2008), *available at* http://www.comscore.com/Press_Events/Press_Releases/2008/11/Social_Networking_in_Brazil.

184. d'Essen, *supra* note 173.

185. Paula Góes, *Brazil: Socio-digital Inclusion through the Lan House Revolution*, GLOBAL VOICES (Sept. 28, 2009), <http://globalvoicesonline.org/2009/09/28/brazil-socio-digital-inclusion-through-the-lan-house-revolution/>.

within one kilometer of schools.¹⁸⁶ The government has favored access to ICT through its government-operated telecenters. However, unlike the open *lan houses*, the government-owned telecenters limit how the Internet can be used, banning activities thought to be a “waste of time,” such as playing video games and social networking over Orkut.¹⁸⁷ Consequently, despite the accessibility of these telecenters, Brazilians have continued to favor accessing the Internet in *lan houses*; only four percent of Brazilians access the Internet through publicly owned telecenters, down from six percent the previous year.¹⁸⁸

C. Egypt, the April 6 Youth Movement, and the 2011 Uprising

The Internet was introduced in Egypt in 1993¹⁸⁹ and was commercialized in 1996, after which the Internet in Egypt underwent a period of substantial growth.¹⁹⁰ However, just as in the case of Sri Lanka, language quickly became a significant obstacle to widespread adoption and use of the Internet in Egypt.¹⁹¹ Although Arabs make up five percent of the world’s population, less than one percent of global online content is available in Arabic.¹⁹² This problem is partly technological in nature: there was no single standard for Arabic-language computing and, as a result, Arabic content developers had to render images in order to guarantee that their content would be readable.¹⁹³ Additionally, use of the Internet in Egypt originated among professionals and educated people who spoke English and, thus, English became the dominant language of the Internet within Egypt.¹⁹⁴ These pioneers built web pages that were available exclusively in English.¹⁹⁵ As a result, Internet usage reached a plateau in the early 2000s, leaving out the 97% of Egyptians who did not speak English.¹⁹⁶

The story, however, began to change in the early 2000s when it became significantly easier to publish Arabic content. Popular blogging platforms like Blogspot began allowing users to publish Arabic content to the web

186. *Id.*

187. FUTURES OF LEARNING, *supra* note 181.

188. See TECNOLOGIAS DA INFORMAÇÃO E DA COMUNICAÇÃO, *supra* note 175.

189. Deborah L. Wheeler, *The Internet in the Arab World: Digital Divides and Cultural Connections*, ROYAL INST. FOR INTER-FAITH STUD. (June 16, 2004), http://www.riifs.org/guest/lecture_text/internet_n_arabworld_all_txt.htm; Warschauer, *supra* note 88 at 58.

190. Warschauer, *supra* note 88, at 58.

191. *Id.* at 58–61.

192. Rania Moussly, *More Arabic online content needed, Google official says*, GULF NEWS (Mar. 1, 2010), <http://gulfnnews.com/news/gulf/uae/education/more-arabic-online-content-needed-google-official-says-1.590167>.

193. Warschauer, *supra* note 88, at 101.

194. *Id.*

195. *Id.* at 100.

196. *Id.* at 102.

with almost no technical literacy.¹⁹⁷ Activists from political groups like *Kefaya*, which sought to force President Hosni Mubarak to step down and hold competitive elections, formed Egypt's first core of bloggers.¹⁹⁸ Although the first set of these bloggers published content in English directed in large part to friends and to English speakers in the western world, between 2003 and 2005 many blogs emerged that were published exclusively in Arabic and directed at an Egyptian audience.¹⁹⁹ In the short period between 2003 and 2007, the number of blogs had increased from approximately forty²⁰⁰ to over 1400,²⁰¹ with the balance shifting to Arabic content.

As Courtney Radsch writes, the political climate in Egypt led to a series of demonstrations in Egypt that "propelled the Egyptian blogosphere into an active realm of contention, making activists into bloggers and bloggers into activists."²⁰² These bloggers developed credibility and attention by covering incidents of sexual assault and other brutality that took place at the hands of government officials.²⁰³ Blogs in Egypt became a real source of information that was not censored or manipulated by the traditional state-controlled media.²⁰⁴

The use of Internet media for discourse and political activity within Egypt has not been limited to blogs; users have also gathered around social networking platforms, photo-sharing websites, and video-sharing websites. For instance, blogger Wael Abbas received a good deal of attention for videos he posted to YouTube that depict Egyptian citizens being abused, tortured, and sodomized in Egyptian police stations.²⁰⁵ One of the most striking uses of the Internet for political activism took place over the social networking site Facebook. Twenty-seven year-old²⁰⁶ Esraa Abdel Fattah Ahmed Rashid joined Facebook for non-political reasons: "to keep up with friends; she joined groups for fans of the Egyptian singer Mohammed Mounir and the national soccer team, another for discussions of the Koran and others that offered updates on the latest styles in pajamas and modest wedding dresses."²⁰⁷ However, in March of 2008, she was informed that a

197. Courtney Radsch, *Core to Commonplace: The evolution of Egypt's blogosphere*, 6 ARAB MEDIA & Soc'y 2 (2008), http://www.arabmediasociety.com/articles/downloads/20080929140127_AMS6_Courtney_Radsch.pdf.

198. *Id.* at 1–3.

199. *Id.* at 1–4.

200. *Id.* at 3.

201. *Id.* at 7.

202. *Id.* at 5.

203. *Id.*

204. *Id.* at 8.

205. See Riz Khan: *Blogs in Egypt* (Al Jazeera English broadcast Sept. 5, 2007), available at <http://www.youtube.com/watch?v=xK-h3fQkmGY&feature=fvsr>. In addition to Al Jazeera, Abbas has appeared on the BBC, CNN, and other news broadcasts around the world commenting on police torture in Egypt.

206. EGYPT'S FACEBOOK FACEOFF (Journeyman Pictures 2008).

207. Samantha M. Shapiro, *Revolution, Facebook-Style*, N.Y. TIMES MAGAZINE, Jan. 25, 2009, at MM34, available at <http://www.nytimes.com/2009/01/25/magazine/25bloggers-t.html>.

group of workers in El-Mahalla El-Kubra, an industrial town, were planning a strike that would take place on April 6. Rashid—who spoke very little English²⁰⁸ and was not previously a political activist—used Facebook to create a page promoting the April 6 strike.²⁰⁹ Over 76,000 people joined Rashid’s Facebook group.²¹⁰ On April 6, thousands of workers gathered for a political demonstration in El-Mahalla El-Kubra, tearing down a billboard of President Mubarak. Many were arrested, including Rashid herself, and at least three people were killed.²¹¹

This political activism did not come without resistance from the Egyptian Government. For instance, the Government-controlled media tried to discourage Egyptians from using Facebook, referring to it as a harmful application,²¹² and government officials joined the April 6 Facebook group warning people not to participate in the strike.²¹³ In response to Abbas’ YouTube videos, the Egyptian Government banned the use of mobile phones in police stations and bloggers like Abbas have received continuous threats from the Egyptian Government.²¹⁴

The Government’s indirect attempts to curb social media were largely ineffective. If anything, they made obvious social media’s immunity from government censorship. The Government’s battle became even more difficult in 2009 when Facebook released support for Arabic script, confronting directly the language barrier that inhibited so many Egyptians.²¹⁵ The release of Arabic was particularly significant in two ways. First, it gave Egyptian Facebook users the ability to engage in expression and dialogue that was not restricted by their competency in English. Second, it gave social media activists a substantially larger audience with which to communicate.

These developments laid the foundation for the 2011 Egyptian uprising that led to President Mubarak’s desperate measure of shutting off Egypt’s Internet and ultimately President Mubarak’s resignation, discussed in the introduction of this Note.

IV. RETHINKING “MEANINGFUL USE”

Taking for granted that physical access and use are necessary elements to addressing the digital divide, those designing policy and programs focused

208. *Id.*

209. *Id.* at MM35.

210. *Id.* at MM37.

211. *Id.*

212. EGYPT’S FACEBOOK FACEOFF, *supra* note 208.

213. Shapiro, *supra* note 207, at MM36.

214. EGYPT’S FACEBOOK FACEOFF, *supra* note 208.

215. For instance, Facebook recently became available in Arabic. Ghassan Haddad, *Facebook Now Available in Arabic and Hebrew*, FACEBOOK BLOG (Mar. 11, 2009, 12:07 AM), <http://blog.facebook.com/blog.php?post=59043607130>.

on bridging the divide must seriously consider *which* uses of ICT should be promoted. In other words, what constitutes “meaningful use” of ICT in developing countries? Michael Gurstein, has broadly defined meaningful use as “[t]he capacity and opportunity to successfully integrate ICTs into the accomplishment of self or collaboratively identified goals.”²¹⁶ Thus far, both popular discourse and academic scholarship have focused almost exclusively on a limited set of goals: encouraging the use of ICT for economic, political, educational, or healthcare purposes. Certainly, these uses are important, but they should not constitute the entirety of the goals pursued. Other, perhaps facially less serious uses of ICT—namely social media—have been largely disfavored and neglected in discourse surrounding the digital divide. However, the stories of ICT usage in Sri Lanka, Peru, Brazil, and Egypt illustrate the capacity for these uses of ICT to promote social adoption of ICT, stimulate content creation, promote ICT skills, and encourage democratization in developing nations.

A. *Social Media, Generally*

In focusing exclusively on the most serious uses of the Internet, discourse on the digital divide has disregarded and even expressed aversion to some of the uses of ICT that might be most impactful in bridging the digital divide. Among these uses are social media, which have intrinsic value to people in developing nations and complement efforts to integrate ICT into communities to which ICT has been socially resisted.

Before understanding the role that social media might play in fostering digital inclusion, it is important to understand what particular uses are described by “social media.” There are various types of social media; the most relevant to this discussion are social networking websites, blogs, and picture and video sharing websites.

Social networking sites allow users to have an online presence where they might share personal information about themselves, search for other users and communicate with those users, sometimes asynchronously and sometimes synchronously. The world’s most common social networking website, Facebook, currently has more than 500 million active users, each of whom has an average of 130 “friends” that they have connected with over the website.²¹⁷ Although communication through social networking sites may take many different forms, the model adopted by Facebook and many other networks largely involves communication from one user to another. However, the message is often visible to other friends or to the public at large, allowing them to join the conversation.

216. Michael Gurstein, *Effective Use: A Community Informatics Strategy Beyond the Digital Divide*, FIRST MONDAY (Dec. 1, 2003), <http://firstmonday.org/htbin/cgiwrap/bin/ojs/index.php/fm/article/view/1107/1027>.

217. *Facebook Statistics*, FACEBOOK, <http://www.facebook.com/press/info.php?statistics> (last visited Nov. 10, 2010).

Blogs serve a different function, allowing users to publish content—often commentary on a subject of interest—and broadcast that content publicly over the Internet. Blogs are sometimes centered on a particular theme, but are often just a collection of whatever commentary the particular user, or blogger, wishes to express.

Multimedia-centered social media allow users to publish images, videos, and music to the Internet and often allow other users to view and comment on each. YouTube, the most prominent video-sharing website, allows users to publish video content to the Internet for other users to view and discuss. According to YouTube, “People are watching 2 billion videos a day on YouTube and uploading hundreds of thousands of videos daily. In fact, every minute, 24 hours of video are uploaded to YouTube.”²¹⁸

Although most social media have a primary use that falls into one of the categories listed above, many social media websites have incorporated features from multiple categories. For instance, Twitter is a micro-blog that includes features more common to social networking. Similarly, Facebook incorporates blogging and multimedia features into its social networking platform.

B. *The Meaningfulness of Social Media*

In the context of the digital divide and especially in light of development initiatives that have commonly failed due to a lack of interest, lack of local content, or lack of skills, these less serious uses of the Internet have much potential. Policymakers and development organizations should consider the capacity of social media to attract a wide user base, stimulate content creation, promote basic ICT skills, and foster participation and democratization in developing nations. Each of these benefits is addressed, in turn, below.

1. *Capacity to Attract a Wide Audience*

The explosion of social media sites and their usage around the world is illustrative of their potential to attract wide audiences to ICT. For instance, Facebook reports that it has over 500 million users, seventy percent of whom reside outside of the United States.²¹⁹ Orkut, another social networking website, was visited by twenty-one million users in Brazil in a single month in 2008²²⁰ and has experienced similar popularity in India, where it received 12.8 million visits in a single month in 2008.²²¹ You-

218. *YouTube Fact Sheet*, http://www.youtube.com/t/fact_sheet (last visited Nov. 10, 2010).

219. See *Facebook Statistics*, *supra* note 217.

220. See *ComScore supra* note 183.

221. Press Release, ComScore, India's Social Networking Market Sees Global Brands Gain Prominence in 2008 (Feb. 17, 2009), available at [http://www.comscore.com/Press_Events/Press_Releases/2009/2/India_Social_Networking/\(language\)/eng-US](http://www.comscore.com/Press_Events/Press_Releases/2009/2/India_Social_Networking/(language)/eng-US).

Tube claims to receive two billion visits *per day* from over two hundred countries.²²²

There are many characteristics of social media that make them particularly apt to attract wide audiences. First, although some social media applications have been targeted to specific groups of people,²²³ in general, the concept of social media is not “targeted” at a specific market in the way that more traditional online content has been.²²⁴ Rather, social media have been made available simply as channels for communication. Therefore, the appeal of social media is not dependent on an interest in content published by some proprietary entity. Rather, it simply requires an interest in communicating with others and self-expression. Second, social media, and social networks in particular, have been developed with simple affordances, requiring little if any knowledge of or familiarity with technological underpinnings in order to publish content to the web. Therefore, in contrast with some of the more advanced uses that have been emphasized by past development initiatives, social media require far less formal training in ICT skills. Third, social media—in particular the most popular sites like Orkut, Facebook, Blogger, Twitter, and YouTube—have been made available for free. Thus, social media are generally accessible as soon as there is physical access. For the same reasons, social media have also largely been able to transcend socioeconomic and racial barriers. For instance, a recent study by the Pew Institute illustrates that low-income American teens are in fact more likely to use social networking than high-income American teens²²⁵ and that participation in the popular social networking site Twitter does not vary by race or ethnicity.²²⁶ Similarly, in 2009, the social networking giant Facebook released data illustrating that the diversity among Facebook users in the United States is reasonably representative of the Internet-using population of the United States.²²⁷

The capacity to attract a wide user base is relevant to digital inclusion for various reasons. Most obviously, the sustainability of ICT development projects is often dependent on having a large consumer base. The success of the *cabinas* and *lan houses* in Brazil is reflective of the traffic generated from the huge segment of the Peruvian and Brazilian populations who seek In-

222. *At Five Years, Two Billion Views Per Day and Counting*, YOUTUBE BLOG (May 16, 2010), <http://youtube-global.blogspot.com/2010/05/at-five-years-two-billion-views-per-day.html>.

223. See, e.g., LINKEDIN, <http://www.linkedin.com/> (last visited Nov. 11, 2010) (targeting business professionals), BUZZNET, <http://www.buzznet.com/> (last visited Nov. 11, 2010) (targeting people interested in pop culture), and JDATE <http://www.jdate.com/> (last visited Nov. 11, 2010) (targeting Jewish singles).

224. See *supra* notes 122–24 and accompanying text (discussing the targeting of online content).

225. AMANDA LENHART ET AL., PEW RESEARCH CENTER, SOCIAL MEDIA & MOBILE INTERNET USE AMONG TEENS AND YOUNG ADULTS 17 (2010), available at http://www.pewinternet.org/~media/Files/Reports/2010/PIP_Social_Media_and_Young_Adults_Report_Final_with_toplevels.pdf.

226. *Id.* at 21.

227. *How Diverse is Facebook*, FACEBOOK (Dec. 16, 2009), http://www.facebook.com/note.php?note_id=205925658858&id=8394258414.

ternet access in order to communicate over Orkut. Second, having a wider audience of users increases the incentive for businesses — local and foreign — to target content at that market. Finally, having many people online means that more people are creating content via social media and more people are developing simple ICT skills; these two benefits are addressed in turn, below.

2. Scalable Content Creation

Social media empower individuals to create their own content. In social media applications, content is created each time one user communicates with another — by posting on someone’s Facebook wall, publishing a video to YouTube, or tweeting — and, as a result, the content is inherently relevant to those users’ local interests. This feature distinguishes social media as a developmental tool from other, more centralized approaches to generating content that is relevant to developing communities. For instance, while the M. S. Swaminathan Foundation’s village knowledge centers in rural India undoubtedly provide information that is useful to farmers, the information is published by a central entity.²²⁸ This central entity determines what information to disseminate to the various kiosks.²²⁹

This centralized approach differs from the model offered by social media in two important respects. First, the amount of published content is limited to the amount of content that the central entity is able to or chooses to create. By contrast, because social media empower individuals to create their own content, the rate at which content is created is a function of the number of users in the system. Second, in the centralized approach, content is created on behalf of the users, rather than created by the users themselves. Thus, the system requires an outside party to determine what content is and is not relevant to the ultimate users of the programming. In contrast, when users are empowered to create their own content, the relevance of the content to the user is inherent. The limitation of systems based on centralized decision-making has been recognized previously in the context of the human right to development.²³⁰ In fact, the quality of “empower[ing] the beneficiaries” has been recognized as a basic element for any program to implement the right to development.²³¹

The scalable nature of social media in generating content is reinforced by their capacity to attract wider audiences and is driven by many of the same factors that attract wide audiences. In particular, social media substantially reduce barriers to publishing content to the web. Blogging applications dramatically simplify the process of publishing to websites or online jour-

228. See *supra* notes 126–28 and accompanying text.

229. *Id.*

230. See Sengupta, *supra* note 63, at 883, 886.

231. *Id.* at 883.

nals.²³² Similarly, social networking websites make self-expression and communication much easier and, therefore, much more accessible.

Further, social media have been at the forefront of overcoming the Internet's language barrier, which has made Internet adoption difficult in many developing nations. Blogging and social networking applications have taken the lead in solving the technical challenges behind the language barrier and have begun to support more languages.²³³ Additionally, social media allow individuals to express themselves in forms beyond textual characters, allowing them to post videos, photos, and pictures to the web.

In sum, social media harness the generative aspects of the Internet, allowing users to become "active participants" instead of "readers, listeners, or viewers."²³⁴ The significance is that the Internet no longer comes across as a static technology where you might search for things that are relevant to you, but a dynamic space in which you can play a role.

3. *Promoting Basic ICT Skills*

Although illiteracy in the more traditional sense is undoubtedly a problem that needs to be addressed throughout the developing world, social media provide an opportunity for developing nations to keep up with the "new literacy"²³⁵ that has emerged with the Internet. The ease of use of most social media make them an attractive tool for promoting basic ICT skills.

Although much of the research on the impact of social media on skill development and education is in its infancy, initial reports suggest that social media and, in particular, social networking sites, are effective in developing ICT skills among users. Dr. Christine Greenhow has examined in depth the impact of social networking sites on youth in the United States. In one study, Dr. Greenhow found that teenagers' participation in the social networking site MySpace

required knowledge of a range of information and communication technologies, including: the ability to search out, preview, select, incorporate, and share audio and video files; the ability to create, edit, copy, find, upload, tag, and arrange image files; the capacity to strategically monitor, respond, multitask, and navigate multiple communication channels (e.g., instant messaging,

232. See YOCHAI BENKLER, *THE WEALTH OF NETWORKS* 216–17 (2006).

233. See *supra* notes 197, 215 and accompanying text.

234. BENKLER, *supra* note 232, at 212.

235. For a more complete account of what has been coined "new literacies" and how social media connect to those literacies, see generally Christine Greenhow & Beth Robelia, *Old Communication, New Literacies: Social Network Sites as Social Learning Resources*, 14 J. OF COMPUTER-MEDIATED COMM. 1130 (2009); JULIE COIRO ET AL., *HANDBOOK OF RESEARCH ON NEW LITERACIES* (2008).

MySpace email, wall posts, blog comments, tagged photos, video-shares, etc.), and more.²³⁶

Dr. Greenhow found that teenagers learned these skills informally, through their use of MySpace, and also formally by visiting online forums and asking friends.²³⁷ These teenagers learned to work with images, audio files, and videos, and some learned from their peers how to manipulate actual HTML code.²³⁸ “Through the cognitive activity of guiding other MySpace users in learning how to manipulate, troubleshoot, and transfer technology skills from one application to another, students are simultaneously developing their own conceptual knowledge and sense of competency.”²³⁹ Researchers who have studied social media in developing nations have made similar findings. One researcher commented, “the skills and capabilities . . . learned through the use of Orkut are key elements in the development of cyberliteracies.”²⁴⁰

It is worth noting that the more traditional economic, educational, and healthcare-related purposes for bridging the digital divide require that users have the skills to navigate the web and find information online. As Professor Eszter Hargittai, a leading scholar in ICT skill development, has found, the capacity of a user to find information online is correlated to the prior experience that the user has using the web.²⁴¹ It is very likely that using the web to communicate and searching for content within social media applications improves the capacity of users to find information on the web generally, and even those concerned exclusively with more traditional pursuits should consider social media as an avenue for developing the requisite ICT skills.

4. *Participation and Democratization*

Perhaps most meaningful is the capacity for social media to foster participation and democratization in developing nations. In the *Wealth of Networks*, Professor Yochai Benkler provides thorough analysis of the democratizing capacity of the Internet. Professor Benkler contends that, at least relative to the traditional mass-media public sphere, the Internet is a liberalizing technology.²⁴² Professor Benkler refers to the emergence of the “writable web” — innovations that “make Web pages easily capable of modification through a simple interface”²⁴³ — and its capacity to convert

236. Christine Greenhow & Beth Robelia, *Informal Learning and Identity Formation in Online Social Networks*, 34 LEARNING MEDIA AND TECHNOLOGY 119, 133 (2009).

237. *Id.* at 134.

238. *Id.*

239. *Id.*

240. Holmes, *supra* note 179, at 14.

241. Eszter Hargittai, *Second-Level Digital Divide: Differences in People's Online Skills*, FIRST MONDAY (Apr. 1, 2002), <http://firstmonday.org/htbin/cgiwrap/bin/ojs/index.php/fm/article/view/942/864>.

242. See BENKLER, *supra* note 232, at 10–11, 212–72.

243. *Id.* at 216.

users from mere listeners to active participants in public debate: “Individuals become less passive, and thus more engaged observers of social spaces that could potentially become subjects for political conversation; they become more engaged participants in the debates about their observations.”²⁴⁴

The chief example that Professor Benkler uses to represent the writable web is the blog. Professor Benkler observes that blogs changed the Web in two significant ways: first, by allowing users to publish content in “journalism time” as opposed to the slower-moving web page culture that preceded them and, second, the blog model allows for a weighted conversation between blogger and commenter.²⁴⁵ However, as Professor Benkler acknowledges, blogs are part of a larger set of web technologies that share the common quality of enabling participation in the public sphere.²⁴⁶ It is clear that other social media, including social networking sites and picture and video sharing sites, also share these qualities that transform the public sphere. This democratizing aspect of social media is reflected in the story of Egypt’s April 6 strike. Rashid, who joined Facebook merely to socialize and network, ultimately used Facebook as a tool to stimulate political discussion and organize political demonstration. Video sharing media have led to similar empowerment to join public discourses, as evident from Abbas’ invocation of YouTube to stimulate discussion on torture in Egypt and, more famously, the role of YouTube in the 2009 Iranian election.²⁴⁷

The democratizing impact of social media is particularly relevant in nations with authoritarian regimes because state censorship of social media is a particularly difficult task. It is for this reason that Egypt was initially forced to take more indirect and ineffective routes, such as discouraging the use of social media, arresting activists, and banning mobile phones in police stations and ultimately to take the drastic step of shutting down the internet. Controlling public use of the Internet requires authoritarian governments to entirely “forgo the benefits of being connected” or, at the very least, to spend enormous political capital by blocking entire sites.²⁴⁸ Ethan Zuckerman, a researcher at Harvard’s Berkman Center for Internet and Society, has referred to this as the “cute cat theory of digital activism.”²⁴⁹ Zuckerman observes that, the Web 2.0 nature of social media prevents authoritarian governments from blocking political activity without also cut-

244. *Id.* at 11.

245. *Id.* at 217.

246. *Id.* at 216.

247. Neda Agha-Soltan’s death during the 2009 Iranian election protests was captured on video by mobile phone, posted to YouTube, and quickly became a national and international symbol of the Iranian protests. See, e.g., Nazila Fathi, *In a Death Seen Around the World, a Symbol of Iranian Protests*, N.Y. TIMES, June 22, 2009, at A1, available at http://www.nytimes.com/2009/06/23/world/middleeast/23neda.html?_r=1&ref=middleeast; ‘Neda’ becomes rallying cry for Iranian protests, CNN.COM (June 22, 2009), <http://www.cnn.com/2009/WORLD/meast/06/21/iran.woman.twitter/>.

248. See BENKLER, *supra* note 232, at 270.

249. Ethan Zuckerman, *The Cute Cat Theory Talk at ETech*, MY HEART’S IN ACCRA (Mar. 8, 2008, 11:29 AM), <http://www.ethanzuckerman.com/blog/2008/03/08/the-cute-cat-theory-talk-at-etech/>.

ting off access to pictures of cute cats.²⁵⁰ “The government can’t simply shut down Facebook, because doing so would alert a large group of people who they can’t afford to radicalize.”²⁵¹

V. CONCLUDING REMARKS

Our conception of the digital divide should evolve reciprocally with our understanding of what constitutes “ICT” and what constitutes meaningful use of that ICT. As former FCC Chairman William Kennard noted, “[t]he landscape of communications is changing dramatically. Being connected will not just be about having phone and perhaps Internet service. It will mean broadband delivery of increasingly converging services such as interactive voice, data and full motion video.”²⁵² Accordingly, our conception of how to respond to the digital divide has evolved from considering mere access to effective use. We should now expand our conception of use to consider more than the traditional instrumental uses that seek immediate economic, educational, health-related gain. There are important differences between the Brazilian who uses the Internet to access Orkut in a *lan house* and the American Professor who uses the Internet to read scholarly articles. Each of these uses is meaningful in its own way. Social media attract wide audiences that reinforce the sustainability of development initiatives, foster the adoption of ICT by empowering individuals to create content that is locally relevant and understandable, and promote basic ICT skills that can support the more traditional end goals of ICT adoption — economic integration and access to educational and healthcare information. Moreover, as the recent stories of blogs, YouTube, and Facebook in countries like Egypt suggest, social media carry serious democratizing potential.

Accepting social media as meaningful use of ICT alters our evaluation of development efforts: programs that result in communities gathering at access points to use social media applications, like those in Peru and Brazil, do not represent failure, but success and opportunity. And, consequently, policymakers should be disinclined to regulate in a way that would discourage the use of social media, as the Brazilian government has done. Rather, policy should recognize the centrality of locally relevant content to the success of ICT initiatives, as in the e-Sri Lanka initiative, and incentivize the use of social media.

One might think Mr. Gates’ challenge to the significance of the digital divide relative to the more serious food and health crises facing these na-

250. *Id.*

251. Shapiro, *supra* note 207, at MM38.

252. Yu, *supra* note 27, at 30. *See also id.* at 29–30 (“Although it is very difficult to determine what should constitute these basic tools, we should constantly review and update the definition so that it corresponds to the rapidly changing technological environment.”); Selwyn, *supra* note 37, at 346–49.

tions²⁵³ becomes stronger when ICT is being used for social media. However, as previously noted, the line that Mr. Gates draws is largely artificial — we should not dismiss the digital divide simply because other divides exist. Not every developing nation faces the problems that Mr. Gates identifies. The democratizing nature of social media provides an additional reason to believe in the capacity for ICT to solve the very problems that Mr. Gates would prioritize. Consider, for instance, Amartya Sen's observation that "no substantial famine has ever occurred in any independent and democratic country with a relatively free press."²⁵⁴ Although Egypt — which has a history of famine and has suffered from recent food crises — is not yet by any means a "democratic country," the democratizing nature of social media generated the pressures that underlie Sen's observation. Blogs, Facebook, YouTube, and Twitter empowered the Egyptian people to organize and speak out, and the inherent difficulty in censoring social media spawned a "relatively free press" where there was none before. Through this new press, the Egyptian people put serious pressure on the Egyptian government to respond to the suffering of its people, and ultimately overthrew President Mubarak.

The story of social media in developing nations so far is one of individual empowerment. Social media not only connects deprived nations to the outside world, but provide the power to shape the Internet in a way that is relevant to their peoples' lives, the power to organize in scale, and the power to speak. These features make social media incredible tools that should be embraced by anyone with an eye towards development.

253. See *supra* note 55 and accompanying text.

254. Amartya Sen, *Democracy as a Universal Value*, 10 J. DEMOCRACY 3, 7–8 (1999).

