7-2008

DIVERSITY AS AN EMERGING PRINCIPLE OF INTERNET GOVERNANCE

Philip M. Napoli
Fordham University

THE
DONALD MCGANNON
COMMUNICATION RESEARCH CENTER

WORKING PAPER

DIVERSITY AS AN EMERGING PRINCIPLE OF INTERNET GOVERNANCE

Philip M. Napoli

Director
The Donald McGannon Communication Research Center

JULY, 2008

This research was conducted with the support of the Phoebe Haas Charitable Trust. The opinions contained within this paper represent those of the author and not those of the Phoebe Hass Charitable Trust or its employees.

The Donald McGannon Communication Research Center
Faculty Memorial Hall, 4th fl.
Fordham University
Bronx, NY 10458
718.817.4195
www.fordham.edu/mcgannon
mcgctr@fordham.edu

Abstract

This paper investigates the ongoing emergence of diversity as a guiding normative principle of Internet governance. This paper starts from the premise that principles play a fundamental role in the development and implementation of any regulatory regime, but that the communications policymaking process historically has suffered from ambiguous and sometimes contradictory conceptualizations of its guiding principles, and from such principles functioning more as rhetorical devices to be exploited by stakeholder groups rather than as analytical tools to be used by policymakers. This paper provides a comparative analysis of the conceptualization and application of the diversity principle in traditional mass media regulation with its developing conceptualization and application in the realm of Internet governance. This paper illustrates the centrality if linguistic diversity to the principle's emerging articulation in the realm of Internet governance. This paper then considers how on-line diversity policy research is evolving in relation to the traditional media diversity literature.

Introduction

Principles are a central component of the policymaking process. As Charles Anderson (1979/1992) states, "In order to make a policy decision, one must invoke some criteria of evaluation. We cannot decide whether a proposal for public action is desirable or undesirable, whether the results of a public program are to be adjudged a success or a failure, except in light of a standard" (p. 387). This standard is usually defined in terms of "a finite and bounded set of classic principles" (Anderson, 1979/1992, p. 390). For these principles to be useful to policymakers and policy analysts, they must have clear, agreed-upon interpretations, so that they contain within them substantive and reasonably stable evaluative standards. Otherwise, "political argument can fasten arbitrarily on one or a few of these concepts and . . . they can be arranged in different patterns in ideological thinking, invested with a variety of meanings and given different degrees of emphasis" (Anderson, 1979/1992, p. 395).

This pitfall has been particularly acute in communications policymaking, where the central guiding principles have suffered from ambiguity, inconsistency, and manipulation (Napoli, 2001). Concepts such as diversity, pluralism, the public interest, and universal service long have been dominant buzzwords in communications policymaking, but often these concepts have not been infused with the specific and concrete meaning necessary for them to serve as meaningful and effective tools for both the design and analysis of policies (Hitchens, 2006; Napoli, 2001).

Efforts to articulate and implement appropriate guiding principles become particularly challenging if the policymaking context is global in scope (Dutton, Palfrey, & Peltu, 2007; Mueller, Mathiason, & Klein, 2007). Such is the case in the emerging realm of Internet governance, where the growing recognition of the need for some form of global policymaking

apparatus and objectives must confront the challenge of navigating and satisfying the diverse policy priorities and needs of many nations and stakeholders. Nonetheless, efforts to develop such guiding principles are ongoing within the context of broader efforts to establish a global system of Internet governance, most notably within the U.N.-sponsored Internet Governance Forum (IGF; described below), which provides the primary context for this analysis.

The principle of diversity has emerged as one of the guiding principles of Internet governance, just as it has served as a guiding policy principle in the realm of traditional media. This paper inquires into the nature of diversity as a principle for Internet governance, in an effort to understand the important similarities and differences in its meaning and application in the on-line and off-line media spaces, particularly in terms of how it is being interpreted and utilized by policy researchers. In addressing these issues, this paper draws from field notes taken during the 2007 IGF, transcripts of 2006 and 2007 IGF proceedings and preparatory meetings, and official documents prepared by the U.N. and the U.N.-created Internet Governance Working Group. In addition, this paper draws upon position papers and scholarly papers prepared by various stakeholder groups, including civil society organizations, government agencies, industry associations, and academics.

The first section of this paper provides background on the developing system of Internet governance, with a particular emphasis on the U.N.'s activities surrounding the creation of the Internet Governance Forum. The second section discusses the role of principles in policymaking, with a particular emphasis on how principles have been used – and misused – in communications policymaking. This section includes a brief summary of how the diversity principle has been conceptualized and applied in traditional communications policymaking and policy research. The third section focuses on the emergence of diversity as a guiding principle of

Internet governance, with an emphasis on the discourse related to the IGF, This section explores the points of similarity and difference between traditional articulations and applications of the diversity principle and the diversity principle's emerging meaning and application – particularly from a research standpoint – within the context of Internet governance. The final section provides some concluding observations and offers suggestions for further research.

Internet Governance

While much has been made of the idea of the Internet as a largely unregulated, global communications medium, the Internet has of course raised a wide range of communications policy issues, ranging from the highly technical to the profoundly political and cultural. And in light of the inherently global nature of the medium, the Internet represents a more complex and challenging communications environment than previous generations of media technologies.

The issue of Internet governance is the focal point of the activities of the Internet Governance Forum (IGF), which emerged out of the United Nations' 2003 and 2005 World Summits on the Information Society.[i] The IGF is a U.N.-sponsored convening that is intended as a forum for multi-stakeholder policy dialogue addressing the wide range of regulatory and policy issues related to the development, diffusion, operation, and governance of the Internet. The IGF represents the U.N.'s response to the fact that, unlike traditional media, the Internet is inherently global (rather than national or local) in its orientation. As such, it presents regulatory and policy problems that can only be fully resolved via international cooperation, collaboration, and implementation. The IGF also is reflective of the growing consensus that "the debate is no longer whether the Internet 'can or should be governed' but that some form of regulation, including options for self-regulation, co-ordination and co-operation should be welcomed" (International Telecommunications Union, 2004, p. 3).

Such a global governance regime is intended to unify, to some extent, the highly fragmented and disjointed nature of contemporary regulation and policymaking related to the Internet (Dutton & Peltu, 2004; Internet Governance Project, 2004). Today, what formal global governance of the Internet that exists is widely dispersed. Core activities related to the assignment of Internet domain names and numbers are handled by the Internet Corporation for Assigned Names and Numbers (ICANN), a private, California-based, non-profit entity that was formed in 1998 after four years of debate over how best to manage technical Internet activities. ICANN operates under a contract with the U.S. Department of Commerce (see United States Department of Commerce, 1998).[ii]

Other aspects of Internet governance are handled by other bodies. For instance, the Internet Engineering Task Force (IETF) is an informal organization that oversees the standards development process for the Internet. The International Telecommunications Union is a United Nations agency that performs a wide range of functions directly or indirectly related to Internet governance, including standards-setting, statistics-gathering, and research (Internet Governance Project, 2004). Other international organizations that directly or indirectly deal with issues of Internet governance include the Internet Systems Consortium (which manages a globalized root server and issues software that implements the Internet's domain name server (DNS) protocol) and the United Nations Educational, Scientific and Cultural Organization (UNESCO). UNESCO's mandate requires it to work on behalf of "the free flow of ideas by word and image," and to "maintain, increase and spread knowledge." These objectives have inevitably involved UNESCO in Internet governance, primarily in terms of issuing position papers, organizing convenings, and engaging in global policy advocacy (see, e.g., UNESCO, 2005a, 2005b).

The list of formal and informal, governmental and private organizations involved in various aspects of Internet governance at the national, regional, and international levels continues well beyond those listed here (for a detailed overview, see Internet Governance Project, 2004; see also Mueller, Mathiason, & McKnight, 2004),[iii] which of course raises the question of whether some sort of more centralized and formalized approach to global Internet governance would be advantageous.

It is within this fragmented state of Internet governance that the United Nations' Working Group on Internet Governance (WGIG) was formed in the wake of the first U.N. World Summit on the Information Society. The Working Group is comprised of 40 members, representing government, the private sector, and civil society. The group met four times in 2004 and 2005. One key output of the WGIG was the recommendation for the establishment of an international convening that ultimately became the Internet Governance Forum.

The stated objective of the Internet Governance Forum is to provide governments, the private sector, and civil society, including the academic and technical communities, with the opportunity to work together towards a sustainable, robust, secure and stable Internet. The most recent Internet Governance Forum was held from November 12th through November 15th, 2007, in Rio de Janeiro, Brazil. The 2007 IGF was the second in a planned five IGFs to be held at various locations around the world over a five-year period. The first IGF was held in Athens, Greece, in 2006. The next IGF is scheduled to be held in December, 2008 in Hyderabad, India.

As was noted above, one of the first tasks assigned to the Working Group on Internet Governance was to develop a clear and concise definition of Internet governance, which the WGIG developed and presented in its report. One key point of discussion revolved around whether the term should be defined narrowly or broadly. That is, should Internet governance be

defined purely in terms of the activities and issues related to the management of domain names and infrastructure, or should Internet governance be defined more broadly to include issues outside of ICANN's jurisdiction (Matsura, 2007)? According to Peake (2004), this issue was a focal point of debate during the first WSIS, with advocates of a narrow definition fearing that the definition of Internet governance could become so broad that it would ultimately devolve into a meaningless "catch-all" for all information and communication technology policies; and advocates of a broader definition fearing that a more narrow, technically oriented definition would allow important socio-political issues related to the operation of the Internet to slip through the cracks (see Center for Democracy & Technology, 2007; Drake, 2004).

Within the context of WSIS and the IGF, the advocates of a broader definition of Internet governance (e.g., Wilson, 2005) seem to have held sway, as the WGIG explicitly stated that "Internet governance includes more than Internet names and addresses, issues dealt with by the Internet Corporation for Assigned Names and Numbers (ICANN): it also includes other significant public policy issues such as critical Internet resources, the security and safety of the Internet, and developmental aspects and issues pertaining to the use of the Internet" (Working Group on Internet Governance, 2005a, p. 4). Reflecting this broader interpretation of the domain of Internet governance, the 2007 IGF was organized around five themes: a) openness; b) access; c) security; d) critical Internet resources; and e) diversity (see Napoli, 2008a).

In identifying diversity as an organizing theme, the IGF has established diversity as a potentially fundamental principle for guiding Internet governance. Moreover, the IGF can be seen as a laboratory in which the guiding principles of Internet governance are likely to be developed. In this regard it represents a useful point of focus for considering diversity as an emerging principle of Internet governance.

Principles, Communications Policymaking, and the Meaning of Diversity

Guiding principles are at the core of the definition of Internet governance established by the Working Group on Internet Governance. According to the Working Group (2005a):

> Internet governance is the development and application by Governments, the private sector and civil society, in their respective roles, of *shared principles,* norms, rules, decision-making procedures, and programmes that shape the evolution and use of the Internet. (p. 4; emphasis added)

Thus, a key early step in the development of any global Internet governance regime is the achievement of clarity and consensus in terms of what should be the guiding principles for Internet governance. The Internet Governance Forum, in particular, has been seen as a potentially fruitful context in which to develop such principles. The IGF lacks any formal decision-making authority – a characteristic that many stakeholders feel is conducive to the kind of open and free exchange of ideas that would be lacking if specific, enforceable policy decisions were required to be reached (see Napoli, 2008a). One IGF participant expressed the idea that the development of a concrete, agreed-upon "Framework of Principles for Internet Governance" would provide "the possibility of an end-state someplace," and thus represent an important tangible output at the conclusion of the five-year cycle of Internet Governance Forums.

It is important to recognize, however, that there are differing interpretive approaches to what comprises a guiding principle. Drawing from regime theory (see Krasner, 1983), Mueller, Mathiason, and Klein (2007) approach principles of Internet governance in terms of "basic definitions and statements of fact – that must be taken into account in any attempt to establish an Internet governance regime" (p. 243). From such an approach, principles are not infused with

any strong normative undercurrents – something that is central to other interpretive approaches to the notion of principles and their role in policymaking.

Indeed, other work by Mueller (2007) employs this more normative approach. Specifically, Mueller (2007) advocates "net neutrality" as a "global principle for Internet governance," arguing that such a principle serves as a "normative guide to policy" that "transcends domestic politics" (p. 1). The Declaration of Principles that emerged from the World Summit on the Information Society was similarly normative in its orientation, identifying access to information and communication infrastructure and technologies, capacity building, building confidence and security in the use of information and communication technologies, and cultural diversity as among its "key principles for building an inclusive Information Society" (WSIS Executive Secretariat, 2004).

The Working Group on Internet Governance explicitly acknowledged these different interpretive approaches to the concept of guiding principles. As the group noted:

> In the global policy environment, as elsewhere, the term is often used in two different ways. One is to refer to statements of fundamental fact or causation about the subject matter at hand. Examples in the Internet environment would include the principle of open, non-proprietary technical standardization, or the "end to end" principle according to which the network simply provides data transport, with applications and processing left to the users at the ends. The other is to refer to the overarching objectives that define an activity, global governance. For example, the interconnection of networks is a guiding principle of the international telecommunications regime, most favoured nation treatment is a guiding principle of the international trade regime, and competition among registrars is a guiding principle of the international regime for Internet naming and numbering.

(Working Group on Internet Governance, 2005b, p. 11)

The WGIG's (2005b) position is that the use of the term "principles" in its definition of Internet governance is meant to incorporate both definitional approaches, as they "can blend into one another at times" (p. 11). Thus, according to the Working Group (2005b), "In short, principles define what a given governance mechanism is about and, at the highest level, is intended to promote" (p. 11).

Given that, historically, the greatest challenges and shortcomings associated with the development and application of guiding principles for communications policymaking have focused on their meaning at the "highest level" (i.e., in terms of defining overarching policy objectives, rather than in terms of reaching agreed-upon statements of fact) (see Hitchens, 2006; Napoli, 2001), it is this latter dimension of principles' role and function in Internet governance that will be the point of focus here.

In terms of the definition and application of such normative principles, communications policymaking has historically been plagued by tendencies towards ambiguity and inconsistency. As Napoli (2001) notes within the context of U.S. communications policymaking:

> terms such as the public interest, diversity, and the marketplace of ideas are used rather casually and, sometimes, carelessly, with little sense of what these terms might actually mean and even less sense of how individual policy decisions actually contribute to the fulfillment of these principles. . . . Too often, these foundation principles function primarily as rhetorical tools for advocating particular policy actions, as opposed to analytical tools for the rigorous assessment of these actions." (p. 3)

Similar concerns have arisen on the global stage. In a multi-national study of the principles of diversity and pluralism in broadcast regulation, Hitchens (2006) concludes that there is "an

absence of a distinctive voice for the public interest" (p. 314), suggesting that the notion of the public interest (of which diversity and pluralism are a key part) in communications policymaking has not been clearly or forcefully articulated. In terms of the discourse surrounding emerging principles for Internet governance, Dutton, Palfrey, and Peltu (2007) have identified a tendency toward "'creative ambiguity' of the language often used to frame international Internet governance agendas" (p. 4).

The Diversity Principle in Communications Policymaking

The place of the diversity principle in communications policymaking is an expansive topic in and of itself (see, e.g., Hitchens, 2006; Napoli, 1999). The purpose here is not to provide a detailed account of the topic, or of the substantial literature that has developed around it (for a useful, current review, see Roessler, 2007). The goal here, rather, is simply to establish the basic contours of the principle and how it has been used in communications policymaking, in an effort to establish a vantage point from which to assess the principle's emerging role in Internet governance.

Amongst all of the overarching themes reflected in the IGF's agenda, the theme of diversity perhaps has the deepest roots in other areas of communications regulation and policymaking (see Napoli, 2008a). Within the context of traditional media regulation and policymaking, the diversity principle has been conceptualized primarily in terms of the promotion and preservation of a diverse array of sources of information, as well as a diverse array of ideas, viewpoints, and content options (see, e.g., Hitchens, 2006; Napoli, 2001).

Insert Figure 1 Here

Figure 1 presents a model of the diversity principle that will provide the basis for this analysis. It is important to note that, while this model was constructed via an analysis of the communications policy in the United States, the model seems to have achieved a certain level of international applicability, making it a potentially useful baseline from which to consider diversity as a principle in the inherently more international context of Internet governance. Specifically, this model of the diversity principle and its meaning in communications policymaking has been utilized by state broadcasters in Finland in connection with their strategic planning (Jaasaari, Kytomaki, & Ruohomaa, 2004), and has been used as a framework for analyzing Mexican (Rendon, 2004) and Australian media policy (Herd, 2006). It has been employed as the basis for research projects conducted by policymakers in Cyprus (Massouras, 2008), and models of the diversity principle in European media policy also have incorporated the core elements of this model (see, e.g., Van Cuilenburg, 2002). Given the apparent international applicability of this model of the diversity principle, it seems reasonable to employ it in an effort to understand the diversity principle's place in Internet governance *vis a vis* its role in traditional media regulation and policy.

At the most basic level, Figure 1 illustrates the notion that the principle of diversity can be broken down into three inter-related components: source, content, and exposure diversity. Source diversity refers to the extent to which the media system under consideration is populated by a diverse array of content providers. This focus on content providers can emphasize the ownership of either the media outlets or the underlying content, with the specific diversity criteria taking a variety of forms, ranging from ownership race/ethnicity or gender, to various dimensions of organizational or economic structure (e.g., public, private, for-profit, non-profit, independent, group-owned, etc.). Source diversity also has, at times, been conceptualized in

terms of the diversity (in terms of gender, ethnicity, etc.) of the individuals working within the media outlets.

A key point reflected in this model is that such source diversity often has been presumed to lead to diversity of content. Content diversity has been conceptualized in a variety of ways, including in terms of the diversity of program types or genres available, the diversity of ideas or viewpoints expressed, or in terms of the demographic diversity of those depicted in the content (see Roessler, 2007). This presumption has, at various times, been questioned, and research addressing this relationship has not provided definitive evidence of a systematic relationship. This issue becomes particularly important within the context of policy debates involving the question of whether the promotion of a diversity of sources is an important policy objective in its own right, absent any clear indication that such source diversity enhances diversity of content (see, e.g., Baker, 2007).

The final element of Figure 1 is exposure diversity. This term refers to the extent to which audiences consume a diverse array of content. Here again, there traditionally has been a presumption that increasing diversity of content promotes diversity of exposure, as audiences have a greater array of sources and content options to choose from (Napoli, 2001). Here again, however, legitimate questions arise as to whether this causal relationship holds, as some studies suggest that many media consumers utilize greater diversity of available content in ways that narrow the range of content they consume (Webster, 2007). From a policy standpoint, this issue becomes particularly important *if* increasing audiences' exposure to diverse sources and content is the ultimate goal of any diversity-enhancing policies. At the very least, however, understanding how changes in source and content diversity impact exposure diversity is fundamental to policymakers' understanding of the production and consumption dynamics of

any media system. Perhaps not surprisingly, exposure diversity has resided at the fringes of contemporary media policy discussions (see Napoli & Gillis, 2008). If and how policymakers should concern themselves with increasing the extent to which audiences consume a diverse array of sources, in keeping with the underlying logic of the effective functioning of a robust marketplace of ideas, remains a difficult question.

Diversity Policy Research

Diversity concerns have been central to a wide range of contemporary media policy issues, ranging from media consolidation, to the privatization and commercialization of media ownership, to minority ownership of media outlets, to content regulations and programming carriage requirements, to, most recently, Internet governance. Consequently, recent years have seen substantial growth in various forms of diversity research, not only within academia, but also within the policymaking sector. Efforts ranging from the FCC's controversial Diversity Index to the German Commission on Concentration in Media's (KEK) weighting approach that accounts for possible influences of various media on the diversity of opinion, to the Ofcom (UK) public interest or plurality test, all have sought to empirically assess one or more of the components of the diversity principle discussed above (see Just, 2008; Karpinen, 2006; Napoli & Gillis, 2008).

Generally, these efforts have focused most heavily on the process of measuring the diversity of available sources. This emphasis is likely best explained by a number of factors. The first is that in some policy contexts there is a reasonable consensus that diversity of sources represents the fundamental policy objective, regardless of any potential relationships between source diversity and content or exposure diversity. The second is that it also has frequently been the case that policymakers have embraced the commonly held (though contested) assumption that source diversity serves as an appropriate proxy for content diversity. The third involves the

frequent hesitancy among policymakers to provoke the free speech concerns that can arise from any governmental assessments of the nature of the content being provided by media outlets, as well as their hesitancy to engage with the substantial methodological challenges associated with objectively and reliably measuring content in ways that are sufficiently acceptable to all stakeholders (see Napoli & Gillis, 2008). And finally, to the extent that diversity of exposure has resided at the margins of contemporary media policy discourse, it also has resided at the periphery of contemporary media policy research (Napoli & Gillis, 2008).

This trend toward bringing greater empirical (typically quantitative) rigor to the diversity principle and its place in media policymaking has itself been the subject of much debate, discussion, and critique. Key concerns that arise from these critiques include the inherent oversimplifications that arise from efforts to translate concepts as complex as diversity into objective empirical measures (Karppinen, 2006), particularly given limitations in available data; (see Napoli & Karaganis, 2007; Napoli & Seaton, 2007), as well as the related concern that such efforts ultimately extract fundamental democratic values from the processes of policy deliberation and policy analysis (Baker, 2007; Just, 2008; Karppinen, 2006).

Diversity as an Emerging Principle of Internet Governance

Obviously, the Internet represents a very different media environment in which the diversity principle is being conceptualized and applied. The issues of spectrum scarcity, license allocations, and high barriers to entry that historically have characterized the traditional media of concern to policymakers are more or less non-issues. At least superficially, this would seem to allow the Internet to provide the kind of choice and multiplicity of sources that extends far beyond what could ever be achieved via traditional mass media, particularly given its inherently

global orientation. From this standpoint, one could potentially assume (as some policymakers have) that the Internet essentially "solves" all diversity policy concerns (see Baker, 2007).

Such an assumption would, however, be misguided (Baker, 2007). Although the Internet may alleviate some diversity policy concerns, it also raises new ones. Specifically, reflecting the medium's global orientation, the key diversity concerns that have thus far arisen within the context of Internet governance revolve around the issue of language. That is, the central problem reflected in the IGF's diversity theme has involved the linguistic diversity (or lack thereof) of the content available online. For many Internet users, the potential benefits of the tremendous variety of content options available on-line from a vast array of sources essentially run aground against the fact that much of this information may not be available in their native language.

As many IGF participants noted, increasing the extent to which the world's citizens have access to the Internet is only part of the problem. It also is necessary to make sure that, once online, these citizens are able to locate and access content in their native language. As was noted in the introduction to an IGF 2007 panel on the Multilingual Internet, there are more than 6000 languages in the world. Ninety percent of these languages are not represented on the Internet. Fifty languages represent 99 percent of the content on-line.[iv]

As one UNESCO representative speaking on the Multilingual Internet panel noted, "The ability to use one's language on the Internet will determine one's ability to participate in the Information Society." This same panelist suggested that the unavailability of native-language content on-line may even represent a more significant component of the Digital Divide than infrastructure imbalances. In this way, the principle of diversity becomes intertwined with the principle of access (see, e.g., UNESCO, 2003).

More broadly, the issue of linguistic diversity on-line reflects broader concerns about preserving and promoting cultural diversity (see Gerrand, 2006; UNESCO, 2002). Many IGF participants stressed the importance of the world's cultural diversity being accurately reflected in the on-line realm.[v] One panelist suggested that "Linguistic diversity is for human society what biodiversity is for nature." Consequently, many IGF participants (particularly those within the civil society sector) stressed the need for the local production of on-line content. This point was emphasized at the IGF by Internet pioneer Vint Cerf, who stressed that the production of native-language content can only be done locally.[vi]

In this way, we also see the principle of diversity as it relates to Internet governance overlapping quite strongly with the principle of localism – which has been a prominent and long-standing principle in the realm of media regulation and policy. In the media realm, localism has been reflected in efforts to structure media markets in ways that promote local ownership of media outlets and that foster (and in some cases, mandate) the production of locally oriented content (see Napoli, 2001). In the case of the Internet, in which the scope is expanded to the global level, thus making the issue of language differences of paramount importance, the achievement of linguistic diversity is most likely *only* achievable via mechanisms that promote the local production of content. Of course, the term "local" is being adjusted to accommodate the scope of the policy space at issue. Within the context of national-level media policy, localism typically is thought of at the level of individual cities or communities. Within the context of global Internet policy, localism is adjusted to units of analysis related to nations, or language communities within these nations. One IGF panelist noted, for instance, that Russia contains over 180 ethnic groups, with more than 150 languages, 24 of which have official status.

In terms of the practicalities associated with this issue, challenges arise not only in terms of the production of native-language content, but also in terms of the underlying system of domain name and number registration. The Internet Domain Name System (DNS) has been based on the American Standard Code for Information Exchange (ASCII), which is limited to Latin letters, digits, and the hyphen. Therefore, it has not traditionally been able to deal with languages consisting of non-Latin characters or even European languages (such as French and German) containing letters with diacritics (Dutton, Palfrey, & Peltu, 2007). In an effort to address this issue, ICANN has incorporated 11 languages that utilize non-Latin scripts into an ongoing test of top level domain names (see http://idn.icann.org/). In this way, the issue of linguistic diversity on-line is a policy issue that touches not only global Internet policymaking bodies, but also local governments, industry actors, and civil society organizations concerned with the production and availability of locally oriented and created on-line content.

Clearly, diversity's emerging incarnation as a principle of Internet governance possesses some fundamental differences from its traditional incarnation as a foundation principle of traditional media regulation and policy. Perhaps most important, the skepticism in some quarters about the relationship between source and content diversity that has characterized the diversity principle's place in the regulation of traditional media has been largely absent, to this point, in the discussion of the diversity principle in the realm of Internet governance. That is, while various stakeholder groups, ranging from scholars to the courts, to regulators, at various times questioned whether enhancing the diversity of sources was a necessary – or even viable – method of enhancing the diversity of content available to the citizenry, this has not been the case (at least not yet) within the realm of Internet governance. In terms of Internet governance, there seems to be something approaching a consensus that diversifying the range of individuals and

organizations with an opportunity to communicate on-line is an essential mechanism for achieving the kind of content diversity (notably, linguistic diversity) that has been deemed lacking in the on-line environment. Certainly, the extent to which content diversity on-line has been operationalized primarily in terms of language has facilitated this tighter linkage between source and content diversity

Finally, it interesting to note that although policy scholars in both the traditional and on-line media realms have advocated a greater focus on the issue of diversity of exposure (i.e., the extent to which audiences access a diverse array of sources and content options; see Hindman, 2007; Webster, 2007), this concern is failing, at this point, to gain significant traction in the realm of global Internet governance, just as it has failed gain significant traction in the realm of traditional media regulation and policymaking (Napoli, 2001; Napoli & Gillis, 2008). There was little, if any, meaningful discussion of this issue at the 2007 IGF, despite a growing body of literature documenting the extent to which audience attention on-line is tightly clustered around relatively few content options (see Hindman, 2007).

The Emergence of Diversity Policy Research for Internet Governance

Just as empirical approaches to the diversity principle have become increasingly prominent in the realm of traditional media policymaking, so too are we now seeing the beginnings of efforts to develop empirical tools for assessing diversity in ways that can potentially inform and guide Internet governance. Accurately gauging the extent of linguistic diversity on-line is proving particularly challenging. What is particularly interesting is how efforts to date map against patterns of diversity measurement in the traditional media.

As was noted previously, within the traditional media context, source and content diversity have received the bulk of both the policy and empirical attention, while notions of

exposure diversity have tended to reside at the margins of both policy discourse and empirical diversity research. We seem to be seeing something similar happening within the context of on-line diversity assessment. For instance, in a UNESCO (2005b)-sponsored assessment of the measurement of linguistic diversity on the Internet that was prepared in conjunction with the World Summit on the Information Society, one report outlines three primary methodologies for assessing linguistic diversity.

The first approach involves the analysis of the user profiles (including native language) of the on-line population. Via this approach, it is the number or proportion of active Internet users in each language group that is the focal point of analysis. Data for this approach are derived from various commercial organizations (SIL International, Global Reach) that publish aggregate data on user profiles across all nations (see, e.g., Global Reach, 2006).

The second approach involves analysis of the languages being used by users on-line. This approach has been described as "an absolute or relative measure of the actual use of a language on the Internet" (Gerrand, 2007, p. 1300). It involves the analysis of a specific on-line communications context such as email or discussion group postings in order to analyze the linguistic behavior of an identified community (see, e.g., Climent, et al., 2003; Durhan, 2003).

The third approach involves the analysis of the languages employed by individual web sites. Under this approach the focus is on the number or proportion of web pages written in each language group. Representative global (or national, depending upon the focus of the analysis) samples of web pages are drawn and assessed in terms of the language they employ in an effort to determine the "web presence" (Gerrand, 2007, 1301) of different languages (see, e.g., Lavoie & O'Neill, 1999; O'Neill, Lavoie, & Bennett, 2003).

If we consider these three methodological approaches in light of the model of the diversity principle discussed earlier, we see that the first approach essentially involves the analysis of source diversity. That is, in the on-line environment, in which the sender-receiver/content provider-audience dichotomies have been blurred to the point of near indistinguishability (see Napoli, 2008b), it seems reasonable to consider any assessment of the number or proportion of Internet users who speak a particular language as a (certainly imperfect) indicator of the linguistic diversity of the sources of on-line communication. This is not to say that such an approach necessarily represents the best, or only, approach to assessing source diversity on-line, but it is an approach that reflects the distribution of on-line speakers in relation to their linguistic affiliation. And, as has long been the case in the traditional media realm, this assessment of source diversity can be argued to represent a meaningful proxy for content diversity, given the likelihood that sources affiliated with a particular linguistic group will communicate using that language. But here, as in the traditional media realm, this is an assumption that's certainly open to question, as a speaker's primary language affiliation is not necessarily the language that the speaker uses when communicating on-line.

The second two approaches represent different mechanisms for more directly tapping at the concept of content diversity. Both the analysis of on-line speech and the analysis of individual web pages represent efforts to assess the linguistic diversity of the content available on-line. The only real difference is in their unit of analysis, with the former approach generally focusing on the analysis of a fairly narrow, discretely defined on-line space (e.g., message boards, emails of a particular population sample) and the latter approach explicitly identifying individual web pages as the unit of analysis.

As should be clear, missing to this point are efforts to consider the extent to which on-line attention is distributed across a diverse array of linguistic groups (i.e., exposure diversity). This is an omission that has not gone unnoticed, even if it has not yet resonated strongly within the policy discourse (particularly that surrounding the IGF). As the UNESCO (2005b) report on linguistic diversity on the Internet noted, "We can easily produce a random count of Internet pages by using any number of commercial search engines, but we cannot judge how often Web pages are read . . ." (p. 6). A paper by Daniel Pimienta (2005) contained within this same report recognizes the value of an analytical focus on exposure diversity, noting that:

> Our experience in the field has made us think that a promising approach that does not yet seem to be used would be a method similar to that used by Alexa to paint a portrait of the most visited sites and to provide other invaluable information. Alexa compiles data on the behaviour of a large number of users who have accepted to download spyware to their computers; this then provides extremely detailed statistics. Following the same method, we can imagine a programme that would be capable of measuring the languages used in a variety of contexts which would be relevant to indicators such as the composing and reading languages of emails, *languages of sites accessed,* etc. (p. 33, emphasis added)

It remains to be seen whether such expressions of the potential viability of assessing diversity of exposure on-line get translated into meaningful, systematic efforts at policy research.

Finally, it is important to note that, just as took place in the traditional media realm, the central diversity concerns in the on-line realm are beginning to coalesce around discussions of diversity indices and their potential policymaking utility. As was noted by linguist John Paolillo (2005) in his contribution to UNESCO's (2005b) report on the measurement of linguistic diversity, "Coherent discussions of linguistic diversity on global or regional scales requires a

quantitative index of diversity. Unfortunately, quantitative measures of linguistic diversity are rarely employed in current linguistic research, and no established measure is widely used" (p. 50). This point is particularly important as it illustrates the largely blank slate confronting the measurement of linguistic diversity on-line. That being said, however, it does seem possible that the now quite extensive literature on diversity assessment, and the construction of various diversity indices, that can be found in the academic literature that has focused on diversity in the traditional media could provide some useful guidance in the on-line realm. It is particularly striking how, at this point, there is virtually no overlap between these two bodies of literature. Assessments of linguistic diversity on-line are largely devoid of any references to the broader media diversity literature. The analysis being conducted here appears to be one of the few efforts to begin integrating these parallel bodies of literature.

Of the few online diversity indices that have been employed to date, some have tapped at elements of the notion of cultural diversity, but have neglected the linguistic component that is at the center of Internet governance concerns (see, e.g., Segev, Ahituv, & Barzilai-Nahon, 2007). Others have more directly addressed these linguistic concerns (Paolillo, 2005). In this regard, the current state of on-line diversity assessment mirrors what has taken place in the realm of traditional media diversity assessment, where only a portion of the research conducted emerged from, and sought to relate its findings back to, contemporary policy concerns. As a result, the current state of affairs is a relative dearth of the kind of diversity research that could feed directly into Internet governance discussions.

Finally, one key point that needs to be emphasized within the context of the existing efforts to assess linguistic diversity on-line is that on-line linguistic diversity should be approached as very much a relative phenomenon. That is, for any measurement approach to

provide meaningful information, it must not only account for the proportions of on-line speech (e.g., web sites, newsgroups, etc.) accounted for by different languages, but also relate these proportions to the prominence of these languages in the off-line world (see Paolillo, 2005). That is, to say that 72 percent of Web sites are in English (O'Neill, Lavoie, & Bennett, 2002) is a statistic that is, in and of itself, certainly of some interest. But from a linguistic diversity standpoint, it means relatively little unless it is also tied to the percentage of people in the world who speak English. Meaningfully understanding linguistic diversity for the purposes of Internet governance requires an analytical approach that considers the prominence of different languages on-line *in relation* to the prominence of different languages in the population as a whole (not unlike the FCC's now defunct workforce diversity policies, which assessed the diversity of a broadcaster's workforce against the diversity of the population in which the broadcaster was located; see Napoli, 1999). Only via such an approach can we truly gain a clear understanding of the extent to which the different languages of the world are being appropriately, and proportionately, represented. The challenge here, however, is that the basis for comparison – the data on the size of different language populations – are themselves of some questionable comprehensiveness and reliability (Paolillo & Das, 2006). One interesting approach has involved comparing linguistic diversity on-line with the linguistic diversity of library collections (O'Neill, Lavoie, & Bennett, 2003).

Conclusion

As should be clear, the diversity principle is developing in ways in the Internet governance context that both reflect and diverge from its conceptualization and application in traditional media policymaking and policy research. As the various stakeholders involved in the IGF, and in the broader process of establishing a more coherent Internet governance regime

continue to move forward in their efforts to meaningfully conceptualize and apply the diversity principle, it is essential that policy researchers move quickly to infuse these discussions with useful research. As this paper has made clear, there is a dearth of relevant policy-oriented research at this point, particularly research that builds upon and extends the fairly substantial body of research that has examined diversity issues within the context of traditional media. Drawing such connections may prove to be particularly important in terms of moving Internet governance issues outside of the relatively narrow group of policy advocates and policy scholars for whom these issues have, at this point resonated, and in terms of assuring that all stakeholders recognize the broader political and cultural implications that underlie the diversity principle's meaning within the context of Internet governance.

Figure 1: Diversity Components, Subcomponents, and Assumed Relationships.

Source Diversity	➔	Content Diversity	➔	Exposure Diversity
1. Ownership		1. Format/Program Type		1. Horizontal
a. Programming		2. Demographic		2. Vertical
b. Outlet		3. Idea/Viewpoint		
2. Workforce				

* Source: Napoli (2001).

References

Anderson, C.W. (1992). The place of principles in policy analysis. In J.M. Gillroy and M. Wade (Eds.), *The moral dimensions of public policy choice: Beyond the market paradigm* (pp. 387-409). Pittsburgh: University of Pittsburgh Press. (Reprinted from the *American Political Science Review, 73* [1979] , 711-723).

Baker, C.E. (2007). *Media concentration and democracy.* New York: Cambridge University Press.

Climent, S., et al. (2003). Bilingual newsrooms in Catalonia: A challenge for machine translation. *Journal of Computer-Mediated Communication, 9*(1). Retrieved June 15, 2008 from: http://www.blackwell-synergy.com/doi/full/10.111/j.1083-6101.2003.tb00360.x.

Durham, M. (2003). Language choice on a Swiss mailing list. *Journal of Computer-Mediated Communication, 9*(1). Retrieved June 15, 2008 from: http://www.blackwell-synergy.com/doi/full/10.111/j.1083-6101.2003.tb00359.x.

Drake, W.J. (2004). Reframing Internet governance discourse: Fifteen baseline propositions. Memo #2 for the Social Science Research Council's Research Network on IT and Governance.

Dutton, W.H., & Palfrey, J. (2007). Deciphering the codes of Internet governance: Understanding the hard issues at stake. OII/e-Horizons Forum Discussion Paper No. 8.

Dutton, W.H., & Peltu, M. (2005). The emerging Internet governance mosaic: Connecting the pieces. OII Forum Discussion Paper No. 5.

Gerrand, P. (2006). Cultural diversity in cyberspace: The Catalan campaign to win the new .cat top level domain. *First Monday, 11*(1-2). Retrieved May 15, 2008 from http://www.uic.edu/htmib/cgiwrap/bin/ojs/index.php/fm/rt/printerFriendly/1305/1225.

Gerrand, P. (2007). Estimating linguistic diversity on the Internet. A taxonomy to avoid pitfalls and paradoxes. *Journal of Computer-Mediated Communication, 12,* 1298-1321.

Global Reach (2006).Global Internet statistics (by language). Retrieved June 26, 2008 from: http://www.global-reach.biz/globstats/index.php3.

Herd, N. (2006, September). Communications policy and the diversity question: Does regulation matter? Paper presented at the Communications Policy and Research Forum 2006, Sydney, Australia. Retrieved June 8, 2008 from: http://www.networkinsight.org/verve/_resources/Herd_N_paper.pdf.

Hindman, M. (2007). A mile wide and an inch deep: Measuring media diversity online and offline. In P.M. Napoli (Ed.), *Media diversity and localism: Meaning and metrics* (pp. 327-348). Mahwah, NJ: Lawrence Erlbaum Associates, Inc.

Hitchens, L. (2006). *Broadcasting pluralism and diversity: A comparative study of policy and regulation.* Portland, OR: Hart Publishing.

International Telecommunications Union (2004, February). Chairman's report on the workshop on Internet governance.

Internet Governance Project (2004). Internet governance: The state of play.

Jaasaari, J., Kytomaki, J., & Ruohomaa, E. (2004). Audience report '04: Diversity as a quality factor for YLE. Helsinki, Finland: YLE. Available: http://yle.fi/fbc/audpdf/yk_englanti_04%20WEB.pdf (retrieved June 8, 2008).

Just, N. (2008, May). Measuring media concentration and diversity: New approaches and instruments in Europe and the USA. Paper presented at the annual meeting of the International Communication Association, Montreal.

Karppinen, K. (2006). Media diversity and the politics of criteria: Diversity assessment and technocratisation of European media policy. *Nordicom Review, 27*(2), 53-68.

Krasner, S.D. (1983). Structural causes and regime consequences: Regimes as intervening variables. In S.D. Krasner (Ed.), *International regimes.* Ithaca, NY: Cornell University Press.

Lavoie, B.F., & O'Neill, E.T. (1999). How "world wide" is the Web? Trends in the internationalization of Web sites. OCLC Annual Review of Research. Retrieved June 15, 2008 from: http://digitalarchive.oclc.org/da/ViewObject.jsp?objid=0000003496.

Massouras, A. (2008, June 4). Personal correspondence. On file with author.

Matsura, K. (2007). Cultural diversity, multilingualism and UNESCO. W. Kleinwachter (Ed.), *The power of ideas: Internet governance in a global multi-stakeholder environment,* pp. 116-120. Berlin, Germany: Marketing fur Deutschland GmbH.

Mueller, M. (2002). *Ruling the root: Internet governance and the taming of cyberspace.* Cambridge, MA: MIT Press.

Mueller, M. (2007). Net neutrality as global principle for Internet governance. Internet Governance Project. Retrieved June 27, 2008 from: http://www.internetgovernance.org/pdf/NetNeutralityGlobalPrinciple.pdf.

Mueller, M., Mathiason, J., & Klein, H. (2007). The Internet and global governance: Principles and norms for a new regime. *Global Governance 13,* 237-254.

Mueller, M., Mathiason, J., & McKnight, L. (2004, February). Making sense of "Internet Governance:" Identifying public policy issues. Paper presented at the International Telecommunications Union Workshop on Internet Governance, Geneva, Switzerland.

Napoli, P.M. (1999). Deconstructing the diversity principle. *Journal of Communication, 49*(4), 7-34.

Napoli, P.M. (2001). *Foundations of communications policy: Principles and process in the regulation of electronic media.* Cresskill, NJ: Hampton Press.

Napoli, P.M. (2008a). Issues and challenges facing Internet governance: A report from the 2007 Internet Governance Forum. Report prepared for the Phoebe Haas Charitable Trust.

Napoli, P.M. (2008b). Toward a model of audience evolution: New technologies and the transformation of media audiences. Paper presented before the annual meeting of the International Association for Media and Communications Research, Stockholm.

Napoli, P.M., & Gillis, N. (2008). Media ownership and diversity assessment: A social science research agenda. In R. Rice (Ed.), *Media ownership: Research and regulation* (pp. 303-322). Cresskill, NJ: Hampton Press.

Napoli, P.M., & Karaganis, J. (2007). Toward a federal data agenda for communications policymaking. *CommLaw Conspectus: The Journal of Communication Law & Policy, 16*(1), 1-44.

Napoli, P.M., & Seaton, M. (2007). Necessary knowledge for communications policy: Information asymmetries and commercial data access and usage in the policymaking process. *Federal Communications Law Journal, 59,* 295-329.

O'Neill, E.t., Lavoie, B.F., & Bennett, R. (2003). Trends in the evolution of the public Web, 1998-2002. *D-Lib Magazine, 9*(4). Retrieved June 24, 2008 from: http://www.dlib.org/dlib/april03/lavoie/04lavoie.html

Peake, A. (2004). Internet governance and the World Summit on the Information Society. Paper prepared for the Association for Progressive Communications.

Pimienta, D. (2005). Linguistic diversity in cyberspace: Models for development and measurement. In UNESCO (Ed.), *Measuring linguistic diversity on the Internet* (pp. 13-42). Paris: UNESCO.

Paolillo, J.C. (2005). Language diversity on the Internet. In UNESCO (Ed.), Measuring linguistic diversity on the Internet (pp. 43-89). Paris: UNESCO.

Paolillo, J.C., & Das, A. (2006). Evaluating language statistics: The Ethnologue and beyond. Report prepared for the UNESCO Institute for Statistics. Retrieved June 15, 2008 from: http://funredes.org/lc2005/english/L5/L5authors.html.

Raboy, M., & Landry, N. (2005). *Civil society, communication and global governance: Issues from the World Summit on the Information Society.* New York: Peter Lang.

Rendon, J.C.L. (2004, October). Public policies and research on cultural diversity in Mexican television. Paper presented at the Seminar on Media and Globalization in North America, Monterrey, Mexico. Retrieved June 8, 2008 from: http://cinco.mty.itesm.mx/cimagen/Texto_9.doc.

Roessler, P. (2006). Media content diversity: Conceptual issues and future directions for communication research. *Communication Yearbook, 31,* 464-520.

Segev, E., Ahituv, N., & Barzilai-Nahon, K. (2007). Mapping diversities and tracing trends of cultural homogeneity/heterogeneity in cyberspace. *Journal of Computer-Mediated Communication, 12,* 1269-1297.

UNESCO (2002). Universal declaration on cultural diversity. Retrieved June 26, 2008 from: http://unesdoc.unesco.org/images/0012/001271/127160m.pdf.

UNESCO (2003). Recommendation concerning the promotion and use of multilingualism and universal access to cyberspace. Retrieved June 28, 2008 from: http://www.minervaplus.ru/docums/multcybe.rtf.

UNESCO (2005a). Reports and conclusions of the thematic meetings organized by UNESCO in preparation of the second meeting of the World Summit on the Information Society.

UNESCO (2005b). *Measuring linguistic diversity on the Internet.* Paris, France: UNESCO.

United States Department of Commerce (1998). Management of Internet names and addresses.

Van Cuilenburg, J. (2002, December). The media diversity concept and European perspectives. Paper presented at the Media Economics, Content and Diversity Seminar, Finnish Academy of Sciences, Helsinki.

Webster, J.G. (2007). Diversity of exposure. In P.M. Napoli (Ed.), *Media diversity and localism: Meaning and metrics* (pp. 309-326). Mahwah, NJ: Lawrence Erlbaum Associates, Inc.

Wilson, E.J., III (2005). What is Internet governance and where does it come from? *Journal of Public Policy*, *25*(1), 29-50.

Working Group on Internet Governance (2005a, June). Report of the working group on Internet governance.

Working Group on Internet Governance (2005b, June). Background report of the working group on Internet governance.

WSIS Executive Secretariat (2004, February). Report of the Geneva phase of the World Summit on the Information Society.

Notes

[i] For an overview and assessment of WSIS from a civil society perspective, see Raboy and Landry (2005).

[ii] ICANN has the authority to set policy for, and manage, the allocation and assignment of Internet protocol addresses, add new names to the top level of the Internet domain name hierarchy, and maintain responsibility for operating root servers that distribute information about the content of the top level of the domain name space (Mueller, 2002).

[iii] It is worth noting that an entire session of the 2007 IGF was devoted to outlining the wide range of formal and informal bodies addressing various elements of Internet governance.

[iv] This statistic came from the presentation of Daniel Pimienta, a researcher at the Antiles Guyane at Martinique, as part of the IGF 2007 Diversity Plenary Session.

[v] As one panelists stated, "To reduce cultural diversity is to jeopardize the possibility for our species to evolve and adapt."

[vi] In his presentation, Cerf used the term "responsible multilingualism" in relation to his point that multilingual elements must be in place in all phases of the Internet's operation. Cerf emphasized that, just like in other areas of communication, we are not likely to be able to achieve an environment in which individuals of different languages can effectively communicate with one another, but that the focus should instead remain on ensuring that the Internet permits people with a common language to effectively communicate with one another.