INCLUSIVE INTERNET GOVERNANCE: ENHANCING MULTISTAKEHOLDER PARTICIPATION THROUGH GEOGRAPHICALLY DISTRIBUTED POLICY COLLABORATORIES

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Abstract

In this paper, we outline a vision for multistakeholder democratic participation in global information and communication policy processes. Drawing on international regime theory, we suggest that the UN World Summit on the Information Society (WSIS) is an explicit attempt to formulate the principles, norms, and values of an emergent international regime to govern the information society in general, and the Internet specifically. However, the formulation of an international regime requires the active and effective participation of multiple stakeholders who can represent their interests. Key to this effective participation is active membership in transnational policy networks and epistemic communities. We find that the working methods of international policy processes do not take full advantage of these networks and need restructuring in order to facilitate the active participation by developing countries and civil society organisations. In order to overcome the current limitations, institutional mechanisms to strengthen geographically distributed collaboration amongst the multiple stakeholders should be pursued. The institutional mechanism of a policy collaboratory could point to solutions.

The Global Information Infrastructure and Information and Communication Policy

On 21 March 1994, during his speech to the First World Telecommunications Development Conference in Buenos Aires, Argentina, then US Vice President Al Gore argued forcefully for the continued development of a Global Information Infrastructure (GII). He suggested that the "networks of distributed intelligence" represented by the GII could "allow us to share information, to connect, and to communicate as a global community" (Gore, 1994, p. 1). In his estimate, the GII would bring all of the communities of the world together.

While this rosy picture of the GII and its tremendous potential is yet to be achieved, more than a decade later, many of the members of the world community have finally realised that the ongoing processes of globalisation and the development of an information society affect communities around the world in profound ways. Incessant development in information and communication technologies – most fully represented by the current Internet – fuels the ongoing development of globalisation. Concomitantly, new social, economic, technological, political, and cultural forces act with remarkable influence on the global economy and society.

Specifically, the rapid development of the GII, now known in some scientific circles as *cyberinfrastructure,* provides the underlying mechanism through which large-scale distributed digital data, innovative applications, and services are emerging. Telemedicine, distance-independent learning, scientific collaboratories, and an increasing global trade in services are all illustrative of this phenomenon.

This plethora of applications has stimulated a variety of stakeholders with political interests and preferences to become involved in the development of information and communications policy. Traditionally, the primary stakeholders involved in global information policy beyond governments and corporations were legions of experts and epistemic communities in engineering, computer science, economics, and law. However, many of the new stakeholders who participate in global information and communications policy processes go beyond these traditional domains; we now see nurses, accountants, medical doctors, teachers, and entrepreneurs of all kinds interested and involved in information and communications policy. Many of these newcomers believe that developments in information and communications policy could either foster or impede the continued development of the information society.

This paper outlines a vision for multistakeholder democratic participation in global information and communication policy processes. Drawing on international regime theory, it suggests that the WSIS is an explicit attempt to formulate the principles, norms, and values of an emergent international regime to govern the information society in general, and the Internet specifically.

Global Governance for the Global Information Infrastructure

Many new stakeholders become involved in policy making because they want to have a voice in shaping the development of the information society.

More specifically, they want to have a role in determining the underlying norms, principles, values, rules, decision-making procedures, and enforcement mechanisms, with an aim to affect the allocation of scarce resources to its development. In short, new stakeholders want to participate in the global governance of the information society and, more accurately, in the governance of its fundamental underlying infrastructure, the Internet.

However, when we speak of global governance, what do we mean? At the same time that contemporary international public policy wrestles with the concept of global governance, significant academic literature explores this phenomenon. Much of the literature emerging from international relations fields focuses on addressing the *anarchy problematique* surrounding the issue. This fundamental problem means that if the world-system is comprised of sovereign and equal nation-states, as well as of a range of important non-state actors, all operating in a global environment devoid of a world government, how are decisions made and enforced, resources allocated, and stability and order maintained? This is a fundamental problem of international co-ordination and collaboration that has received attention from a wide range of scholars (Keohane and Nye, 1989; Axelrod, 1985; Keohane, 1984).

One conceptual framework for understanding and analysing the *anarchy problematique* has been international regime theory. In 1982, Steven Krasner and a group of colleagues interrogated the concept of international regimes in a special issue of *International Organization.* Here, Krasner sets out what has become the classic and consensual definition of an international regime: "sets of implicit or explicit principles, norms, rules and decision-making procedures around which actors' expectations converge in a given areas of international relations" (Krasner, 1982, p. 186). When Krasner articulated this perspective, the dominant actors to which the theory referred were nation-states. However, as we currently think about regime theory, it is clear that the conception must be broadened to include non-state actors, from the private sector, as Haufler (2001) has done, to civil society and transnational networks (Cogburn, in press; Edwards, 2004).

According to Krasner (1982), an important aspect of international regime theory is a major structural division between soft components and hard components. The "softer" components of international regimes include *the principles,* defined as "beliefs of fact, causation and rectitude;" and *norms,* defined as "standards of behavior related in terms of rights and obligations." The "harder" components of international regimes include *the rules,* defined as specific prescriptions or proscriptions for action, and *the decision-making*

procedures, defined as the prevailing practices for making collective choices, resolving disputes, and enforcing decisions (Krasner, 1982, p. 186).

Using this theoretical framework, scholars have been able to identify a number of important international regimes in a wide variety of domains, ranging from international shipping, to air transport, international post, atomic energy and weapons, environmental issues, the global commons (e.g., seas and outer space) – and even in trading of commodities such as diamonds (Rittberger, 1993; Haas, 1980; Gourevitch, 1978a; 1978b). However, one of the oldest and most successful international regimes identified by scholars is the international telecommunications regime (Zacher and Sutton, 1996; Cowhey, 1990; Drake, 1988). The international telecommunication regime, based on the International Telecommunication Union, has provided stability and governance for the growth and development of the global telecommunications infrastructure for over one hundred years.

The global telecommunications infrastructure provides the foundation on which the GII – or Internet – rests today. However, as Gore and many others have articulated, a plethora of social, political, and economic factors combined in the mid 1990s to challenge significantly the existing global governance of telecommunications and, specifically, the global governance of the Internet. Some of the social factors included the rapid introduction of new stakeholders demanding universal access to the variety of so-called information society applications. Progressive political activists wanted to ensure that social welfare was maximised in the development of the GII and that resources would be allocated to alleviate what became known as the "digital divide."

Political factors eroding the existing telecommunications regime include the decline of support for the international accounting rate system and a negative reaction to the perceived aggressive dominance of the US in international fora relating to information and communications technologies. These fora included the World Trade Organization and its Agreement on Basic Telecommunications, the restructuring of Intelsat, and the overall global trend towards liberalisation and privatisation of telecommunications.

Economic factors, such as the drive to harness the potential of global electronic commerce for both large corporations and small, medium, and micro-sized enterprises, also contributed to this erosion. This drive required the rapid development of a GII that could provide high quality, low cost digital communication and data transfer around the world.

Finally, numerous technological developments contributed to the challenge to existing global governance. Newly emerging applications and hard-

ware, such as Voice Over Internet Protocol and Very Small Aperture Terminal Satellites, as well as new services such as call-back systems, allowed consumers to bypass local telecommunications companies.

Current Global Internet Governance Structure

In the Internet world, demand for broader participation in governance of the root servers and the domain name system on which the Internet rests led to the severing of the sole responsibility for these processes by the US government. This demand also led to the creation of the Internet Corporation for Assigned Names and Numbers (ICANN). While ICANN was registered as a not-for-profit corporation in California, and still maintains a very close relationship with the US government, it was a major step towards the creation of international institutional mechanisms for multistakeholder participation in the global governance of the Internet (Mueller, 2002).

While a somewhat slippery concept, the Internet is defined as "the global data communication system formed by the interconnection of public and private telecommunication networks using Internet Protocol (IP), TCP [transmission control protocols] and the protocols required to implement IP internetworking on a global scale, such as DNS [domain name system] and packet routing protocols" (IGP, 2004, pp. 6-7).

Global Internet governance involves three interrelated layers of activity: (1) technical standardisation; (2) resource allocation and assignment; and (3) policy-making. The first, *technical standardisation,* is focused on "how decisions are made about the core protocols and applications that make the Internet work" (IGP, 2004, pp. 9-10). Examples of these technical issues include TCP/IP and DNS issues, the migration from IPv4 to IPv6, and the ENUM/E.164 standard. *Resource allocation* and assignment refers to the administration of the scarce resources of the Internet. These resource allocation issues include domain name allocation, IP addresses, regional registries, and dispute resolution processes. Finally, *the policy making* component includes policy formulation processes and the monitoring, enforcement, and dispute resolution processes for the technical and socio-economic aspects of the Internet. These policy issues include a wide range of socio-economic issues including customs and taxation issues, electronic payments, privacy/data protection, freedom of expression, security/encryption, authentication/digital signatures, knowledge and intellectual property, human rights, content creation and

protection, labour and the social impact, infrastructure development and financing, and universal service/access.

Although the global Internet governance regime is distinct from, yet currently based on ICANN, it is still intertwined and intimately related to the international telecommunications regime. Accordingly, disruptions in the international telecommunications regime contribute to disruption in the global governance of the Internet. This interrelation helps one to understand why the current process of regime formation for the information society, driven by the WSIS and organised by the International Telecommunication Union, is important. The UN Working Group on Internet Governance, which emerged out of the WSIS processes, is particularly important.

Internet Governance Policy Processes

However, before focusing on WSIS, a glance at the bigger picture will be useful. The process of establishing global governance for any international issue area is complex and includes the work of a variety of formal and informal institutions. These institutions, and the international conferences and decision-making procedures in which they are involved, vary in the degree to which they are publicly accessible. The traditional actors in these global governance processes are governments, including those organised governmental groupings such as the Group of Eight Industrialised Nations, the European Union and European Commission, the Asia Pacific Economic Co-operation, and the Organisation for Economic Co-operation and Development. In addition to governments, international and inter-governmental organisations have been primary convening institutions. As well, the World Trade Organisation, the World Intellectual Property Organisation, the United Nations Education, Scientific and Cultural Organisation, and the United Nations Conference on Trade Law have taken active parts. Increasingly, private and private sector organisations, such as ICANN, the Global Information Infrastructure Commission, the Global Business Dialogue for Electronic Commerce, and the International Chamber of Commerce, have played important roles. Interspersed within these governments and international, intergovernmental, regional, and private organisations are individual experts, whose expertise ranges from telecommunications, Internet, and international trade and law. Many of these individuals participate in organised groupings, such as the Internet Engineering Task Force, the World Wide Web Consortium, and the North American Network Operators Group.

Many of these individuals possessing expert knowledge have formed themselves into *epistemic communities,* primarily groupings of scientists holding the same or similar causal belief systems and who actively engage in the political process (Haas, 1992; Haas, 1990; Haas, et al., 1977).

Interestingly, in recent years another, more heterogeneous stakeholder grouping has emerged to play an important role in nearly all of these processes – civil society groupings and individuals. Individual citizens, represented by non-governmental organisations and transnational networks have increasingly demanded recognition as important stakeholders in global governance processes (Cardozo, 2004). These civil society organisations represent the new energy and vitality of the diverse human participation in global governance processes.

Cogburn (2004a) argues that international conferences play a critical role in global governance and, specifically, in regime formation processes. He argues that international conferences serve as focal points for contesting the norms, principles, values, and decision-making procedures of the emergent regime. These international conferences also serve to nurture global networks of recognised policy experts and epistemic communities. Policy-actors interact at these global fora and practice "conference diplomacy" in attempts to influence conference outcomes.

While it may be obvious to anyone who regularly participates in these international conferences, the actual summit is relatively anticlimactic in terms of actual decision-making. Numerous newcomers to the global policy making process may be heard asking, "When are we going to start negotiating?" and "When do we work on the closing conference statements?" Regulars in the international policy making arena know that the conference itself is only a large-scale punctuation of an on-going process of international conference diplomacy. This conference diplomacy starts in the pre-conference period, marked, in formal UN conferences, by a series of "preparatory committee" meetings or prepcoms. The issues the conference will discuss, the summit agenda, the procedures for participation, and the actual text of the final conference documents are settled in these prepcoms. These preparatory processes can take several years, leading up to the actual conference or summit itself.

Although dwarfed in importance for regime formation, the actual summit or conference is an important event. This is especially true for the networking elements and the final last minute negotiations that may take place. During any of these conferences, the drafting of language or text for insertion into emerging documents is critical. Persons, or delegations, possessing strong language skills,

writing ability, legal knowledge, and awareness of international organisations and protocol are highly valued in the drafting process. Effectiveness in these processes also requires a high degree of physical stamina.

Following a conference, follow-up on conference agreements and monitoring of the implementation is another critical phase. Follow-up is aided significantly by those policy-actors that have a substantial presence in the global nodal cities of international policy formulation, namely Geneva, Paris, and New York (and, to some degree, Washington, DC). However, not all international conferences are equal; the importance of a conference to regime formation can be determined by essential characteristics of the conference. For example, while each level is important, the "lowest" level of importance to regime formation is an international conference that simply presents and debates contending articulations of principles, values, and norms for the emergent regime. The middle level of importance is an international conference where rule making, decision-making, or enforcement takes place – including the settlement of international treaties and agreements. Finally, conferences that allocate actual resources make, perhaps, the largest contribution to regime formation.

Effective participation in these multiple global policy processes requires two important components: networks and knowledge. By networks, we mean transnational policy actor networks, comprised of elite policy experts (Creech and Willard, 2001; Clark, Friedman and Hochstetler, 1998). By knowledge, we mean expert knowledge applied to the policy formulation process via organised networks of scientific experts holding the same or similar views on the specific policy issues under negotiation (Cowhey; 1990; Krasner, 1983).

Krasner (1983) argues that knowledge plays a critically important role in these processes, suggesting that "in a highly complex world, where goals are often ill-defined and many links are possible, consensual knowledge can greatly facilitate agreement on the development of an international regime" (p. 20). He argues that *the consensual* aspects to knowledge are most important in influencing international policy processes, for "without consensus, knowledge can have little impact on regime development in a world of sovereign states" (p. 20). International conferences play an important role in integrating this knowledge and helping to formulate a consensus amongst the relevant actors.

Over the last decade, at least ten clusters of international conferences have played a critical role in the global governance of information and communications technologies, including the Internet (Cogburn, 2004a). Each of these

clusters is centred around one or more international organisation, including the Group of Eight Industrialised Nations (Information Society and Development, Digital Opportunities Task Force); the International Telecommunications Union (World Telecommunications Development Conference, TELECOM, WSIS); the Organisation for Economic Co-operation and Development (Global E-commerce); ICANN (Annual Meetings); the World Trade Organization (Ministerial Meetings); the Global Information Infrastructure Commission (Annual Meetings, Regional Meetings); the Global Business Dialogue for Electronic Commerce (Annual Meetings); the World Economic Forum (Annual Meetings, Regional Meetings); Global Knowledge for Development (irregular meetings), and the World Intellectual Property Organization. These meetings vary in the degree to which they are public, or by invitation only, but nearly all have now opened their doors to active participation by civil society actors, alongside governments and the private sector.

Problem: From Pawns to Partners

Having outlined the contours of global governance in general and, specifically, having looked at some of the regime formation processes for the information society and the Internet, we can address some of the major problems with this process. The existing global governance processes are not working for developing countries and civil society organisations (Cogburn, 2003).

Civil society and developing countries tend to participate in these policy processes with very little influence on the actual outcomes (Global Contract Foundation, 2003). Frustration with these processes led to the walkout by developing countries of the World Trade Organization Ministerial Meeting in Cancun (Economist, 2003).

Interestingly, neither developed nor developing country interests are well served by this continued imbalance in the world-system (Soros, 2002; 2000; Sachs, 1999). Several organisations, such as the UN Task Force on Information and Communication Technologies, are working on trying to identify ways to address these inequalities and to improve the inclusion of developing countries and civil society organisations.

However, pursuing this inclusion is no small feat. Numerous obstacles exist to the effective participation by these stakeholders in the global policy formulation processes. At the international level, MacLean (2004) has identified some of the primary factors limiting participation: the lack of easy, affordable, and timely

information; the structure, functioning, and working methods of international fora; and the ineffective use of available financial resources. At the national level, he identifies a lack of awareness among decision-makers, lack of technical and policy capacity on information and communication issues, and weaknesses in national and regional policy processes and institutions.

Due in large part to the inability of these stakeholders to wield much influence in the global policy formulation processes, two subtly divergent visions for the GII or information society are emerging. Cogburn (2003) calls the first vision the GII/GIS (Global Information Society) regime. Here, the focus is on using the GII to maximise social welfare, to redress socio-economic inequalities through a range of information society applications, and to open access to knowledge and information. Cogburn calls the second vision the GII/GEC (Global Electronic Commerce) regime. In this vision, the focus is on maximising economic growth and developing the socio-technical infrastructure to support global electronic commerce. This vision entails closed access to knowledge and information. Since the terrorist attacks on New York and Washington on September 11, 2001, the latter version has become associated with national security considerations.

Enhancing Inclusion: Collaboratories and Multistakeholder Participation

Given the nature of the global governance process and the limitations identified for developing country and civil society participation, innovative methods and mechanisms must be identified to enhance their participation. If *multistakeholder* diplomacy is to work, it must include mechanisms that effectively integrate developing countries and civil society organisations into the process. One such mechanism could possible develop out of the lessons learned from the building and evolution of scientific collaboratories.

Within the field of computer-supported co-operative work, some important pieces of literature have focused on the analysis of a new and highly innovative institutional form called a *collaboratory*. Blending the words "collaborate" and "laboratory," the concept emerged from the US National Science Foundation in the mid- to late-1980s. In 1989, William Wulf argued at a National Science Foundation sponsored workshop that a collaboratory was "a center without walls, in which the nation's research-

ers can perform their research without regard to geographical location" (Wulf, 1989, p. 7).

In 1993, a National Research Council report further developed this concept, unleashing tremendous energy as diverse scientific communities began to exploit this institutional model. Soon, collaboratories appeared in scientific fields as diverse as oceanography, space physics, and molecular biology. The development by the National Science Foundation was followed by similar work by the National Institute of Health, Department of Energy, National Aeronautics and Space Administration, and other federal agencies. Currently, the National Science Foundation has been re-conceptualising the collaboratory movement, with a focus on making the collaboratory more mainstream in the scientific realm and creating an underlying *cyberinfrastructure* to stimulate large-scale scientific advancement (Atkins, et al., 2003).

In computer supported co-operative work, a standard 2x2 matrix illustrates the four quadrants of collaborative work. One axis represents *time,* with the two dimensions being same and different (synchronous and asynchronous). The other axis represents *place* with the two dimensions also being same and different (face-to-face and geographically distributed). Figure 1 illustrates these quadrants.

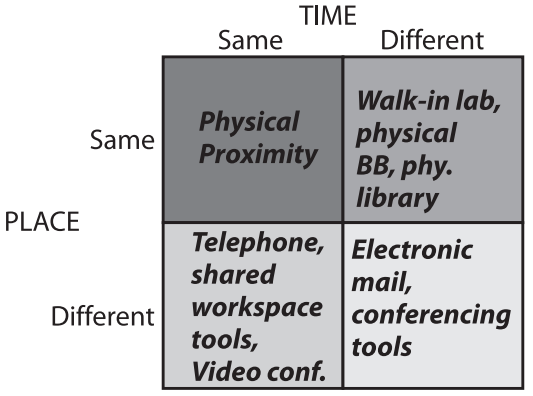

Figure 1. Matrix of Variants of Collaborative Work and Related Technologies

In addition to the identification of synchronous and asynchronous methods of collaboration, a National Science Foundation funded project called *the Science of Collaboratories* has identified three distinct functions of a collaboratory. These three functions include (1) direct people-to-people interaction;

(2) direct people-to-information access; and (3) immediate people-to-facilities access. A suite of collaboration tools and social practices supports the functioning of an effective collaboratory. For example, in *the people-to-people* category, a collection of tools supports the ability of members of the group to remain aware of and to be in touch with the various members of the research team. Regarding *people-to-information* functions, a collaboratory uses content management systems and other tools to ensure sufficient access to digital libraries and other knowledge and information required by the members of the collaboratory. Finally, certain collaboration tools such as webconferencing and application sharing provides remote *people-to-facilities* access, such as access to conference rooms and even shared access to instruments (for an overview, see `www.scienceofcollaboratories.org`).

Given the limitations outlined above for developing countries and civil society organisations to take part effectively in international fora, adopting mechanisms such as a collaboratory could be an important step in enabling the participation of developing countries and civil society organisations.

Outline of a Global Policy Collaboratory

It is possible that the insertion of a policy collaboratory into global policy formulation processes can enhance the ability for policy-actors from developing countries and the transnational civil society to participate in conferences, and to facilitate their interaction with geographically distant epistemic communities. In order to explore the potential that a collaboratory approach might have on enhancing multistakeholder participation in global policy processes, The Collaboratory on Technology Enhanced Learning Communities at Syracuse University has designed, built, and evaluated a potential policy collaboratory.

In this collaboratory, we have sought to design, develop, deploy, and evaluate the application of collaboratory approaches to the international information and communication policy domain. In particular, our goal has been to work collaboratively with interested parties to introduce a nascent policy collaboratory within the processes of the WSIS. We believe that it is possible to work collaboratively with widely geographically distributed WSIS policy-actors to enhance the following areas: (1) the administrative capacity; (2) the policy development capacity; (3) the deliberative capacity; (4) the density of social networks; and (5) the degree of engagement with epistemic communities.

For example, it would be possible to use the policy collaboratory to hold geographically distributed seminars and panel presentations on important themes, both to raise awareness of the themes and to conduct substantive training. These training sessions can include panellists from around the world sitting in their own country/organisation and participants from around the world sitting in a virtual plenary room. Following the seminar discussion, we can move these participants into multiple breakout rooms (which could be by language, by theme, by region, or some other characteristic) – all the while being physically located anywhere in the world having access to the Internet. We can also use this infrastructure to hold robust issue debates or strategy sessions, and to conduct administrative business and training. Evaluation and iterative redesign are critical components of the development of a policy collaboratory, so that the socio-technical infrastructure continues to meet the needs of the participants.

The technological infrastructure, designed to support the three functions of a collaboratory outlined above, include the following: (1) presence awareness and web-based deliberative dialogues; (2) webconferencing and application sharing; and (3) digital repositories.

Figure 2. Leading Chat Tools

Presence awareness, including applications such as iChat, AOL Instant Messenger, and MSN Messenger, shown in *Figure 2,* provide instant messaging, as well as easy to use person-to-person voice, video and data transfer. When people are collocated, it is common to drop in on someone's office or bump into someone in the hallway or coffee room. Further, it is usually easy to tell whether the other person is available for an interruption or is too busy and to create private lists so that only those colleagues whom you desire to know you are online can see you. This kind of informal interaction is critical to collaboration. It is also very difficult to do at a distance and, indeed, research has shown that it introduces considerable delay into processes that require interaction among dispersed participants (Herbsleb, et al., 2000). A number of research projects have attempted to provide such awareness at a distance. Some have used elaborate video or audio hook-ups that are always on to create virtual hallways or virtual shared offices.

Webconferencing and application sharing functionalities, shown in *Figure 3,* allow for virtual seminar rooms, with voice and video over IP, multi-media content, slides/whiteboards, polling and decision-making tools, and real-time application sharing.

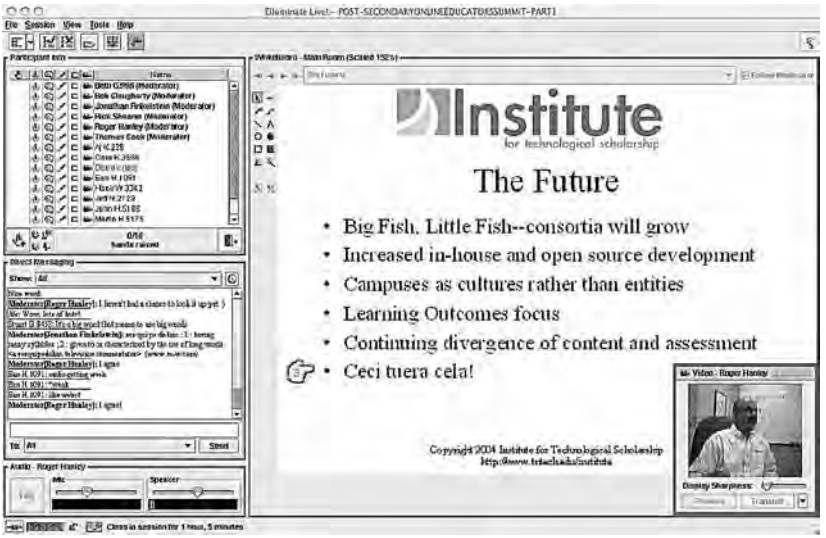

Figure 3: Webconferencing with Video, Slides, and Text Chat

Web-conferencing substantially facilitates interactions among researchers involved in projects. At present, most of the interactions in the WSIS process take place either face-to-face, which requires expensive air travel and lodging, or via e-mail lists (Cogburn, in press). The Internet and World Wide Web make additional options available. Internet-based web conferencing tools make possible audio and video interactions, with the advantage that these are much less expensive and frequently more efficient than long-distance teleconferencing or traditional video conferencing.

An important companion to web conferencing is application sharing. *Figure 4* depicts application sharing. The ability to share any software application open on one computer with other members of a web-conference presents numerous opportunities. Using these technologies, researchers can collaboratively edit documents, review data sets, run and interpret statistical calculations, observe remote video cameras, and much more, all in real time from the comfort of their own home or office. Application sharing allows all participants access to the editable object (with appropriate floor control protocols), and jointly to annotate, sketch, and scribble on work material such as charts, photos, and presentation slides.

Figure 4. Sharing a Statistical Application via Webconferencing

In short, a high degree of real-time interactivity is possible. Further, these materials can be archived and replayed, an especially useful capability for long-distance education. In several of our earlier collaboratories, these capabilities have turned out to be one of the most useful features. By combining conferencing and application sharing, it is possible to carry out formal, scheduled sessions like lab meetings, colloquia, or seminars, or informal interactions among a small group of researchers. Cotelco has used these capabilities for six years to conduct interactive, weekly graduate seminars with members in the US and South Africa.

Digital repository functionalities facilitate document storage, digital library resources, shared data and archives, as well as photo directories of members. Projects inevitably generate digital artefacts, such as data sets, drafts of manuscripts, proposals, planning documents, schedules, contact lists, recordings of sessions, and photos. A project intranet is a web-accessible repository of these materials, each with a certain level of public access that maintains strict security. It is possible to provide security at several different levels of granularity, starting with something as simple as a login with password (with increasing access or non-access based upon the desires and decisions of the collaboratory management). The ability to share material across sites is extremely valuable. We are promoting the use of open source content management systems, such as Dotnetnuke, Plone, or Mambo in building content management systems (this means that the limited resources of the project go into the installation, maintenance, and population of the site, and not to a license purchase). For an example of a new but growing content management system, one can peruse `http://cove.cotelco.net`.

One of the challenges of co-ordinating a widely geographically distributed group is the scheduling of activities and shared access to calendars. A number of software applications are now available to collaboratory planners that facilitate easier scheduling of formal and informal joint activities, and awareness of other collaboratory members. Various methods control access to information from such calendars. Substantial research shows that online photo directories can help develop and strengthen social capital within physically distributed communities. Amazingly, a simple digital photograph accompanied by a brief biography and a statement of research interests and role in the project, recommended reading, and other facts, can significantly increase awareness and interactions within a project.

Many of these functions are included in most contemporary content management systems. These systems are more than digital repositories; they become

essential building blocks for a geographically distributed community. Using these systems, a community can use the same web site as a public face and provide highly regulated access control for members. One persistent principle is that the user sees only what they have access to, so that they are not frustrated seeing documents or folders that say "members only." In this model, if they do not have access to it, they do not see it. Members can have wiki-style access to the site, with any number of members being authorised to update, manipulate, and change the site.

Educational Integration: Going Global, Locally

We have integrated our work on the pilot information policy collaboratories into our interdisciplinary graduate training program in the School of Information Studies at Syracuse University. Since 1999, the Collaboratory on Technology Enhanced Learning Communities has organised and conducted a global graduate seminar entitled "Globalisation and the Information Society: Information, Communication Policy and Development." This interdisciplinary seminar has included up to six universities, three in the US and three in South Africa (Cogburn and Levinson, 2003; Cogburn, 2002; Cogburn, Zhang, Khothule, 2002).

Within the seminar, five global virtual teams each represent a different stakeholder grouping in the world-system, including: global and multinational corporations; developed country national governments; developing country national governments; intergovernmental organisations; and non-governmental and community-based organisations. These teams consist of students from each of the participating universities, representing different time zones, cultures, institutions, languages, technology background, levels of infrastructure access, and disciplines – making them complex, cross-national, collaborative learning teams.

Throughout the semester, these global virtual teams – that we call "Global Syndicates" – engage in simulated decision-making and policy formulation exercises designed to illustrate opportunities and challenges in working in global virtual teams and in influencing the development of global information policy. These teams provide novice epistemic communities with the experience of interacting with real-world civil society policy actors, providing mutual intellectual and practical benefit. Lessons learned from our work in this collaborative learning environment have encouraged us to begin exploring the impact in the real-world policy environment of the policy collaboratory.

Summary and Conclusions

In this paper, we have tried to sketch out a vision for multistakeholder democratic participation in global information and communication policy processes. Drawing on international regime theory, we have suggested that the UN WSIS is an explicit attempt to formulate the principles, norms, and values of an emergent international regime required to govern the information society in general, and the Internet specifically. Given the broad reach of the Internet and its implications and potential for world wide socio-economic development, it is critical that the broadest diversity of ideas and talents be included in the debate and discussions concerning its development. However, the point is not just to have those voices included, but to ensure that developing countries and civil society organisations are genuine partners in the process, not merely pawns to project a false image of multistakeholderism.

Pursuing this approach to inclusive Internet governance is an important step towards increasing awareness of and adherence to the regime principles, norms, values, and rules. Such an approach will certainly increase the legitimacy of the Internet governance process. However, such an approach requires the active and effective participation of multiple stakeholders who can effectively represent their interests.

An essential part of this process is participation in transnational policy networks and epistemic communities. Evidence shows that these transnational policy networks and epistemic communities already exist within both developing countries and civil society organisations (Cogburn, 2004b). The working methods of international policy processes, especially Internet governance, need restructuring in order to facilitate active participation of developing countries and civil society organisations. In order to overcome the current limitations, institutional mechanisms to strengthen collaboration among the multiple stakeholders should be pursued. The institutional mechanism of a policy collaboratory could point to some of the solutions.

Discussion and Way Forward

Now that the work of the WSIS is over, and with its report calling for the creation of a multistakeholder forum for global deliberation on issues of Internet governance, it is time to consider institutionalising some of the ideas discussed in this paper. Whether or not one calls the forum mechanism

a collaboratory, the activities described herein are critical to the success of a multistakeholder forum. Effective multistakeholder participation must go beyond one or two face-to-face meetings per year. *A status quo* approach to international meetings significantly privileges certain actors while simultaneously disadvantaging others.

It is crucial to utilise information and communication technologies much more explicitly to facilitate the active participation of geographically distributed actors as they engage in the business of global Internet governance. The innovative use of these technologies should be introduced as a controlled intervention, to study the impact that such an institutional form might have on enhancing participation in these processes. These lessons could then be used to improve the process, and transferred to other international multistakeholder policy processes. Our approach to such studies has been to use a collaborative action research model. In this model, we work interactively with the participants to help them design the contours of the intervention. We have worked to design the study in a way that helps them to meet their own objectives as well. This systematic and rigorous approach reveals great potential for the future of online democratic deliberation and global multistakeholder diplomacy.

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