

Towards an Indigenous vision for the Information Society

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Abstract: The very concept of the “*Information Society*” is a cultural expression, originating in the context of the evolution of the industrial into a “post-industrial” world. Accordingly, its core elements - knowledge, information, communication and *Information and Communication Technologies (ICTs)* - are in fact culturally defined practices. However, the global approach of the evolving Information Society in an advancing Network Age makes these transformations a global issue. Societies with a different cultural, social and/or economic background, such as many Indigenous Peoples around the globe, are already affected by its dynamics – so far largely without being part of developing its philosophies or applications. To become truly global, and to avoid a new level of assimilation, colonization and marginalization, Indigenous Peoples must be equal partners in building the Information Society. Thus, the “*Information Society for All*” will have to embrace Indigenous concepts and visions in both its general conceptions and its implementations.

Key words: culture, Digital Divide, ethics, indigenous peoples, traditional knowledge

THE INFORMATION SOCIETY AS A CULTURAL CONCEPT

Information is processed according to an already existing body of knowledge, which defines its meaning and value for a given recipient. In other words: there is no information as such. What could be labelled as “information” is in fact as diverse as individual, social and cultural diversity. Likewise, knowledge has to be seen in these contexts. Consequently, the concept of knowledge is as diverse as the idea of information. Its content, definition and rules of application are culture-bound and relate to specific cultural values and protocols.

Communication, as a means for disseminating knowledge and information, is also shaped by and depends on culturally defined regulations. Awareness about these procedures is the pre-condition for allowing mutual understanding. Social rules or conventions for its distribution and the correct interaction of the involved actors may play an important role for the communication process. Such protocols not only determine what is viewed as the proper information flow, but also the appropriate medium of communication.

Knowledge, information and communication in Indigenous societies

For Indigenous Peoples, the generation and preservation of knowledge is intrinsically linked to a complex relationship with their respective ancestral territory and its environment. Traditional knowledge not only constitutes a system of knowledge and practices, but simultaneously provides a philosophy defining the place of humans in the entire “web of life”. As such, it includes an inherent ethics or moral code for interaction between human, natural and spiritual worlds, which guides the utilization of resources for human use and application of knowledge for human purposes. Maintaining these relationships with accompanying obligations and responsibilities are at the heart of the identity of an Indigenous People.

Accordingly, Indigenous customary laws provide for the classification of different types of knowledge, proper procedures for its acquisition and sharing and for rights and responsibilities which attach to its possession (Dutfield 1999/1). Genetic information originating from ancestral territories is an integral part of traditional knowledge with related ethics and cultural protocols for its utilization.

In short, Indigenous knowledge can be described as deeply holistic, collective in nature and containing an entire worldview, including social and political relations and regulations for its use and dissemination. Some of its aspects are considered sacred and secret altogether. It is rooted to a particular place and cultural context. Stewardship, guardianship and inter-generational responsibility are important principles for managing traditional knowledge.

In this context, information can be defined as “traditional knowledge that is communicated in a certain form to a certain audience ... with and for a certain purpose” (Alonso 2003). Indigenous protocols of sharing and acquiring knowledge address questions such as appropriate actors, language, context, situation and procedures to follow. Much knowledge is gender and age specific and/or is guarded by a certain clan, family or specialist. Exchange of information and knowledge, therefore, also follows these patterns of guardianship. Indigenous approaches to information communication are highly contextual and bound to the ethical and cultural obligations related to the shared knowledge. Communication of knowledge from generation to generation takes place according to culturally defined socialisation and education processes. Often, knowledge is revealed through stories, legends, performance or ceremonies. Teachings are specific in time and place, and adapted to the respective recipient(s).

Oral transmission is generally considered the appropriate medium for sharing and communicating Indigenous knowledge and information. Fixing it through writing, taping or other means is often seen as unduly defining a part or particular view as the whole, while taking it out of context. Passing on knowledge includes an obligation of the teacher to consider whether the learner is ready to use the knowledge responsibly. Recordings would relinquish the possibility of adjusting the teaching to the maturity of the learner and thereby influencing the ethical use of knowledge (Brant Castellano 2000).

INDIGENOUS KNOWLEDGE AND THE INFORMATION SOCIETY

The Information Society is a knowledge-based economy. Companies are under high pressure for constant innovation to stay competitive in a globalised world. Access to and acquisition of knowledge and information have become a strategic competitive advantage for their economic growth and survival. Knowledge and information have turned into decisive resources to fuel the “new economy” of post-industrial societies. Information, in this context, also includes genetic and biological information.

Traditional knowledge and inventions of Indigenous Peoples are an important part of these developments, mainly utilized for product development in agri-business and the pharmaceutical industry. Indigenous cultivars like rice, maize and potatoes can be used to improve commercial food and fibre crops, for example by increasing resistance to extreme climatic conditions or disease (Daes 1993). The pharmaceutical industry on its part applies Indigenous medicinal and botanical knowledge for the development of new drugs. Knowledge shared by Indigenous Peoples on specific plants, their physiological effects and methods for drug processing can provide valuable insight for the identification and isolation of active molecules. It is estimated that using ethnobotanical information when screening plants has increased the rate of discovery of biological activity by 400-800% (Swanson 1995).

Searching and collecting biological material and traditional knowledge from Indigenous territories for commercial use, so-called 'bioprospecting', has intensified in recent years (Dutfield 1999/2). Scientific estimates indicate that Indigenous Peoples possess as much as 99% of the existing knowledge about usable species (BMZ 1997) – and thus about utilization of biodiversity. However, bioprospecting and subsequent economic exploitation of Indigenous knowledge, cultivars or other biological and genetic material originating from their territories, often takes place without authorization and consent of Indigenous Peoples or adequate benefit sharing. Indigenous knowledge becomes increasingly reduced to a mere raw material for the knowledge-based economy of the Information Society.

Indigenous knowledge and the public domain

It is evident that the public domain concept, developed in the framework of European economic philosophy, does not match with Indigenous ethics and customary laws when it comes to disseminating and utilizing knowledge and information. Western economic thinking classifies all information and knowledge that it considers shared, disclosed or generally known, as part of the public domain. As such it is perceived a freely available resource for commercial use. Non-Indigenous actors have widely applied this idea to exploitation of Indigenous knowledge and cultural expressions, for example in the context of bioprospecting. As a result, Indigenous Peoples not only lose ownership and control but in fact are barred from fulfilling existing cultural obligations in breach of customary laws. Additionally, third parties often secure Intellectual Property Rights for commercial applications derived from Indigenous knowledge and information.

From an Indigenous point of view, there might be striking similarities between the historic use of the *terra nullius* concept for seizing Indigenous territories and the current conversion of traditional knowledge into a *res nullius* by defining it as part of the public domain. A similar ‘philosophy of appropriation’ is connected to the notion of ‘wilderness’ in Western economic thinking: useful plants or an entire ecosystem and its biodiversity declared as ‘wild’ or ‘natural’ belong to the public domain, for instance as common heritage of mankind. Such ‘wilderness’, however, might have been managed for millennia by Indigenous Peoples, who nurtured its biodiversity through developing and encouraging species diversity. From an Indigenous perspective, the distinction between ‘domesticated cultivars’ and ‘wild relatives’ might even be meaningless. Nevertheless, the label ‘wild’ categorizes Indigenous cultivars, medicinal plants and their genetic information as *res nullius*. For Indigenous Peoples, such denial of their rights is unacceptable.

Indigenous Peoples and Intellectual Property Rights (IPRs)

Access to a vibrant public domain is the backbone of the envisioned global Information Society and its knowledge-based economy. However, at the same time, Indigenous Peoples need to assert their rights and obligations towards their traditional knowledge. Are IPRs a solution to this problem?

The IPR-concept has been elaborated within the same philosophical framework as the public domain. In fact, both are two sides of one coin. Producing a new creative work with commercial value out of public domain resources, gives rise to private property rights for the inventor or creator. The owner can seek intellectual property protection under IPR law. IPRs are an instrument to reap economic benefits from a commercial creative work by allowing its temporary removal from the public domain.

Applying this legal concept to Indigenous knowledge and creativity raises a number of difficulties. For Indigenous Peoples, “intellectual property” does not necessarily imply ownership in the sense of private property, used for the purpose of extracting economic benefits. Instead, “possessing” knowledge is linked to community and individual responsibilities, involving a reciprocal relationship with humans, animals, plants or places it is connected to. Due to the collective status of traditional knowledge, it might violate Indigenous ethics to determine a single owner (an individual or a group) as creator or inventor. Also, for many Indigenous Peoples creation is a gift. Authorship or the source of innovation may be assigned to ancestors or spiritual beings. Human ownership is rather

understood as custodianship, with future generations as strong rights-holders.

Current IPR-regulations cannot assist Indigenous Peoples in preventing unauthorized release of their knowledge into the public domain with subsequent exploitation either. IPRs are temporary and solely protect the expression of ideas or their physical embodiment, but not the knowledge itself. Instead, protection of a work as intellectual property often means disclosure of relevant knowledge. Copyright protection for Indigenous songs or stories would for instance require recording. Likewise, filing a patent involves public disclosure of the invention. Consequently, related knowledge and information can be freely utilized as long as there is no infringement on a protected work.

Evidently, IPRs cannot enforce respect for Indigenous obligations towards their traditional knowledge or protection against its appropriation. Thus, adequate *Rights of Indigenous Peoples in the Information Society* must be elaborated.

THE INFORMATION SOCIETY - CHALLENGES AND POTENTIALS FOR INDIGENOUS PEOPLES

For Indigenous Peoples, two essential questions emerge regarding their participation in the Information Society:

1. Is it possible to share their knowledge and information without violating their cultural obligations and customary laws?
2. Is it possible to utilize ICTs within their cultural contexts without risking to lose their cultural identity?

ICTs are fundamental tools for the implementation of the Information Society. They determine, how knowledge and information are communicated. ICTs are, as any technology, a cultural product expressing the cultural identity of the society that has developed them. And as any technology, ICTs bring forth a new world - emerging out of particular cultural conditions and in turn helping to create new ones (Escobar 1994).

For Indigenous Peoples, these impacts can constitute a challenge, a potential or both – depending on their participation in this process and their ability to determine ICT utilization on their own terms. Cultural appropriateness of ICT applications and content, also reflecting Indigenous modes of communication, is essential. ICT use must support and enrich Indigenous cultures, strengthen their identities and improve their quality of

life. Also, ICTs cannot replace traditional elements of Indigenous cultures, such as inter-generational knowledge transmission or interaction with ancestral territories. If these pre-conditions are met, ICTs might develop into a useful complementary tool. Otherwise, they may contribute to culture loss. (Indigenous Media Network 2003)

Table 1. Towards an Indigenous Vision of the Information Society (Indigenous WSIS-Position 2003)

Key elements	Instruments
Equal participation of Indigenous Peoples and recognition of Indigenous cultural approaches towards knowledge, information, communication and ICTs	Recognition of existing Indigenous Rights; Respect for treaty rights; New standard setting activities to develop adequate <i>Indigenous Rights in the Information Society</i>
Respect for Indigenous cultural protocols for sharing, disseminating and communicating knowledge and information; Protection of Indigenous knowledge against appropriation, misuse and unauthorized exploitation; Enforcement of Indigenous cultural obligations towards their knowledge	Creation of an international legal instrument with participation of Indigenous Peoples, taking into account: <ul style="list-style-type: none"> - the right of Indigenous Peoples to full ownership, control and protection of their cultural and intellectual property - their culturally diverse concepts and provisions of their customary laws in defining the term “intellectual and cultural property” - their cultural obligations towards communicating, sharing, disseminating, using and applying knowledge - alternatives to the application of the public domain concept to their knowledge and genetic information originating from their territories - alternatives to the application of current IPR regimes to their knowledge and genetic information originating from their territories - the collective status of their knowledge - their culturally diverse concepts of ownership - a multi-generational view towards rights holders - their right to be first beneficiaries of their knowledge - culturally appropriate mechanisms of benefit sharing - their right to say “no” - adequate monitoring mechanisms Creation of similar national legal instruments and mechanisms

Key elements	Instruments
Equal partnership in building the Information Society; Contributions to the ethics of the Information Society; Intercultural understanding.	Establishment of a high-level mechanism that brings together Indigenous and non-Indigenous actors and provides Indigenous Peoples with the possibility to continuously contribute their input towards the evolution and implementation of the Information Society; Promotion of exchange between Indigenous and non-Indigenous practitioners to foster mutual understanding and develop solutions that respect Indigenous approaches in a global Information Society

Accordingly, participation of Indigenous Peoples in the Information Society needs to be rights-based. Recognition of Indigenous rights such as those related to their ancestral territories, traditional knowledge, cultural values, educational systems, languages, methods of teaching and learning, the integrity of their traditional health systems and healing practices or establishment of their own media are fundamental for enabling Indigenous Peoples to become equal partners in the evolution and implementation of the Information Society, and to develop their own visions.

Within such a framework, Indigenous ICT utilization could include:

- Preservation of Indigenous cultures and languages;
- Indigenous education, and particularly long-distance teaching;
- Indigenous language training;
- Indigenous health education;
- Health assistance for remote Indigenous communities;
- Environmental education and monitoring;
- Support for traditional ways of life, for instance: nomadic communities;
- E-business;
- Establishment of Indigenous media;
- Intercultural education and combating racism and discrimination against Indigenous Peoples.

However, not all Indigenous knowledge and cultural expressions can be digitalized and/or digitally preserved, due to cultural protocols and obligations. Also, Indigenous Peoples are deeply concerned about losing ownership and control over use of their traditional knowledge and cultural expressions, once they are displayed for preservation, educational or other purposes - and thus classified as part of the public domain by the non-Indigenous world.

Therefore it is indispensable for Indigenous Peoples to not only control and determine the utilization of ICTs in their communities, but also develop their own culturally appropriate ICT applications and content. Furthermore, from an Indigenous point of view, it may be essential to involve Elders and other traditional authorities, responsible for guarding Indigenous knowledge, into resolving these questions.

Table 2. Towards a policy on Indigenous Peoples and the Information Society (Indigenous WSIS-Position 2003)

Key elements	Instruments
Development of Indigenous approaches towards the evolution and implementation of the Information Society and establishment of equal partnership between Indigenous and non-Indigenous actors	<ul style="list-style-type: none"> - Promotion of Indigenous research projects to explore the aspirations of Indigenous Peoples towards the Information Society and the potentials and challenges it poses to their communities - Support for Indigenous monitoring activities regarding legislation and business practices affecting their traditional knowledge and cultural expressions
Bridging the digital divide in Indigenous areas	<ul style="list-style-type: none"> - Support for Indigenous studies to develop strategies of Indigenous Peoples how to bridge the digital divide in their regions on their own terms and ensure affordable access solutions - Promotion of “ICT - Elders-and-Youth” initiatives in Indigenous communities - Support for Indigenous Peoples to exchange experiences on ICT-use among themselves - Promotion of “Indigenous-to-Indigenous” co-operation
Development of culturally appropriate ICT-applications	<ul style="list-style-type: none"> - Design of culturally appropriate capacity building instruments on ICT-use by Indigenous experts and with participation of the Indigenous Peoples concerned - Informed decision-making processes by Indigenous Peoples on their needs for ICT-utilization and on culturally appropriate ICT-applications and content - Development and implementation of culturally appropriate ICT- solutions with participation of Indigenous Peoples, taking into account high illiteracy rates and lack of command of non-Indigenous languages, while simultaneously strengthening Indigenous languages

Key elements	Instruments
Establishment of Indigenous media	<ul style="list-style-type: none"> - Promotion of partnerships for culturally appropriate digitalization of Indigenous languages, if so requested by the Indigenous Peoples concerned, with projects carried out under their direct control and with their approval for every step of the process - Support for Indigenous research on the effects of ICT-utilization on the survival of Indigenous cultures, languages and identities - Developing, in co-operation with Indigenous Peoples, policies and communication legislation for the establishment, operation and funding of Indigenous media and related technical infrastructure - Support for content development by Indigenous Peoples to counter racism against them

Culturally appropriate capacity-building on technical aspects, but also on the potentials of ICTs in their various fields of application will be fundamental to enable informed decision-making of Indigenous Peoples. Preferably, such programs should be designed and carried out by Indigenous ICT-experts.

However, Indigenous Peoples, no matter where they live, are affected by the digital divide. Lack of basic infrastructure including electricity and telephone services, availability of servers and ICT-equipment and/or financial resources for necessary acquisitions prevent many Indigenous Peoples from access to and participation in the Information Society. Nevertheless access solutions have to be culturally appropriate. Thus, the right of Indigenous Peoples to bridge the digital divide on their own terms has to be recognized. One possible avenue to take would be the promotion of “elders-and-youth” initiatives that would assist Indigenous Peoples in shaping their future without losing their cultural identity and in supporting the survival of their living cultures without risking their museumisation.

To reach these goals, it is important for Indigenous Peoples to share experiences on ICT-use and to conduct their own research on these issues.

INDIGENOUS CONTRIBUTIONS TO THE INFORMATION SOCIETY

Traditional knowledge is often viewed as primitive, without value or “wild”. Treating it as “raw material” for the “new economy” continues this tradition.

However, human progress and particularly European development historically have greatly benefited from Indigenous knowledge and innovations. Quinine and rubber for instance, both originating from Indigenous cultures, played an important role in European medicinal and industrial development. Potatoes, tomatoes, corn, cacao or chocolate are all the result of Indigenous creative work. Even the shaping of democratic ideas was influenced by Indigenous philosophies.

Indigenous Peoples guard a major part of existing knowledge about biodiversity, while their philosophies provide holistic guidelines for its use. Today, Indigenous knowledge continues to fuel progress in medicine, agriculture and economic production, but also on the philosophical level. Lately, it has been instrumental in forming the idea of sustainable development.

An Indigenous vision for a future Information Society seeks inclusion of their *web of life* philosophy. Indigenous Peoples understand that knowledge, information, communication and technology are not context-free, but intimately interwoven with ethical obligations towards the entire web of life. Global networks and “the web” as emerging organisational principles of the Information Society point to this reality. However, the evolving vision of human organisation and interaction within all-embracing network structures so far lacks philosophical and ethical grounding.

The very concept of traditional knowledge offers a contribution to developing a holistic philosophical framework of the Information Society, adequately reflecting its network character. Recognizing its moral principles would enrich a global cyber-community with an ethical dimension on knowledge sharing. Respecting its holistic nature would provide the actors of the knowledge economy with an ethical guideline for responsible utilization of information and content. Thus, protection of Indigenous rights enables Indigenous equal participation in shaping a common future nurtured by cultural diversity.

BIOGRAPHY

Kenneth Deer has been coordinating a study on Indigenous Peoples and the Information Society to produce a position paper for Indigenous

representatives to Prepcom 3 and the World Summit on the Information Society. He was media coordinator for the Indigenous Caucus at the World Summit on Sustainable Development 2002 in Johannesburg. He was selected as an Indigenous journalist by the UN to report on the World Conference Against Racism 2001. In 2000 he was chairman/rapporteur of the United Nations Workshop on Indigenous Media in New York.

He is founder of the weekly newspaper *The Eastern Door* (since January 31, 1992). As owner, publisher and editor, he oversaw the development of the paper from its beginnings until today where it is a well established, award winning newspaper. He occasionally writes editorials in the *Montreal Gazette*, a large urban newspaper.

He is member of the Native American Journalist Association and winner of a number of awards from this association, Canadian Community Newspaper Association and the Quebec Community Newspaper Association. He was member of the Board of Directors for the Quebec Community Newspaper Association from 1999 to 2001.

Kenneth is co-founder of the Indigenous Media Network, an international organization to link Indigenous journalists around the world. (www.indigenousmedia.org)

On the international level he is coordinator and often co-chairman of the Indigenous Caucus at the United Nations in Geneva. As such, he participates in the meetings of the UN Working Group on Indigenous Populations, the Working Group on the Draft Declaration on the Rights of Indigenous Peoples, the Permanent Forum on **Indigenous Issues** and other meetings. He has been invited speaker to numerous seminars in various countries to discuss Indigenous Rights.

Ann-Kristin Håkansson has been assisting in carrying out a study on Indigenous Peoples and the Information Society and to produce a position paper for Indigenous representatives to Prepcom 3 and the World Summit of the Information Society. She has 20 years of experience in development co-operation with Indigenous Peoples, project management and project evaluation. Furthermore, she has carried out a number of research tasks in this context. Finally, she has organised Indigenous capacity-building programs for Indigenous Peoples from developing countries, but also served as a resource person in such training programs. Her main geographic areas of work are Latin America and Africa.

Ann-Kristin has worked as a consultant for the European Commission, undertaking a study on the EU-development co-operation with Indigenous Peoples. The study served as background material for the elaboration of an European Union policy on Indigenous Peoples and development co-operation. Furthermore, she was in charge of a commission funded project

on conducting regional studies on *Indigenous Peoples in the Development Situation* on a global scale, resulting in the production of a booklet on an Indigenous approach to sustainable development.

Since 1977 she has worked for the Saami Council, an Indigenous NGO for Saami living in Norway, Sweden, Finland and Russia. The Saami Council was established in 1956 and has a consultative ECOSOC status at the United Nations.

On the international level, she participates in meetings related to Indigenous issues, such as the United Nations Working Group on Indigenous Populations and the Working Group on the Draft Declaration on the Rights of Indigenous Peoples, the United Nations Human Rights Commission and the Commission on the Right to Development.

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