Indigenous Knowledge and Communication: Current Approaches[1]

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Abstract

Indigenous knowledge -- the knowledge developed by local people and passed down over generations -- is a major, untapped resource for development. , Indigenous information is transmitted mainly through indigenous communication channels: indigenous organizations, folk media, traditional education, and so forth. This paper analyzes current approaches to indigenous knowledge, examines the interface between indigenous knowledge and indigenous communication, and explores ways in which indigenous knowledge and communication can be used to promote participatory development.

We are becoming ever more aware of the human element in the development equation, as reflected in calls for people's participation in development activities. Central to participation is the concept of indigenous knowledge -- local knowledge, specific to a certain place or culture, developed by local people and passed down through the society over generations.[2] Parallel to and interlocking with indigenous knowledge is a system of indigenous communication. This article describes both indigenous knowledge and communication and suggests ways in which they can be integrated into current development efforts.

Indigenous Knowledge

We can conveniently contrast indigenous knowledge with the "modern," "Western," "international," "scientific," or "exogenous" knowledge generated through universities, research institutes, and private industry. Where international knowledge is (or claims to be) systematic, value-free and not bound by culture, indigenous knowledge is location-specific, value-laden, and closely related to the local culture.

Indigenous ("local," "traditional") knowledge is reflected in the massive rice terraces of Banaue in the Philippines, constructed 2000 years ago without the aid of a single theodolite or a single engineer. It is demonstrated by the traditional *subak* irrigation associations of Bali, in Indonesia, which govern the flow of irrigation water to rice paddies in that island. It is shown by the familiarity of Sahelian nomads with the plants and rainfall patterns of their parched land. It is reflected in the vast range of traditional herbal treatments for both humans and livestock -- many of which treatments have been validated through scientific methods -- and by the rituals that accompany their use.

From an outsider's perspective, indigenous knowledge may be inconsistent, based on superstition, or just plain wrong. But a member of the local culture sees it as logical, useful, and consonant with other beliefs.

Not all indigenous knowledge is of ancient origin. Farmers and other local people generate new knowledge every day -- through trial-and-error, deliberate experiments to develop and

test new techniques, and adaptations to suit a changing economic and biophysical environment (Rhoades and Bebbington 1988). Indigenous knowledge is thus dynamic -- not static, as the word "traditional" commonly implies.

Indigenous knowledge is central to participation because people make decisions based on their existing knowledge and experience. Development activities that try to impose an outside technology without considering what local people know and do, cannot be participative.

Indigenous knowledge and the idea of sustainability are also intertwined. Often it is the indigenous practice that is sustainable, while many "modern" technologies harm the environment or force local people onto an economic treadmill.

This is not to imply that indigenous techniques are superior to modern ones. On the contrary, many are actually harmful. But they should be considered nevertheless, since they define what local people know and do -- they are part of the local culture. To ignore existing knowledge is not only to ignore a potential major development resource. To ignore it is to ignore local people themselves.

Approaches to indigenous knowledge

Various underlying views of indigenous knowledge can be identified in the literature. These views are riot all mutually exclusive -- indeed, they overlap to some degree. Some individuals lean toward one view without necessarily rejecting the validity of the others. Below are brief stereotypes of seven such views.[3]

1. **The Scientist** studies indigenous knowledge for its own sake -- as an interesting phenomenon that may yield insights into culture (as in anthropological research) or the physical world (as in biomedical research to identify plants that contain hitherto unknown active ingredients for drugs). The scientist views knowledge as something to be shared openly for the betterment of all humankind.
2. **The Development Agent** sees that farmers and other local people are acutely attuned to their surroundings. They have intimate knowledge of their soils, climates, and markets. Recommendations derived from outside research may not fit local needs and require costly inputs. The development agent recognizes that recommendations are more likely to be useful and sustainable if they are based on existing practices and are couched in terms that local people readily understand.
3. **The Facilitator** pressures for indigenous knowledge as a resource that local people can use to further their own development. Instead of trying to persuade farmers to adopt technologies developed elsewhere, in this view, agricultural extensionists and other development workers should facilitate farmers' experiments and encourage local people to exchange information.
4. **The Conservationist** views with alarm the current rapid rates of environmental destruction and biodiversity loss. Traditional, minority societies occupying remote, often forested and mountainous areas, are suffering similar disruption under the onslaughts of environmental destruction, urbanization, and outside culture. The conservationist advocates the protection of these societies and the preservation of their cultures and knowledge in situ.
5. **The Political Advocate** perceives local people as being suppressed by wealthy, often foreign, elites. This view supports the protection of rights and the end of exploitation. It denies the scientist's ideal of sharing of wisdom for mutual betterment, instead seeing relationships with potential of exploitation. Sanctions

must protect the weaker party -- for instance by introducing patent rights for indigenous knowledge to prevent their expropriation by outsiders.

6. **The Capitalist**, by contrast, sees indigenous knowledge as a resource to be tapped by outsiders in pursuit of a profit. Examples of this are the "chemical prospecting" of tropical forests by drug companies and germplasm collecting by crop breeding firms. Both may draw on the knowledge of local people to identify promising sites, species, and uses. The capitalist makes a large investment of knowledge and money in developing, say, a new crop variety from such germplasm. This, it is argued, dwarfs the original local contribution and justifies the firm's patenting of the variety. Aspiring to the scientist's quest for knowledge and free access to information, universities and herbariums are often unwitting partners of the capitalist.
7. **The Skeptic** views indigenous knowledge at best as amusing, and at worst as dangerous superstition -- a barrier to progress. According to the skeptic, indigenous knowledge should be eradicated as soon as possible through education and the modernization process. If only local people were "rational," the skeptic argues, they would recognize the superiority of introduced technologies or new economic forms. Sadly, the skeptic's view is the dominant one among policy makers and government personnel.

Indigenous communication

Parallel to the concept of indigenous knowledge is the notion of *indigenous communication* (Wang 1982, p. 3). Indigenous communication channels include folk media such as puppet shows and folk drama, interpersonal communication channels, storytelling, village organizations, markets, discussions at the well and tea house, and other forms discussed briefly below.

Indigenous communication systems exist alongside exogenous forms such as the mass media, schools, extension services, firms, banks, postal and telephone services. Together with the exogenous forms, they form the information environment of people in both urban and rural areas.

Indigenous channels carry a wide range of messages: entertainment, news, and other social exchanges. Here I will focus on their use to transmit technical information -- a topic of interest for development purposes, yet strangely neglected by academics and development professionals alike.

Types of indigenous communication

As indicated above, indigenous communication can take many different forms. Here are five:

1. **Folk media** are the indigenous equivalents of exogenous mass media. They include festivals, plays, puppet shows, dance, song, storytelling and poetry (Valbuena 1986). Of the various indigenous channels, the folk media have been most used to support development activities. In Indonesia, India and other countries, puppetry and other folk media have been used to promote family planning and political messages, often with success.
2. **Indigenous organizations** include religious groups, village meetings, irrigation associations, mothers' clubs and loan associations (van den Akker 1987). These

organizations orchestrate much communication: through formal meetings of members, by messages sent about activities and obligations, and through work activities.

3. **Economic relationships and service suppliers** such as traders, farm input suppliers, and indigenous specialists such as healers and midwives are important sources of information for local people. Market traders provide information on prices, varieties and fertilizer use. Healers explain diseases and treatments. Any society has individuals who are regarded as authorities in their field of specialization. They are potent sources of indigenous knowledge on that topic.

4. **Deliberate instruction**. When we are children, our parents, families and peers teach us how to eat, how to behave, how to cook, plough and plant. Warren (1964, p. 10) calls this process "deliberate instruction." It continues during adolescence and adulthood through initiations and other rites of passage, apprenticeship arrangements and the instructions given by village elders.

   Deliberate instruction would seem far more important in the communication of technical information than are the occasional folk media performance or village festival, or even than the mass media and schools. Yet deliberate instruction has received very little attention from development specialists.

5. **Unstructured channels.** Indigenous communication occurs in many other settings: talk at home and at the well, in the fields and on the road, in the teahouse and chief's house, and wherever else people meet and talk. A major part is communication among kin and peer groups. This communication is not organized or orchestrated but spontaneous and informal.

And many other forms of indigenous communication exist: African memorized narratives, Balinese land ownership records written on palm leaves, folklore and proverbs, to name a few. And direct observation may be important: a farmer may observe a neighbor's bumper crop and decide the variety used is a good one.

The knowledge-communication interface

Let us imagine an exogenous technology, such as a new rice variety developed at the research station. Details of this technology are commonly passed through exogenous channels -- the extension system and the mass media. They may also find their way into indigenous channels, for instance when farmers discuss the new rice in the tea house or' at a community meeting.

Similarly, let us imagine an indigenous technology, such as a herbal medicine used to treat a ruminant ailment. Such a technology can also pass through indigenous channels, as when a native healer passes on the skill to an apprentice, or the technique is discussed in the tea house. But it is seldom that such information enters the exogenous communication system or is disseminated through the extension service or mass media.

Technology transfer. The majority of the technical information passing through exogenous channels is exogenous in nature. This quadrant (Figure 1) has been the focus of most development communication efforts and research. It might conveniently be termed "technology transfer" -- a strategy aiming to develop technologies that are clearly superior to current practices and to disseminate them through channels over which the disseminating agency has some control. Indigenous channels are seen as multipliers that will take over the dissemination process once the innovation has proven superior.

Communication systems	Knowledge systems	
	Exogenous	Indigenous
Exogenous	Technology transfer	Indigenous-knowledge-based development
Indigenous	Diffusion; coopting of traditional media	Cultural continuity and change

Figure 1. Typology of the interface between knowledge and communication types.[4]

Cultural continuity and change. Just as exogenous information is communicated mainly by exogenous channels, indigenous information is transmitted almost exclusively through indigenous channels. This process is vital to the continuity of cultures and their adaptation to a changing world.

The study of traditional communication systems has fallen largely into the realm of cultural anthropology. Even so, many anthropologists have ignored the communication of technical knowledge. There is a need to search for clues on how these communication systems work and to incorporate this knowledge into development projects.

Each of the indigenous channels described above can carry technical messages, though some are more suited to this task than others. It seems that deliberate instruction is likely to be more important than folk media, for instance, despite the disproportionate attention given to the latter.

Diffusion. The spread of exogenous information through indigenous interpersonal networks has been the focus of much of the vast literature on innovation diffusion. Numerous studies of innovation diffusion have been made in developing societies, identifying such features as opinion leadership, the importance of homophily, socioeconomic status, interpersonal networks, and so forth. Much effort has been put into identifying characteristics of key actors (innovators and opinion leaders) in order to target them in information campaigns (Rogers 1983).

Organized channels and folk media are also frequently co-opted to spread exogenous information. For instance, extensionists use traditional organizations to spread family planning and agricultural messages. In the last two decades much attention has been given to the folk media to promote social change (Kidd 1982). The advantages of using these media include their familiarity and credibility to local people and the potential for the involvement of the audience in performances.

Two problems are evident in using folk media to spread development messages developed by others. The first is that even though in their original forms they may contain morals or substantive messages embedded within them, these media carry primarily entertainment in the same way as do the mass media. Audiences may therefore not perceive or understand the development messages included in the script (Lent 1982).

The second problem is that audiences may resent the use of traditional forms to convey development messages (Diaz Bordenave 1975). One way to avoid this is to enable local people to develop their own messages and performances, as in an International Institute of Rural Reconstruction project described by Compton (1980, p. 309-311) in the Philippines.

Indigenous knowledge-based development. Indigenous information rarely finds its way into the exogenous media, though this has great growth potential. One such area is represented by the growing literature on indigenous knowledge (for example, Brokensha et al. 1980, Warren et al., in press) and the global indigenous knowledge network.[5]

Another area is the emphasis given to farming systems research in many countries, and within this, the movements toward participatory rural appraisal and farmer-managed research.

A third area is in the use of exogenous media to enable farmers to learn directly about indigenous knowledge. Among the few examples of this in the developing world is Minka, a low-cost magazine devoted to recording and disseminating the knowledge of local farmers to other farmers in the Peruvian Andes (Altieri 1984).

Melding indigenous with exogenous

It is possible to meld indigenous and exogenous forms of knowledge, for instance by using modern research techniques to improve (rather than replace) local technologies. It is also possible to meld indigenous and exogenous forms of communication, as when extension services tap into local channels to exchange information, or when local people use video to communicate with their peers in other villages.

Both indigenous and exogenous forms of knowledge and of communication have much to offer. Both can be used to the advantage of local people -- or to their detriment. Indigenous knowledge and indigenous forms of communication should not become yet another way of extracting resources from the poor and of making them comply with an outsider's will. Rather, they should be used to the benefit of local people, as vehicles they can themselves use to further their own development.

References

Akker, Piet van den. Savings clubs (*jam'iyyat iddikhar*): The Egyptian experience. Development 1987(2/3):145-147, (1987).

Altieri, Miguel A. Towards a grassroots approach to rural development in the Third World. *Agriculture and Human Values* 1(4):45-48, (1984).

Brokensha, David, D. M. Warren and Oswald Werner (eds.). *Indigenous knowledge systems and development*. Lanham, MD, University Press of America, (1980).

Compton, J. Lin. Indigenous folk media in rural development. Ch. 17 in: David Brokensha, D.M. Warren and Oswald Werner (eds.). *Indigenous knowledge systems and development*. Lanham, MD, University Press of America, (1980).

Diaz Bordenave, Juan. The role of folk media: A point of view. *Instructional Technology Report* 1.2. Informational Center on Instructional Technology, Washington, DC, Academy for Educational Development, (1975).

Kidd, Ross. The popular performing arts, non-formal education and social change in the Third World: A bibliography and review essay. *Bibliography 7*, The Hague, Centre for the Study of Education in Developing Countries (CESO), (1982).

Lent, John A. Grassroots renaissance: Folk media in the Third World. Media Asia 90):9-17, (1982).

Mundy, Paul, and J. Lin Compton. Indigenous communication and indigenous knowledge. In: Warren, D. Michael, David Brokensha, and L. Jan Slikkerveer (eds.). In press.

Indigenous knowledge systems: The cultural dimension of development. London, Kegan Paul International, (in press).

Nicholls, Robert W. Music and dance associations of the Igede of Nigeria: The relevance of indigenous communication learning systems to rural development projects. Ph.D. dissertation, Washington, DC, Howard University, (1992).

Reppika (Regional Program for the Promotion of Indigenous Knowledge in Asia). *Indigenous knowledge and sustainable development*. An international symposium held at the International Institute for Rural Reconstruction, September 20-26, 1992. Silang, Philippines, IIRR, (1993).

Rhoades, Robert and Anthony Bebbington. Farmers who experiment: An untapped resource for agricultural research and development. Paper presented at the International Congress on Plant Physiology, New Delhi, India, 15-20 February 1988. (Draft, 1988).

Rogers, Everett M. *The diffusion of innovations*. New York, Free Press, (1983).

Valbuena, Victor T. *Philippine folk media in development communication*. Singapore, Asian Mass Communication Research and Information Centre, (1986).

Wang, Georgette. Indigenous communication systems in research and development. Paper presented at the conference on Knowledge Utilization: Theory and Methodology, 25-30 April 1982, Honolulu, HI, East-West Center, (1982).

Warren, Charles P. Progress report III: Deliberate instruction in non-literate societies. Chicago, IL, Department of Anthropology, University of Chicago, (1964). (ERIC document ED 040 121.)

Warren, D. Michael, David Brokensha, and L. Jan Slikkerveer (eds.). *Indigenous knowledge systems: The cultural dimension of development*. London, Kegan Paul International, (in press).

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[1] This article is based largely on Mundy and Compton (in press) and the introduction to Reppika (1993).

[2] "Indigenous" as used here is broader than the Spanish term indigena, which refers solely to Latin American Indians and other native peoples; rather, indigenous knowledge refers to the local knowledge of any culture or group of people.

[3] These stereotypes are based on an idea by Frank Denton, IIRR.

[4] Nicholls (1992, p. 532) has a similar typology.

[5] For more information on this network, contact the Center for Indigenous Knowledge for Agricultural and Rural Development (CIKARD), Iowa State University, Ames, IA 50011, USA (fax 1-515-294-1708); the Centre for International Research and Advisory Networks (fax 31-70-351-0516); or the Regional Program for the Promotion of Indigenous Knowledge in Asia (Reppika), International Institute of Rural Reconstruction, Silang, Cavite, Philippines (fax 63-2-522-2494).