Rural Places: <u>Local Community Building with Intermediate Technology in a Global Context</u>

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Through ever increasing urban migration, rural areas in both developed and undeveloped

countries are losing their local culture and sense of place. Despite the stark differences in local

economies, technologies, politics and social ways of life there is a prominent Western

misconception throughout the developed and undeveloped world that insists that communities

must infinitely scale up to become 'urban', or continue in a decline towards eventual failure

(Luther, 1997, p. 152). Evidence of this may be seen ranging from the declining populations of

North America's agricultural communities to the continued impoverished state of India's rural

areas. This globalized perspective needs to be challenged if we are to encourage and exercise

a sustainable development practice that has roots in the local place of these communities, to

further an exploration into alternative, achievable and sustainable futures. This challenge is

articulated by investigating and comparing two projects situated in rural North America and

India, each providing sustainable options for rural communities in a global context.

In America alone the farming population has dropped from 30 million in 1940 to 5.4 million in

1985 and is still continuing to decline due to so called economic and technological

progress(Clugston, 1997, p. 79). Meanwhile, India faces staggering rural decline as over

500,000 people migrate to Delhi each year as "lopsided investment in information technologies

leaves agriculture to stagnate and rural infrastructure to decay"(Davis, 2006, p. 18, 171).

Although the contributing factors concerning urban migration in both developed and

undeveloped countries differs greatly in each case, many of the contemporary issues

surrounding technological development remain the same. In many cases globalization giantism

and self-assured technological progress have scarcely provided any solutions to the problems

of rural decline in these areas, and as a result, have contributed to a loss of local culture and

sense of place. Growing groups of local thinkers and activists are learning to effectively

counteract the damage of globalization by shifting the scale and attention back to the local

community, local culture and place (Esteva, 1997, p. 286). Through a shift away from this

enormous globalized and technological scale toward a counter-globalized local scale, these

groups provide the necessary ground work to eventually reformulate technologies through local

self determination. As a result these communities are able to reassess their own rural progress

on a local level by implementing what Schumacher refers to as intermediate technologies. The

concepts of integrating intermediate technologies as a vehicle for developing a counter-

globalized local scale will be exemplified through a dialogue between two distinct case studies.

In the essay "The Work of Local Culture", Wendell Berry examines the importance of bringing

attention back toward a community driven process, a departure from our modern perception of

progress in a globalized sense. Berry accepts the idea that when the "local community decays

along with local economy, a vast amnesia settles over the countryside"(Berry, 2007, p. 5). As a

result this amnesia of local memory, wisdom, and knowledge produces a loss of local culture

and place accepted as just "another by-product of the technological and economic progress"

(Berry, 2007, p. 5). Berry continues to challenge that "lacking an authentic local culture, a place

is open to exploitation, and ultimately destruction, from the center"(Berry, 2007, p. 12). In these

terms technological progress, at a scale of global economic development, deprives a

community of its sense of place and local culture, resulting in a deterioration of the rural way of

life. It is however, through alternative intermediate technologies and local involvement rooted in

the community that development can pursue a positive role in re-building these communities.

Local cultures and groups are beginning to protect and liberate themselves from imposed

definitions of what global economic development has determined as "the good life" by rooting

themselves firmly in their own cultural commons and refusing to be marginalized by any global way of life (Esteva, 1997, p. 285). However, it is important to note that this cultural commons also belongs to a global community. Furthermore, it is with a distinction in improving the local place with like-minded communal action that *good* global thinking can occur to help build bridges on local, national and global scales (Johnston, 2006, p. 63). Through local self-help and self-determination, deteriorating rural communities have made it possible to liberate themselves from the global economic development chains that continue to support urban migration. Two very distinct regional case studies of local community projects are rooted in North America and India respectively and each have been successful in forming regional networks and providing community leadership within a sustainable model.

Local communities and grassroots organizations in North America have begun to collaborate by providing fundamental restructuring of the agricultural economy. Communities are becoming entrepreneurs and have identified and constructed new opportunities for themselves in the wake of declining rural population and economics stability. The success story of the community of Craik, Saskatchewan, through self-determination initiated a long-term community-based rural revitalization project as a means to promote sustainability through viable solutions. The 'Craik Sustainable Living Project' developed out of need to provide "local and tangible initiatives addressing climate change and the socio-economic revitalization of its rural community" (McMillan, 2004, <http://www.craikecovillage.ca/intro.html>). As part of a regional network, the project provides inspiration for positive change throughout Western Canada by focusing on four key activities related to sustainable solution for the community: the eco-centre, outreach and education, community action, and the eco-village. Locally, the 'Craik Sustainable Living Project' has developed to become a source of pride and place for the community providing a pivotal role

in promoting continual renewal for the area.

Similarly, the 'Barefoot College' NGO, located in Tilonia, Rajasthan, India was originally founded with the strong belief that solutions to rural problems also lie within the community. The 'Barefoot' concept takes skills normally concentrated in the hands of urban professionals to groups in the general population, changing attitudes of the rural communities so that they may become self-reliant in order to stop urban migration. Stemming from Gandhi's central belief that the knowledge, skills and wisdom found in the rural Indian villages should be used for their own development before acquiring skills from outside, the 'Barefoot College' provides community members the opportunity to become 'barefoot professionals' (Brunei Gallery Website, 1998, <http://www.soas.ac.uk/gallery.html>). By providing individuals the means to be self-sustaining, the 'Barefoot College' recognizes the importance of having the rural poor satisfy their own basic minimum needs. The college provides an alternative to global economic development by acknowledging that "development programmes do not need urban-based professionals because para-professionals already exist in the villages whose wisdom, knowledge and skills area neither identified, mobilized nor applied just because they do not have an educational qualification" (Barefoot College Website, 2005, <http://www.barefootcollege.org>). The Barefoot approach is also spreading beyond India to encompass women and men from Afghanistan, Bolivia, Cameroon, Mali, Sierra Leone, and The Gambia. These 'Barefoot Professionals' receive training for six months in Tilonia and subsequently return home to their communities to impart skills learned through the college.

In a global context, both the 'Craik Sustainable Project' and the 'Barefoot College' have widespread influence outside of their immediate communities, providing local examples of

leadership in alternative development practices to other areas within the global community. These examples have established a cultural commons of knowledge. One that provides community based knowledge from non-expert sources and is rooted in the spaces of everyday local living (Johnston, 2006, p. 62).

Within the global economy, technology is at the forefront of rural development practices. Large scale technologies have become increasingly used and adopted as global solutions for development in rural areas in both developed and undeveloped countries. Leopold Kohr suggests "that the true problem of the modern age lies in the inhuman size or the scale of many contemporary institutions and technologies" (Esteva, 1997, p. 287). It is suggested that the scale of these contemporary technologies and governing institutions has grown to an inhumane size that it is now becoming culturally reductive rather than productive. It is now time to seek alternatives to reinterpret the scale and application of such technology in order to inform a shift to what Schumacher would call intermediate or self-help technologies.

In recent years technological innovation in rural North American agricultural areas has reduced the need for human labour, causing once thriving communities to shift away from agriculture by either moving to larger centres for employment or finding other means of staying in a place by building in another direction. This decline offsets what was once considered a largely self-sufficient agricultural economy based on a mutual assistance of community members. Currently, technological progress has grown on a monumental scale to increase production of high volumes leaving these areas dependant on outside inputs (equipment, fertilizers and fuel). This technological innovation has further replaced human labour creating extensive rural unemployment by substituting jobs with petroleum (Clugston, 1997, p. 79). The resulting

decrease in rural population with associated agricultural livelihoods has shifted demographics away from rural to urban areas. Such technological innovation has triggered rising unemployment and the decline of many rural communities in North America.

In comparison, rural India's struggle with technology has had widespread adverse effects on rural communities throughout the country. India has recently seen "enormous speculative investment in the information technology sector while leaving agriculture to become stagnate" (Davis, 2006, p. 171). While the urban middle class enjoy the luxuries that come with prosperous international investment, many of the rural poor live increasingly in despair which has in turn "dislodged vast numbers of poor farmers and labourers whose only alternative has been migration to the slum outskirts of high-tech boomtowns like Bangalore" (Davis, 2006, p. 172).

In both the North American and Indian instance Berry would argue that not only are these communities going through a dramatic demographic shift but they are also losing their sense of culture and place along with it. It is precisely at this point that projects such as the 'Barefoot College' and the 'Craik Sustainable Living Project' are imperative to provide insight into achieving alternatives to mainstream development through implementing intermediate technology in both a rural developed and undeveloped country context.

The 'Craik Sustainable Living Project' has developed intermediate technology in order to help sustain not just the project itself, but to extend itself into the community for a larger community initiative. The project's adaptation to the changing agricultural economy is physically visible in

the eco-centre's use of local construction materials and intermediate technologies. Timber

framing recycled from the recently demolished grain elevators that once stood at the heart of

the town expresses a sense of place within the new construction. Low technology straw bale

construction supplied necessary insulation for the eco-centre while also providing a local farmer

with a new market for fibre production. Passive heating and cooling systems, on-site water

collection, and composting toilets contributed to the centre's growing initiative to promoting

intermediate technology into the building systems. With the projects continued community

support during and since construction along with recent designation as part of the 'United

Nations Regional Centre of Expertise in Environmental Education and Research' the 'Craik

Sustainable Living Project' now provides other community groups with an opportunity to

investigate these kinds of available alternative intermediate technologies (McMillan, 2004,

<http://www.craikecovillage.ca/intro.html>).

Craik Sustainable Living Project

Photos: McMillan, 2004, <http://www.craikecovillage.ca/intro.html>
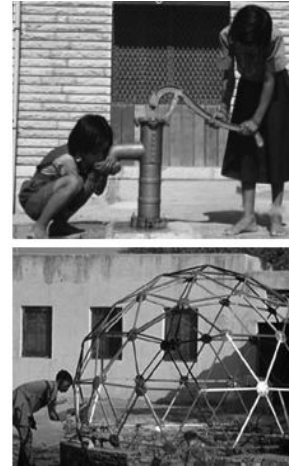
Barefoot College

Photos: Barefoot Photographers, 2005, <http://www.barefootcollege.org>

Comparatively, the 'Barefoot College' relies on the exclusive teaching of such intermediate technologies to community technicians by "demystifing technology, to allow people the space to acquire a skill on their own time, and to building self-confidence so that they can replicate what they've leaned at home" (Barefoot College Website, 2005, <http://www.barefootcollege.org>). The organization has trained over 750 technicians (most of whom have been women, drop-outs, and unemployable youths) in remote villages in 13 Indian states over the past 30 years (Barefoot College Website, 2005, <http://www.barefootcollege.org>). The model respects the local knowledge and capabilities, while promoting local organizations to make community decisions. This community approach purposefully attacks the issue of urban migration by focusing its energies directly on the rural men and women to training them to be self-sufficient leaders within their communities. Intermediate building technologies applied by the 'Barefoot College' include solar power, rainwater harvesting, and recycled geodesic domes.

Originally illiterate and semi-literate rural women and unemployed youth, the 'Barefoot Solar Engineers' trained by the College have installed solar home lighting systems in their villages. Fabricating and producing solar lanterns these 'Barefoot Solar Engineers' have initiated more than 178 kilowatts of solar energy generated across the country through solar photovoltaic and lantern systems. As a result, the solar power initiatives set out by the College have had an enormous effect on these local communities (Barefoot College Website, 2005, <http://www.barefootcollege.org>). More than 300 'Adult Education Centres' and 500 Children's Night Schools have been able to minimize the use of fossil fuels, and have enabled these communities to be self sufficient in creating and maintaining conducive environments for learning and literacy (Barefoot College Website, 2005, <http://www.barefootcollege.org>). Another type of intermediate technological development of the College is the design and implementation of rainwater harvesting structures, which have been installed at the campus and in schools throughout the region. Based on traditional rural technologies, these structures gather water from flat rooftops and channel it to storage tanks, usually situated underground instead of the expensive short-term process of tapping groundwater sources (Barefoot College Website, 2005, <http://www.barefootcollege.org>). An interesting spin off of this inexpensive system is that the attendance of girls in several rural primary schools has improved because they do not have to spend hours walking several kilometres to collect drinking water. A third type of intermediate technology takes advantage of recycled local construction materials in the architectural application of the Buckminster Fuller's geodesic dome. Fabricated from scrap metal available from agricultural implements, bullock carts and pump sections these geodesic domes have been implemented by the 'Barefoot Architects' as a means to provide a construction technique to combat the scarcity of wood typical of traditional housing techniques in the desert area (Barefoot College Website, 2005, <http://www.barefootcollege.org>).

The intermediate technologies incorporate by both the "Craik Sustainable Living Project' and the 'Barefoot College' are evidence that rural communities can explore alternative sustainable developments that are self-supportive and self-sufficient by being engaged and rooted in the local community. By departing from a global technological scale towards that of the local community, both case studies provide insight into how intermediate technologies can be integrated as a vehicle for developing at the scale of the community. By challenging the globalized perspective these projects among others scale back to the local community, thereby initiating the likelihood that rural local culture and place can be retained. As Berry alludes, that only then can there be a true resurrection and renewal of the rural community, and from there it may then lead to the beginnings of a cultural regeneration for an entire country.

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