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The technology transfer systems in communities, product versus processes.

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Abstract

Based on a case study taken place in the jungle community of Santa Rita-Ecuador, we will refer on the negative and positive impacts of the technology transfer system, acknowledging the differences, seeing this as a product versus a process. The product approach will have an impact in form and shape and the process approach on concept ideas and ideals. What may be better for communities? Taking in consideration that sometimes communities might need immediate product solution for their necessities but in the long run empowerment escorted by the people and collaborative processes lead to successful technology transfer and empowered-independent communities.

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1. Main text

Why should any community want or need technology transfers?

The idea of technology transfer has been present “for most of the pre-history of the human species, technology transfer involved tacit knowledge, which is evolutionarily prior to explicit (Donald, 1991; Mathews and Roussel, 1997). There were no written languages until 3000 BC, and language, supplemented by equations and diagrams, is

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still the major means for explicit transfer of technological knowledge. Spoken languages and gestures certainly could have explicitly transferred technological knowledge in friendly encounters, but much of prehistoric technology ‘transfer’ between peoples occurred when the people with the superior agricultural technology assimilated or eliminated those who could not reproduce as rapidly (Diamond, 1997). Within groups, apprenticeship was the main vehicle for knowledge transmission across generations.” (Gorman 2002) And it means ideally using new or non-existing technology in order to apply this technology for the development of a specific context.

This study will show two application of technology transfer and their impacts on communities, first by understanding the technology transfer ideal and ideal through history and within the Latin American context. Then, based on a site specific case study located in the jungle community of Santa Rita - Ecuador, these two approaches, product vs. process, will be confronted through two projects in the community. This comparison will be also illustrated by the use of construction detailing reflecting on two different ideological approaches, dependences vs. empowerment.

Initially during the seventies the way that technology transfer was applied in Latin American countries was most of the times in order to create never ending debt and neocolonialism based on technology, sometimes based on a false ideal of development being engaged in, usually, useless “sick” projects that lead our countries to endlessly depend on technical support for the imported technology: “Economic hit men (EHMs) are highly paid professionals who cheat countries around the globe out of trillions of dollars. They funnel money from the World Bank, the U.S. Agency for International Development (USAID), and other foreign “aid” organizations into the coffers of huge corporations and the pockets of a few wealthy families who control the planet’s natural resources. Their tools in fraudulent financial reports, rigged elections, pays, extortion, sex, and murder. They play a game as old as empire, but one that has taken on new and terrifying dimensions during this time of globalization. I should know; I was an EHM” (Perkins 2004)

Sometimes, and in the past, technology transfer answers not to local requirements but to the owner of the technology’s interests, economic, etc. In present times and based on some catastrophic examples this concept has been evolving to something more responsible for the context in where it should be applied: the appropriate technology² transfer:

“The concept of Appropriate Technology (AT) stemmed from the work of British economist Dr. Fritz Schumacher in the 1970s. Appropriate technology is a grass roots approach to technology that builds a strong sense of community and encompasses benefits that span across social, environmental, cultural, economic, and spiritual facets. Appropriate technology is not a one size fits all approach, but rather adapts to best fit the community in which it is developed. Appropriate technology best fits with the community it serves because it is created by the people to meet a need. Therefore, the communities are placed at the center of decision making and create technologies that will best serve their communities in the long term.” (Margolus, Nakashima y Orr 2011)

The most contemporary mode of seeing the technology transfer might not try to condemn an entire country but sometimes might have strong negative impacts within the communities in which it is applied. This new ideal deals with the involvement of communities and their development using the proposed technology. This ideal may sound great, but sometimes this technology might create unnecessary needs for the communities, and this will engage them to welfarism in order to maintain certain technology and in dependence rather than development. When a technology transfer comes from necessity it generates a processes rather than products. Necessity: meaning a real need from a community and not a need from the technology producer. It should be a matching of necessities between the actors in order to have a win-win situation that doesn’t generate unnecessary dependence.

Process referring to the technology as a role model or a best practice that may be developed, evolved, mutate, transform, etc. in which case we will see the idea of this technology replicated in concept and not necessary in shape or form. Product means, the technology for the technology, in which it creates dependence because this product is something with closed information and systems. When technology transfer comes not from necessity but from external needs, like the need form the technology developer to market its technology, it generates a product which

² Term coined in the 70’s by Ernst Friedrich “Fritz” Schumacher an internationally influential economic thinker, statistician and economist in Britain. Founded the Intermediate Technology Development Group (now Practical Action) in 1966

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