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Technology Transfer, a Public Utility?

Technology development is both difficult, time consuming and expensive. Technology transfer makes technologies available to those who themselves have not developed the technologies they want to use. That appears like a simple and even a natural business transaction between a seller and a buyer, yet that is but one narrow sector of a complex interest. Technologies are vitally important goods not only to individuals but to their various communities. These communities, often states, determine their competitive aspects to one another in relation to the technologies they have. The same states possess keen interest to promote technological progress and consequently offer funds to its realisation. Quite naturally they expect that any successful results be distributed, disseminated, among their entire territory as quickly and effectively as possible.

Societies' funding is inadequate but significant. Mostly technological development is carried out by private enterprises with the help of privately raised funds. The origin of funding tends to determine the fate of the results. This is one of the deriving complexities. The old scientific tradition demands science's results to be free to all while the private funding creates ownerships. This demarcation line has become muddled in the post World War II era with rapid technological development and the two once separate pursuits have become completely intertwined. Technology transfer is strongly related to the concept of owning technology, owning knowledge. Of course it is possible to transfer also such technology and knowledge which is not owned by the transferor but the interest and hope that are placed on technology transfer depend on the rare and limited property rights that guarantee free and undisturbed operation. This attempts simultaneously to exclude competition and improve means to compete. The former relates to direct measures while the latter addresses the question of alternatives.

An acute knowledge related problem arises out of the fundamental difference between the two contextual imperatives, public and private. As separate domains they are also very similar but only when considered separate from each other. A private party regards itself unencumbered beyond financial means which are the same that direct and determine any possible exploitation including technology transfer. A public interest is predetermined only by its statehood according to which it attempts to control and deliver orders as well as rewards and sanctions but with increasing inefficiency. This article intends to discuss the two co-operative and competing domains of technology transfer and propose a mechanism of utility obtaining for both. Special emphasis is put to the juxtapositions of free science and industrial property rights, motivation and restrictions to exploitation, public investment in science and technology development and societies' returns, globalisation and intensification of risks. This article proposes a solution through improved control by public actors. One vital means to exercise control is by science and technology policies whose consequences determine inter alia innovations. **KEYWORDS:** technology, science, utility, knowledge, growth of knowledge, science and technology development (STD), technology transfer, public, private