

"The Value of the Multi-discipline Approach to Research"

Let us begin with a story, "Kunja Kathai" ("Story about the Youngest Brother"). This story is told by the Kaani tribal people of south India, who live in the southernmost section of the Western Ghats mountain range:

Six older brothers invited their youngest brother to come to the forest to hunt for wild pigs. However, deep in the forest, the six older brothers turned on their youngest brother and stabbed him to death with their spears. The youngest brother's two dogs went running back to the village. By whining and nudging, they pleaded with the youngest brother's wife to come with them. They led the wife to her husband's body, laying on the grass. The wife fell to her knees and began to weep. Nearby, a snake and a mongoose were playing. This was unusual because usually they are fighting. The snake observed the woman and said, "Please do not weep, madam. We will get the medicine and bring your husband back to life". So the snake and mongoose got the needed plants, ground and mixed them, and applied the paste to the youngest brother's skin. He revived, to the great joy of his wife. The youngest brother, his wife, and two dogs returned to their village. They told the village elders what had happened, and the six older brothers had to leave the village.

-- Told by Rajammal, in the village of Vellambi, Kanyakumari district, Tamil Nadu, in 2003.

Numerous academic disciplines are needed to consider this story, such as Botany, Chemistry, Biology, Literature, Psychology, Sociology, Anthropology, Folklore, Medicine, Linguistics, Law, Music, Religion, and History. This is the case especially because Kaani culture holds that the fabled Sage Agastiyar taught the Kaani people about medicinal uses of plants (and other subjects).

Medicinal uses of plants, herbs, and flowers -- and stories about same -- is an area that truly brings out the need for and value of the Multi-discipline Approach to Research. The medical plant theme appears in the *Ramayana* epic (when Hanuman brings the needed flower on the mountain). And today, pharmaceutical companies and others are seeking to patent molecular structures in plants, and in plant preparations, and to use these in modern medicines.

"Multi-discipline" refers to the existence of numerous disciplines. "Inter-discipline" refers to moving from one discipline to another. "Trans-discipline" refers to moving through all relevant disciplines -- and this is what is called for when one utilises the multi-disciplinary approach.

Multi-/inter-/trans-disciplinary research often combines data-gathering and theoretical methodologies. It often considers the ethical, environmental, legal, and social implications of situations. And it also often combines the study of the way things are, and the creating of new things.

Some of the academic disciplines and their research methods are:

History -- Methodology: Reading written histories and Government records; and recording oral histories.

Sociology -- Methodology: Designing and circulating polls/surveys/questionnaires about people's opinions and behaviours.

Cultural Anthropology, and Folklore -- Methodology: Ethnographic fieldwork, with participant observation. Cultural Anthropology is the study of cultures as systems. Folklore is considered a separate discipline, although it is also a subset within Cultural Anthropology. Folklore involves traditions, and ways these traditions are changing in the modern world. Folklore is an inter-disciplinary discipline. It has been called the child of Anthropology and Literature, and often also involves Sociology, Linguistics (Socio-linguistics, Conversation Analysis, etc), Communication, History, Education, Psychology, etc.

Storytelling Studies (an inter-disciplinary field) -- Methodology: As with the study of Visual Art, Music, Dance, Theatre, and the other arts, the study of Storytelling often involves both Analytic courses, and Studio courses (in which students receive training in the art).

Natural Sciences (Botany, Zoology, Geography, etc) -- Methodology: Observing and collecting specimens.

Sciences in general -- Methodology: Designing and conducting experiments. These experiments and the results they generate must be repeatable.

All of the above-described methods also involve the scholar generating his/her own commentary and analysis.

To do multi-disciplinary work, a common language that facilitates a shared conceptual framework is needed. And we have it! Common to work in all academic disciplines is the composing, framing, and crafting of *Research Questions*. Preliminary possible answers (hypothetical answers, hypothetical theses, hypotheses) may also be given. Then the balance of a Research Essay involves giving evidence to answer the Research Questions, and to support one's hypothesis (if indeed a hypothesis has been given).

To speak of the *multi-discipline approach* is to speak of diversity. What is the value of diversity?

Biologically-diverse environments tend to be resilient to biological challenges, unlike mono-crops. Diverse plant-life retains top-soil and water in an environment.

But what is the value of *Cultural diversity*? Of *Linguistic diversity*?

Dramatic examples can be found, such as: 1) the afore-mentioned medical uses of plants, and 2) in 2004, due to their traditional knowledge, Moken tribal people who live on islands off the coast of Thailand, recognised the tsunami was coming, and saved lives. Biological, Linguistic, and Cultural phenomena are often intertwined and mutually-supportive (www.terralingua.org). More research needs to be done in this area, to further prove the value of Bio-cultural diversity.

Following are some (paraphrased) statements by scholars regarding Multi-/inter-/trans-disciplinary research:

No single discipline, method, or perspective is sufficient to understand real-world situations.

An institutional platform for collaboration is needed to foster inter-disciplinary research: an infrastructure of cooperating institutions and departments, academic journals, conferences, funding opportunities, and informal networks of researchers.

There is no question about the productivity and effectiveness of research teams formed of partners with diverse expertise.

To understand the world, it seemed necessary to analyze it by breaking it into many pieces (that is, the disciplines and their sub-divisions). But to act in the world effectively, to put our knowledge together again for coping with the real problems of the world, we need to somehow reassemble all the pieces, and all the perspectives. (Robertson 2003.)

We are not students of abstractions. We are students of real problems. And real problems often cut across the borders of academic disciplines. (Popper 1963.)

Many of today's most pressing problems can only be addressed in meaningful ways through combined applications of the natural and social sciences. I am referring to problems such as climate change, genetic modification of plants and animals, pandemic medical diseases and conditions, energy, economic development, social inequality, population control, etc. (Greaves 2008, page 2.)

One example of the multi-disciplinary approach is *Narrative Medicine* (a form of *Storytelling Therapy*). In *Narrative Medicine*, the patient constructs and communicates the story of his/her medical condition in the context of his/her overall life. (Columbia University Medical Center, New York City, Program in Narrative Medicine, www.narrativemedicine.org .)

One doctor in Tamil Nadu recently told me: "Before HIV/AIDs, I treated diseases. With HIV/AIDs, I am forced to treat the entire patient -- psychological, social, economic, and other issues are often involved."

The *compartmentalizing of knowledge* is a system that is breaking down today.

The *Google generation* has relatively easy access to information across all disciplines, on the Internet -- although information is different from knowledge, and knowledge is different from the ability to wisely apply knowledge to action. Knowledge and wisdom require understanding of broader contexts, and often also of theoretical and analytical frameworks. Inter-disciplinary discussion groups are appearing on social networking sites such as Facebook. This is creating a stimulating environment for inter-disciplinary research. (Greaves 2008, page 4.)

Today we are experiencing a shift from focusing primarily on *specialized segments*, to also seeking *awareness of the whole, of the total field*. According to Marshall McLuhan, this paradigm shift is due to the passage from an era shaped by mechanization, which involved sequence, to the era shaped by the instant speed of electricity, which has brought simultaneity. (Interdisciplinarity wiki page.)

Sources Cited

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