



Title: Science and Third World Issues

Author(s): Dr. S. Kounosu

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For International Development
Discussion Group.

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[Dear T. Thanks to your discourse with me. Without your inspiration --- your "tenacious" willigness to engage in intense talk ---, I would not have thought of things now I write up.]

What "Science" got to do with the Third World Issues ?
--- Problem Solving, Discourse
Learning, and Enoblement ---.

1. Let us try Word Assoiciation Game. What is the first thing that comes to your mind in hearing these two words; "Science" and "Third World" ?

It may be "Scientific-Technological Aid to the Third World". We see the Third World Nations are sadly lacking in Science. So send "Science" to Africa, Asia, or Latine America ? But how can we send "Science" ? Do we mean texts books on science ? Information or data ? Instruments ? Medical supply ? New variety crop seeds ?

They have something to do with Science, but that is not quite the same as "Science". "Science" is a mental entity and cannot be packaged and shipped off. So we send scientists ? That is ok. as a short term measure. But, in a long run, it may become a neo-colonialist domination of these nations under intellectual supervision of our scientists. That does not "empower" people in Science, but rather make them more dependent.

Science are often said to be Objective and Materialistic. But Science used in producing material objects and appreciated by consumers is in the Minds of people who make these things. Viewed from producer's side, Science as a "Power/Ability of Thinking" is more to do with Imaginations, Adventure, Dream than Material Objects.

Beyond that we can think of Science as "Power/Ability to Reason" (i.e. Theoretical sense of Science) which has nothing to do with material objects. Moreover, "World Citizens" are interested in development of the "Power/Ability to Understand" which is one step higher Science than the Power/Ability to Reason.

[It may be of interest to you to look back how the word/concept of "Citizen" emerged in our History. Jean-Jacques Rousseau and others talked of distinction of "Citizen" from Slaves, Subjects of Master/Rulers. Citizens have certain Powers and Sovereign Will. They were talking of political issues, but we could think of meaning of "Citizenship" in Science. Are we not mere passive consumers in Science, and hence slaves ?]

For emergency situations, material aid is necessary. But "Development" is aimed at eliminating the need of "Aid". In that sense, we have to think of Third World Issues in terms of Empowerment at least, if not in terms of Mutual Understanding. And in this, the consumer sense of Science is inappropriate. The Dependency is the problem. We have to think of ways to foster Third World Science, which is not dependent on our Science (EuroAmerican Science). "Scientific Colonialism" in our mind has to be eliminated first of all.

Well, some think of inviting students from former colonial countries into Canadian universities and make them scientists that these countries needs. We are doing that to some extent.

But then we might think of "Brain Drain" from poor countries to wealthy countries like Canada and the U.S. The third world countries not only have very small number of scientists, but they "export" a large number of scientists to the "First World". In the U.S., some 1/3 of graduate students in Science and Engineering are from foreign nations. Some do go home after receiving degrees, but the most of them do not, for a simple reason that they cannot find job in home countries.

For that matter, I can tell you that the majority of Physicists of my age or above in the U.S. were born in midwestern states, such as North and South Dakota. They were sons of farmers in the "Dust Ball". They became Ph D.

physicists and moved to Cities at eastern sea coasts and in California. They did not go back to their home states. The economics dictates where scientists go.

Some of you might ask why we do not start "Science Transfer" by doing Science Education right in the Third World nations. The First World nations could donate money for facilities, teachers, library materials, and scientific information. Although, Science (and Technological) Education is 3 to 4 times expensive per student relative to the ordinary Education, UNESCO, for example, see it imperative and would welcome that. I myself once went on a CIDA mission to an African country. I taught Mathematical Theory of System Control to 3 Master and 2 Ph D. program students in a university. I can tell you what it was like.

It does not work. The reason is a bit complicated, but I think it is important that we understand this --- that is; if we care about the Third World Issues beyond the level of donating money for Emergency Relief operations ---.

2. We are looking at problems of long term Development, which takes different level of thinking. Unfortunately, we do not really think about Development, but rather think of "Rescuing" operations. Pardon me to say this, but even World Citizens Centre directs its appeal to "Pity" on, if not "Guilt" for "Unfortunate Poor People". The appeal comes with "shocking news" about extreme poverty, deprivation, oppression and tragedy. In that sense, World Citizen's Centre is a Philanthropic Organization, which is beautiful. But in usual sense, "Philanthropy" is understood as a matter of feeling. And from that point of view, the Third World Issue has nothing to do with Science. Science is perceived as a "cold hearted" intellectual exercise that some intellectual elite, specialists do.

[Incidentally, the number of professional scientists in the world today is about a million or so, and 90% or more is in The "First World" countries.

However, this number depends on how we define who are to be called "scientists". We shall have to discuss this problem. But, you note that if we identify "Science" to be what these professional scientists are doing, it amounts to be an activity of a very small number of specialized people. It is like 2 in 10,000 people, and the rest of people have nothing

much to do with Science.

If people could not care less about science, that is entirely natural.

Of course, this is a misperception. But the existence of the misperception is related to the essence of the issue of Development. It is not enough to say it is wrong. We have to discuss and learn how the misperception is created and find ways to correct it.]

Naturally, people feel they have nothing to do with Science even in their daily life in Canada, let alone seeing its relevance to people of the Third World countries.

[Dr. Hellen Cardicott said "Science is an Intellectual Masterbation", when she came to Lethbridge to give a lecture. Dr. Cardicott was not too far off the mark in characterizing what we today identify as "Science". But I think it not so harmless as she chracterized it.

Perhaps, it is more accurate to say "the Sciene today is Bureaucratization of human intelligence". It can be powerful like a huge machine for the service to the Power. But for the service to people, it is totally inoperable machine. Many individual scientists have humanitarian ideals and good intentions, just as bureacrats as individuals do. But as long as the system is unchanged, it is almost futile to try any thing within. Individuals might do some spectacular good, but they then will be promoted out of reach of people, and the system remain intact. They may change office space arrangements --- such as "open space concept" ---. But the Inhumanity of the system has only increased, every time it moved to new office building. Likewise, the remoteness of Science from Humanity has only increased, every time new a specilizatrion was added to Science and research grant money increased.]

I do not deny the beauty and importance of Humanitarian concerns and Moral feeling. They are starters. Without that, nothing can be done. But, they are the Gates, through which we come to learn something more than the atrocious living condition in the Third World countries. I think of this process of "Learning On" to be the essence of "Science". This is a critically important point, in my view.

Pity, Sympathy, Concern, Empathy, Interest, Benvolence, Love, Care, are important. I think they are essential and beautiful. But a critical question is "Are we Learning ?"

Putting it bluntly, are we not patronizing --- no doubt without intending to be so --- ? We think we are fortunate enough to be in some position to help these people in the Third World. That is true. But then, are we not thinking as if we are "Teachers" who know, able to think better, and to tell these people what to do. We want to Teach our superior knowledge to those who are not as knowledgeable and smart as we are. It does not often occur to us that even Teachers have to Learn.

I admit we university professors are worse. We think we are so superior in knowing things that we need not Learn for teaching --- we do research just for getting salary increment and personal prestige ---. In teaching we have a funny notion inherited from good old days. Old fashioned teachers apparently felt that they could not show any sign of Learning in front of their students, because that means lack of "authority" in their part. This attitude came from "teaching" in Religious institutions. In my view, one cannot do Science in such an attitude. I hope today they are extinct in science education in elementary and secondary schools. But it certainly persists in universities, where professors pretend to know everything and have nothing more to learn, particularly in science teaching. I think "Teaching" as such is the opposite of Science.

For that reason and others, I think Science ought not be taught, but ought to be Discoursed. Discourse is Learning in a group of people, by a community. It has to be Participatory and mutual.

I think when Brandt Report called for "North-South Dialogue", it meant Discourse. But people might have taken "Dialogue" to mean just talking or negotiating. The report implied, but did not stress "Learning" sufficiently clear. Of course, people connected to World Citizen Centre got the meaning right. If so, saying that "Both Development and Science is Learning" is not strange to you. Perhaps, some of you had word association among "Development, Science, Learning" instantly. But if I may say so, association of Science/Development and Discourse is not quite easy and there are "good reasons" for that.

For one thing, in ordinary word usages, "Development" means Economic Growth, such as making factories to make things for export. And Science means Knowledge --- that "Dead Knowlwe" printed in text books which we were forced to memorize for no rhyme nor reason ---. The common usages of these words represent what we actually do with these things. That we begun to disagree with the common word usages signifies that we have come to feeling the problems.

But having problems is the starting point of Science and Development. For Science and Development are Pobleem Solving. We cannot have one without the other --- I think of analogy to Love Affairs; relations that are not somewhat problematic is not really Love Affair. They have to be somewhat imperfect ---. The humblness to acknowledge imperfections and vulnerability is the sign of Science, as opposed to Religious Teaching. To say "I know" is a characteristic of Religion. To say "I do not know" is the distinguishing mark of Science. Religions cannot be wrong. Science has to be falible and open to change. For this reason, if we get every thing too easy, intellectually or otherwise, we are in trouble.

Human beings who do not know come together and do Science, and they do so because they have problems. Those who have no problem would not waste time for it, though there is an intrinsic sense of pleasure in meeting with people, regarless of its excuse. The "come together" (i.e. Participation) makes the Discourse. It has to do with process of knowing, but Knowledge is not Discourse hence not Science. In this sense, A.A. meetings are doing real Science. What Scott Peck is describing as "Wonderful Experiences" in Different Drum are "Diecourses" and "Science" in a verb sense.

[As to this sense of Science, I wrote a story "Raven The First Native Scientist". My "Requiem For Chester Heavy Runner Jr." also written for what I think "Science" ought to be. I do not know whether I was correct as to Native Science or not, but that is my way of trying things out. Copies enclosed.]

In the above sense "Science" is "Human Development" in a communal/social scale. Some economists have talked about this in terms of "Infra-Structure" to Economy. Phrases like "Human Investment" has been used to talk about this in Developmental Economics. But, vocational education

of individual ability for market competition was still a strong overtone to Economists' talks. Economic cannot easily change its metaphysics of utilitarian rationality. A few economists pointed out a need of Paradigm Shift in that science, but there is little sign that a new Paradigm is emerging. [*1]

Likewise, social thinkers have started to talk of "Human Development" --- needed in the First World Nations ---. Jane J Mansbridge in Beyond Adversary Democracy wrote;

"A few philosophers have recently sounded the alarm against the increasingly self-interested focus of public life. They call for a return to preadversary conceptions of the common good,.... and to relations of fellowship and community."
[Basic Books 1980. p. 302. JC423 M353 U.L.Lib.]

That is "Development" is not just a problem in the Third World Nations, but it is a problem for the people in the First World Nations; i.e us.

The "Human Science" has a task of constructing an alternative metaphysics which is humane, environmentally healthy and capable of providing basis for non-adversary human/social relations. That is why I talk of Love, Care, Grace, etc., though they are ^{not} considered in European Science today. However, in the 18th century, thinkers such as Rousseau, Hume, Mills, or even Hobbes did think of them to be proper subject of Science. Adam Smith was a professor of Moral Philosophy and he meant he was doing a Science. Of course, their Science established Utilitarian Rationality. That was equivalent to the establishment of Newtonian Physics. What we have to do is equivalent of constructing Relativity or Quantum Theory, alternatives to Newtonian Mechanics.

[*1. As to "Paradigm Shift" see; Drew Westen. Self And Society. Cambridge U. Press 1985. BF698.9 C8 W47. U.L.Lib.]

He talks of 4 Phases in changes of "Culture" (Collective Mind/Science of society) as well as in changes of individual mind (psyche, intelligence, self-concept). Interestingly, Nietzsche's Thus Spoken Zarathustra, Wm. Blake's Four Zoas, etc, also exhibit the same "4 Phases" of change.

"Human Science" has been in existence, but so far, not recognized as "Science". These books contain interesting "clues", here and there. That is why I make mention of them to you.]

3. The "Wonderful Experience" stories make us to ask a harder question for ourselves --- that is, if we do not wish to be "Couch Potato" spectators of Science, deluding ourselves in psychological identification with our intellectual or spiritual hero/heroins, like we do with Wayne Gretzky ---. What is stopping us from Discoursing=Developing=Sciencing for ourselves ?

To be sure, some of us may be so conceited to see no problem like common people, and may complain that there is no problem to science with. In such a case, I would recomend to put oneslef in the position of program coordinator for World Citizen's Centre. That will guarantee to provide as many problems as one wish, in terms of relating to people or getting them interested in Third World Issues. Or we can say to Yuppies that if they need "Quailty Time" for their mental health, they can do that in discoursing on the Thrid World problems. If they do not have time and be deprived of "Quality Time" as such, that is a problem for them to science with.

But I think most people are fortunate enough to have problems. Rather we deny the problem and resist learning. We are like Alcoholics, intoxicating in our pride of being far above these "miserable poor ignorant people" in the Third World and protecting it by a elaborate network of delusions, deceits. "Supoort Network" is a popular cliché nawadays. But we have it, in terms of legitimizing and maintaining our "comfortable feeling" about our afflent consumer life style. It is a Network of Narcissism. Of course, beneith our smugness, there is a Fear. We feel we have a lot to lose, if we do anythging to change the system. We do not wish to fall off from our "respectable" position in the Network. So we compete like in a Hell, which give rise to Yuppy life style that we all suffer. In actual matter of fact, the feeling of Powerlessness, Meaninglessness, Lovelessness, bitter cynicism, nihilism are wide sprade among us like epidemics. We are so afraid that we cannot admit and face our problems.

Our basic mental posture is that of Defense. Whereas "Learning" (Discourse, Science) is an openness, hence vulnerability to unknowns. One does not know what troubles one gets in, when involvement get to be "intimate". So, we avoid that. We can learn about that problem --- if there is nothing else. And it so happens that that is the same Problem as that of Development. If we cannot do Human Development, we cannot do Social Development either --- or rather the two are "co-comitmental" and "Discourse" deals with the both.

However, to discourse on the problems of Discourse we need something a bit more than Philanthropy. World Citizen's Centre used to call itself a "Learning Centre", and The Learning is the Science. But it appears that Learning Centre has had difficulties. I actually do not know enough to say this, but my impression is that Learning part of the Centre has not been easy. In terms of getting people engaged in Learning, the Centre is struggling --- to put it politely ---. And I would like to know what the difficulty is. I suspect it has something common with Third World Development problems.

To argue for my contention, let me cite problems in Third World Development. Even in a very narrow technological science we do find reports of problems. Here, I cite a fiction from Mother Jones magazine [Oct 89.: "Doctor Kamikaze" by Ayi Kwei Armah. p34-38, 46., see copy.]. It is a story of a native woman who try to do "Developing work" but shafted out of the country to a high UN office. I think fiction is based on real experience and treat it as such. (The reason why it cannot be published in the form of factual report itself is an indication of the problem that we are concerned about.)

The trouble with Dr. Kamikaze was that she did not have local participation strong enough to overcome the politics that sabotage the Development project --- local politicians pocketed the Aid money and the President of the nation could not do anything much about it, because he was dependent on the "old-boy support network" ---.

It was a problem of Human Relation. She did not learn about Human Relations in her Western Education. Her Scientific (technical) Rationality was not functional in the situation. The story is sympathetic to Dr. Kamikaze and talks of the corruption of local politicians. But the

story did not suggest she had paid much effort in Discoursing with local peasants either, nor did she appear to have cared to learn anything much about petty politics of the nation, other than got angry at it. It does look that this high minded lady, with Ph D from European University, descended upon local situation with an air of superiority, just like foreign scientists from UN Development Agency or CIDA would have done. Local people did not obey her command, and she get angry.

Her anger is quite justified. But "Good Will" and "Desire for Betterment" were there. The President and officials around her was rather "Kind" to her. In fact they admired her attitude of "No Bull Shit". But "Science" was lacking. Problem was there, and everybody knew the problem. But "Problem Solving" (= science) was not there. I do not mean "Political Science", "Social Science", "Psycho-Science" that universities teach. I mean real Science of Discourse.

[We ought to note that the inefficiency of "corrupt petty politics" is comparable to the inefficiency of Bureacracy. Inefficiency is not a peculiarity of "backward countries". We have it around us, if we ourselves are not part of it.

In addition it ought to be pointed out that "Careerism" exists in any agency, and the poison of careerism is just the same as that of corrupt petty politics. Self-interests (or self-preservation) must take the priority over anything else, even in the career in Development Agencies. Since nobody cares about you, it is entirely justified and rational for you to look after your self-interest. Even humanitarian project becomes the means to feather one's own nest. It is legal and rational in the Utilitarian sense, but no different in principle from the corrupted petty politics.]

Another thing we ought to note is that knowing some fantasy fictions like Black Hole sounds "Scientific" and has Academic respectability. But knowing how humans interact in intimate senses does not look like "intellectual" thing to do. It may not be "rational" nor "reasonable". It is a favorite subject the "Pop-sychology". But, no high paid profession so far had anything to do with human relations in the intimate sense --- except perhaps "psychotherapy", but it only deal with "pathological cases" at individulistic basis, not "normal" people in normal life at communal/

social basis ---. Therefore Universities did not see any profit in offering a "science" for it. By the same reason, "Development" is not a subject that universities deal with, other than as a part of Political Science, Economics etc, which concern only with Utilitarian values.

Moreover, the science of human relations may have to do with Morality, Justice, Peace, or even Grace. That sounds very opposit of what we think of "Science" or "Knowledge". Our "knowledge" is mainly concerned with Power and Utility --- how to exploit nature and to control/manipulate people for utilitarian purposes, in a metaphor with Newtonian Mechanics ---, not "wishy-washy stuffs" like Love, Care, Respect, Grace.

4. Now, suppose one tries to do Human Science, including Love, Care, Respect, Grace, in addition to Power. I am thinking of doing Science in the sense "Raven The First Native Scientist" did. In our European Cultural norm, that is a strange thing to try. One will quickly finds a wall of silence, indifference, contempt, rejection. It is rare in our life style that even two people engage in discourse with earnestness. We can argue and debate in a competition, if any of us want to "make a point". But that is in "Adversary Cmpetition", not in "Participatory Learning" and hence not "Science" in Raven's sense.

This is not, however, because people are ignorant nor because they are "nasty". It comes from much deeper roots than what we can see on the surface. For one thing, whoever try to do stuffs like "Human Develpoment" becomes an alienated "Outsider" by a mere fact of trying odd stuffs that ordinary people would not do. In a sense, one who tries is between the world of "what is of the reality" and the world of "what can be of human community". He or she is trying to built a Bridge between the two worlds. That means, she or he does not belong to neither one.

That is, Discourse is a Bridge, sensitive, but transient, unstable. One becomes vulnerable in that sensitivity. The position is similar to Natives in city ghetoos, Native Youths adapted by Non-Native families, and worst of all "Half Breeds". In their suffering, they are doing the Bridging, not in an intellectual sense, but by their body and soul. We need to appreciate this precarious position.

I would recommend for people interested in "Human Science" to read what Paula Gunn Allen talked about "Outsider" in The Sacred Hoop, or Leslie Marmon Silko's novel Ceremony, etc.

I am trying to tell you that the being "Outsider" is common to you who attempt to Bridge two Worlds, or two Cultures and those who live in pain at the margins of Society. This commonness is the precious element --- Natives would say "Medecine" --- that has the power of transforming the both. If there can be anything like Understanding between people, between Cultures, between the First and the Third World, this is the Medecine. That is the basis on which empowerment, ennoblement, spiritual liberation, and perhaps even grace develop.

If one is not willing to be an "Outsider", she or he would stay in the smugness of the conventional life, or of performing bureaucratic routines. It is a voluntary servitude (Neitzsche called it "slave" life, Fromm called it "Escape from Freedom"). That one feels pain and outrage in such a life is a blessing, for the pain and outrage give one needed energy, spiritual incentive to "Science" the system as such. Human Science is not for "Power" that stands above, commands and moves society, but rather for (powerless) Love/Respect of people in "marginality" and for ennobling oneself by ennobling people involved. According to Simon de Beauvoir, Sartre after a life long struggle with "Being and Nothingness" (Cartesian Hell) finally reached to an idea of "Participation". But Sartre did not elaborate the idea to a level of Discourse. I think what Human Science, Human Development, has to do is to go on doing what Sartre failed.

Of course, people might resent that, for they do have repressed pain and outrage and having a hard time denying them. The "Bridge Builders" are disturbing their "Peace of Mind" --- as Dostoevski's Grand Inquisitor eloquently pointed out to returned Jesus ---. I am not a Christian, and certainly do not advocate "Jesus Delusion" to anybody. But being an alienated "Outsider" is similar to that. One get to be one, not by choice, but by "circumstance" or "karma". If you are born with sensitive mind, that is your misfortune. But as much as you cannot shut your sensitivity off, you might just as well to make the best use of your "brain defect". You are Human Scientist, not because you have a superior intelligence, but because you are "victime". At least to think like that let one to

avoid patronizing attitude and get on with Discourse. If you find at the end that you are truly noble person, that is one way of ennoblement.

However, I suspect that most anybody has problems in one sense or another. We should not be deceived by the appearances that people put up in defense or in vain pride. You look into Yuppie life style to find a lot of problems. People who appear to be "successful" or "powerful" also have problems. It is not just alcoholics, nor poor people in the Third World countries, that have problems. If any thing we are the ones who are handicaped by our unwillingness to acknowledge our problems, so that we lag behind in science.

At any rate, if I do talk about Science, Developemnt, Morality, Spirituality, etc, it is not because I know anything better, but because I too am an "Outsider", in Limbo, in Purgetory, on Bridge (Budhist metaphor) by different reasons. It is more of cry or appeal than "knowledge claim".

(S.K.)

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