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Two Estranged Cultures

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Abstract

In 1959, the British scientist C. P. Snow gave the prestigious Rede lecture with the thesis of a breakdown of communication between the "two cultures" of modern society – the sciences and the humanities – which was a major hindrance to solving the world's problems (Wikipedia). In the 21st century, a more serious breakdown has occurred between the two cultures of politicians and scientists, especially concerning the five critical, global problems: (1) climate change, (2) acidification of the oceans, (3) overpopulation, (4) ecological overshoot, (5) damage, possibly irreversible, to the biospheric life support system. All these global problems require a holistic approach and will only be solved by exemplary collaboration among the world's nations, using a "top-down," global-system perspective. Special interest views are important, but should not dominate. However, in the United States, and most other countries, special interest groups and lobbyists do dominate. The global system, Earth, has no well financed, politically powerful lobby. The result is that two, global, ecological tipping points have been passed and the damage is irreversible in timeframes of interest to humans. Can this alienation between scientists and politicians be resolved? It must be quickly resolved if civilization is to be saved.

Keywords: Estrangement, Alienation, Politicians, Scientists, Two cultures, Global collaboration.

There is nothing a government hates more than to be well-informed; for it makes the process of arriving at decisions much more complicated and difficult.

—John Maynard Keyes

All of us concerned for peace and triumph of reason and justice must be keenly aware of how small an influence reason and honest good will exert upon events in the political field.

—Albert Einstein

Any man who afflicts the human race with ideas must be prepared to see them misunderstood.

—H. L. Mencken

1. Overview

The United Nations Climate Change Conference (Copenhagen, Denmark, December 7-18, 2009) will probably be the defining meeting for controlling, or not controlling, anthropogenic greenhouse gas emissions. Either the nations of the world will accept numerical limits and fixed timeframes for meeting these scientifically appropriate controls or they will not. Both China and the United States must become world leaders at this conference or it will fail. Most climate scientists believe in major reductions of anthropogenic greenhouse gas emissions or the climate system will be beyond human influence. Although a few climate change deniers remain (many with no scientific credentials), the preponderance of scientific evidence supports the need for controls.

2. Emissions Per Capita or Per Nation

Without quantitative goals for greenhouse gas emissions within a specific timeframe, one or more climate tipping points will probably be passed in the next decade, and humankind has no assurance that it will be able to effectively adjust to the changes that occur. If substantive negotiations on greenhouse gas emissions reductions occur, one key issue will almost certainly be whether changes will be initiated by nation or per capita. Stern (2009, p. 152) gives a concise statement on per capita data on carbon dioxide:

> *Although the current average is 7-8 tonnes per capita per annum, the differentials across the world are huge. In the USA, Canada and Australia they are over 20 tonnes; in Europe and Japan they are 10-12 tonnes; in China over 5 tonnes; in India under 2 tonnes, and in most of sub-Saharan Africa well under 1 tonne.*
>
> *If the world average is to be around 2 tonnes per capita, then the emissions from most of the major countries will have to be fairly close to that per capita level. The reason is clear and follows from the basic sums: if there are, say, a group of 1 billion people, out of the likely population of 9 billion, at 4 tonnes per capita, then for a world average of 2 tonnes per capita, there will have to be another group of 1 billion people at zero, or another group of 2 billion people at 1 tonne. The average is the average, and if we have one group above there must be a corresponding group below.*

The science is clear – greenhouse gas emissions must be reduced now to match Earth's assimilative capacity for greenhouse gas emissions or humankind will face very severe consequences. The preponderance of scientific evidence is almost overwhelming on greenhouse gas emissions, but the political solution is unpalatable, at best, to the developed countries. If the science is effectively ignored in making political decisions, the latter will not produce the desired results. Present evidence does not suggest that politicians understand the science, and scientists are not entrusted to make political policy decisions, nor should they be entrusted with making them.

3. World Views – Scientists and Politicians

Most political rhetoric on global crises is from an anthropogenic (homocentric) point of view. This approach is to be expected since, in a democracy, politicians are elected because they have strong support from a majority or plurality of the citizens who actually vote. Politicians also receive substantial campaign funds from special interest groups that expect to benefit from the politician's election. However, this situation is not a good way to develop the holistic perspective essential to coping with a series of interacting global crises (i.e., climate change; overpopulation; ecological overshoot; loss of biodiversity; acidification of the oceans; toxicants, including endocrine disruptors).

Scientists often have difficulty communicating even with others in their disciplines, especially since the 20th century was an era of specialization. Each specialty has its own isolating mechanisms, such as rites of passage for academic degrees, specialized journals, unique terminology (an uncharitable person might call it *jargon*), highly focused annual meetings, etc. However, Wilson (1998) notes that the isolating

mechanisms are beginning to break down and transdisciplinary groups are emerging.

Mooney and Kirshenbaum (2009, p. 57) remark:

> *In part, the divorce of science and politics can be explained by the very different worldviews that inform each field. Scientists look at the world and see order, and generally assume rational action will (or should) be taken. . . . Politicians live in a very different world, one in which they are more often rewarded for playing to voters' emotions than their intellects. Even if they themselves know better, they recognize that particularly in the television age, charisma, charm, and personal appeals will get them a lot further than logical argumentation.*

Still, politicians and scientists are in two dramatically different cultures, which will probably remain true for at least the 21st century. However, climate change and the other global crises could destroy civilization and result in a less than habitable, or even uninhabitable, planet. If policy decisions are not based on the best available science and the preponderance of scientific evidence, they are just ideology/advocacy. Krugman (2009) comments on a climate change bill that narrowly passed in the US House of Representatives (and now must go to the US Senate):

> *But 212 representatives voted no. A handful of these no votes came from representatives who considered the bill too weak, but most rejected the bill because they rejected the whole notion that we have to do something about greenhouse gases. And as I watched the deniers make their arguments, I couldn't help thinking that I was watching a form of treason – treason against the planet.*

Those representatives who voted in favor of the bill may suffer as a consequence (Stein, 2009). Since most scientists support climate change bills (Stein, 2009), the estrangement between politicians and scientists may not be as large as it seems – some of the gap may be due to fear of differing from the "party line."

Friedman (2009) views current climate change bills as too weak in key areas and too complicated in others. However, the insufficient bills are exactly what one might expect from two estranged cultures. One culture, science, provides the data and analysis, and the other, politics, converts it to suit its particular culture. Politicians have little or no regard for the scientific process since it is alien to the political process. Friedman (2009) remarks: "It is pathetic that we couldn't do better." One might add – especially since the planet and human civilization are at stake. Even though bills waiting to be passed that would cap greenhouse gas emissions are a remarkable achievement, they will add up to zero if they are not passed by both houses of Congress. "The country would be left with an outdated energy policy and the planet would be struck with steadily rising emissions" (Editorial 2009). The United States still might take a halting, confused step in what appears to be the correct direction.

4. Globalization

Friedman (2000, p. 11) quotes Joseph Schumpeter (a former Austrian Minister of Finance and Harvard Business School professor): "the essence of capitalism is the process of 'creative destruction' – the perpetual cycle of destroying the old and less efficient product or service and replacing it with new, more efficient ones." If lifestyles and policies that produce greenhouse gas emissions are to change to avoid the continuation of the global climate crisis, what is to replace the current energy sources that produce the emissions?

With all the fuss over climate change bills, alternative (non-carbon) energy bills seem to have been forgotten. If countries such as the United States persist in clinging to old technologies, they will lose out to nations developing the new, more efficient technologies. Third-world technology on the way up is much more satisfactory than technologies of developed nations that are on the way down! The nation with the new technologies (e.g., solar, wind, geothermal) will have greater independence and less dependence on other, possibly hostile, nations. The choice appears simple, but the affection for "business as usual" is exceedingly powerful.

5. Conclusions

The two estranged cultures – politics and science – seem far from a harmonious, even civil, relationship any time in the foreseeable future. Neither culture trusts the other – the scientific evidence has been largely ignored and politicians do not appear to be taking science seriously. Scientists do not understand political thought processes and are often bewildered by them. If politicians and scientists shared the same vision of how closely their fates and that of Earth are linked, an effective working relationship might develop. However, climate change is occurring more rapidly than scientists thought it would, and acceptance of new technologies is extremely slow. Time is short for the two cultures to develop trust and mutual respect.

Without question, the two cultures are vastly different and each has within it a vast diversity of viewpoints. However, the differences between the two cultures are far greater than the differences within each culture. Arguably, the greatest difference is the perspective on the urgency of climate change problems. Scientists understand computer models and the constant need to improve and update them. Politicians do not. Most citizens are more like politicians in this regard. The global educational system must remedy this chasm, but its financial support is primarily under the control of politicians.

However, the solution may be beyond human control. Paul Slovic, author of a book on how our minds assess risks, states: "We humans do strange things, perhaps because vestiges of our ancient brain still guide us in the modern world" (as quoted in Kristof, 2009). "What's important are the threats that were dominant in our evolutionary history," notes Daniel Gilbert, a professor of psychology at Harvard University (as quoted in Kristof, 2009).

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