

## Remarks of Dr. James R. Schlesinger

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It may be obvious, but nonetheless, it is still necessary to express, how grateful I am to the Marshall Institute in honoring me with its Founder's Award. As you may know, General Marshall himself was one who clearly distinguished between analysis and decision-making. In his view, science illuminated the analytical effort, but did not determine political decision-making. I shall return to this subject shortly.

Before that, however, I want to declare that, in this new age of sensitivity, I shall apologize in advance to any here assembled who may be offended by my subsequent remarks. Nonetheless, I shall make them anyhow.

Let me start with the state of our universities. In days of old, universities prided themselves on being open to ideas. That was their glory. Indeed, protection of ideas that might be unpopular was the justification for faculty tenure. Faculty members might be attacked for reasons wholly unrelated to subject matter. When the United States went to war in 1917, Hugo Muensterberg, a professor of philosophy at Harvard, was under assault as an immigrant from Germany. Alas, he did little to calm the storm, when he declared, "I am not a German-American, I am a German."

During World War II, Joseph Schumpeter, perhaps this country's most illustrious economist, became partially isolated or shunned at Harvard. He had taught in that part of the Austrian Empire, later absorbed into the Soviet Union and, though wholly opposed to the Nazi regime, he challenged the prevailing belief in Cambridge that the Soviet Union would prove to be our friend in peace as well as war. Both, nonetheless, were reasonably well protected, as were many who fell afoul of Senator McCarthy in a later period.

Regrettably, these days universities seem less open to ideas. That may have been their glory in times past—but now we have litmus tests and checklists, and these may now include scientific subjects.

We have a modern-day equivalent of the Watch and Ward Society ever on the alert for any heresy. There are grand inquisitors ready to hunt down heretics, not to burn them, of course, but to decry them and force them to recant.

Consider the case of Larry Summers who, rather innocently, touched one of the third rails of academic politics. (In this era of Political Correctness, there are numerous third rails.) We have all heard about Holocaust Denial, well Larry stood accused of Gender Identicalness Denial, since he was caught musing about the subject. That a fair number of biologists have also mused about such innate differences between the sexes provided no protection. In an age when it is right to assure us that women are more empathetic, sensitive, and intuitive than are men. Moreover, when we are told that the medical treatment of an ailment should be different for men and women, Summers seemed to be exploring whether it was possible that some differences between the sexes might be to the disadvantage of women. The whole episode as Ruth Marcus observed in the *Washington Post*, "says less...about the Harvard president than it does about the unwillingness of the modern academy to tolerate the kind of

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freewheeling inquiry that academics and intellectuals above all ought to prize rather than revile.”

Early in the twentieth century, in the French Chamber of Deputies, a speaker was declaiming that there was very little difference between men and women. From the back of the Chamber, a Gallic voice was heard remonstrating: “*Vive la Difference.*” Ah, but that was France.

The Harvard Faculty of Arts and Sciences, however, has risen to the occasion. It has revived the spirit of Cotton Mather, resuscitated the traditions of the seventeenth century and the Salem witch trials—and delivered a vote of no confidence in the president. (A friend of mine in the Business School confided that “we in the professional schools intend to get together and deliver a vote of no confidence in the Faculty of Arts and Sciences.”)

Unfortunately, this caste of mind has also spilled over into the subject matter of science. In its most acute form, it can be found in the widespread distress over the phenomenon of global warming, which, it is now confidently asserted, arises primarily from the release of greenhouse gases, reflecting human activity. This, of course, provides a splendid opportunity for self-flagellation by the guilty. In many universities, it also provides the opportunity to search for those heretics who may question whether the greenhouse phenomenon is indeed the principal cause of climate change.

To be sure, the earth has been warming up ever since the end of the Little Ice Age in the seventeenth century. Just over thirty years ago, climatologists were worried about global cooling—that had gone on roughly since 1940. The most recent apparent increase in global temperature may to some extent be related to the increase in greenhouse gases—but one ought not leap to the conclusion that the greenhouse effect is the principal cause of observed global warming—without careful consideration of other alternatives, including solar variability. Such a faith is based, as St. Paul phrased it, on “the evidence of things not seen.”

To be sure, we do have computer models. Depending on what we feed into those models, we reach the conclusion that was built into the model—such as the temperature in the year 2100. But we would be mistaken if we believed that the conclusion was something more than we had built in. To infer so much from a computer simulation would be a marvelous example of what Alfred North Whitehead called “the Fallacy of Misplaced Concreteness.”

Just recently, eleven national academies of science joined together to declare the issue has now been settled, that the release of greenhouse gases is the principal contributor to global warming—and chided the United States for its failure to acknowledge that reality. This conclusion is stated authoritatively and apparently *ex cathedra*. In this connection, I can do no more tonight than review with you what I cited last year, Michael Crichton’s observations in his Michelin Lecture at Caltech.

“I want to pause here and talk about this notion of consensus, and the rise of what has been called consensus science. I regard consensus science as an extremely pernicious development that ought to be stopped cold in its tracks.

“Let’s be clear: the work of science has nothing to do with consensus. Consensus is the business of politics. Science, on the contrary, requires only one investigator who happens to be right... In science consensus is irrelevant. What is relevant is reproducible results. The greatest scientists in history are great precisely because they broke with the consensus.

“There is no such thing as consensus science. If it’s consensus, it isn’t science. If it’s science, it isn’t consensus. Period.”

I might add in another connection, just three years ago it was a nigh-universal consensus of national governments, intelligence agencies, the UN and so on that Iraq had weapons of

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mass destruction. Then, as the search for evidence proceeded, the consensus rapidly evaporated. Consensus, intuition, informed opinion, and guesswork are not enough. Evidence is needed—and evidence that human activity is the principal cause of the global rise in temperature is simply not there.

A recent article in USA Today headlines “THE DEBATE’S OVER: GLOBE *IS* WARMING.” And adds in a subhead, “Politicians, corporations and religious groups differ mainly on how to fix the problem.” In the first place, “the debate” was not over whether the globe is warming; the debate is over whether or not man’s activities are the principal culprit. Second, it is not clear that there is a way to “fix the problem.” The wisest thing for those who attribute global warming primarily to the release of greenhouse gases might do would be to pray that they are wrong. Let me count the reasons why.

1. In the first place, the European nations to date have not met—and likely will not meet—their commitments for reduction of greenhouse gas emissions under the Kyoto Protocol. Seven years ago, I observed in a speech “it is hard to take the Kyoto commitments seriously. It is hard to see anyway to get from here to there and actually to fulfill those commitments. Thus, we are faced with some mixture of self-deception and make-believe.” That judgment still appears to be true.
2. We must engage in a little quantitative reasoning. Even if the ratifiers of the Kyoto Protocol do achieve the pledged reductions, which remains doubtful, by 2040 China alone is projected to burn an additional

600 million more tons of coal annually—and thereby by itself add almost twice the amount of greenhouse gases to the atmosphere than that hopefully reduced by the achievement of Kyoto. Worldwide it is projected that we shall be burning an addition 2 billion tons of coal. So the volume of CO<sub>2</sub>, methane, etc. would continue to rise. So, unless the presumed correlation is in error, temperatures will continue to rise. There is no way to “fix the problem”—save, perhaps, new technologies far down the road.

3. But that may be too late. Irreversibility comes in many forms. We start from where we are—and not from where we wish we might be. Global warming is a self-reinforcing process. The warming that we have already observed in the Arctic has reduced the sea ice and the extent and duration of snow cover. That, in turn, has reduced the albedo, or the ability of the earth to reflect back the sun’s radiation.

In short, if one believes or assumes that it is the release of the greenhouse gases that is the culprit and not some more cyclical phenomenon, there may be no solution—and we need to begin to adjust to an earth that continues to warm. Those who profess to be able to “fix the problem” may turn out to be like King Canute, commanding the waves of the sea to stand still.

So let us join General Marshall in distinguishing between analysis and decision-making. Science is the basis of analysis. Science should inform decision-makers, but science is separate from political decision-making—particularly when the latter includes a large component of wishful thinking.