## Remarks of Alan Lightman and Stephen Pinker at a colloquium to discuss the thematic issues within this volume

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Over the years, my wife and children have grown accustomed to seeing me drift off into the world of my own thoughts -- it might be during a car ride or listening to my daughter tell me a story, or I might even be talking myself -- when, I'm told, my face dissolves, my eyes get glassy, I'm gone, useless to them, an absent father and husband. Being a person who works with ideas and books, an academic or a writer, is a terribly selfish activity, because it's hard to turn your mind off -- you're always at work, to the suffering of your family and friends. So I'd like to say a few things in justification of this kind of life, put it in larger perspective. In short, what is the role of the intellectual in the world at large? I wish my long suffering family and friends could be in this room at this moment to hear my defense. I'll begin with some remarks by a famous intellectual of the past, Ralph Waldo Emerson, and a famous intellectual of the present, Edward Said. I then want to describe a sort of hierarchy of categories of the public intellectual and the increasing responsibilities as one moves up the hierarchy. I'll finish with a few remarks about the extraordinary recent phenomenon in which people trained in the sciences have become some of our leading public intellectuals.

Over 150 years ago, Ralph Waldo Emerson considered the meaning and function of the intellectual in his great essay "The American Scholar," delivered not far from where we sit now. [Address to the Phi Beta Kappa society, 1837]. Emerson put forth the idea of the "One Man," by which he meant the complete person, or the person who embodies all dimensions of human potential and actuality -- the farmer, the professor, the engineer, the priest, the scholar, the statesman, the soldier, the artist. (If Emerson had lived today, surely he would have used the term "The One Person.") The intellectual is this whole person while thinking. Emerson's intellectual, while enriched by the past, should not be bound by books. His most important activity is action. Inaction is cowardice. Emerson's intellectual preserves great ideas of the past, communicates them, and creates new ideas. He is the "world's eye." And he communicates his ideas to the world, not just to fellow intellectuals. And finally, Emerson's intellectual does all of these things not out of obligation to his society, but out of obligation to himself. Public action is part of being the One Man, the whole person.

A more political tone to the concept of the public intellectual was suggested a few years ago by Edward Said of Columbia University, in a series of lectures called Representations of the Intellectual (1993 Reith Lecture). According to Said, an intellectual's mission in life is to advance human freedom and knowledge. This mission often means standing outside of society and its institutions and actively disturbing the status quo. At the same time, Said's intellectual is a part of society and should address his concerns to as wide a public as possible. Thus Said's intellectual is constantly balancing

the private and the public. His or her private, personal commitment to an ideal provides necessary force. Yet, the ideal must have relevance for society. Said's ideas raise some interesting questions: How does the intellectual stand both outside society and inside society? How does the intellectual find common ground between what is of deeply personal and private interest and also what is of public interest? How does the intellectual engage him or herself with the changing issues of society while at the same time remaining true to certain unchanging principles?

Let me now define what I mean by the public intellectual today "Such a person is often a trained in a particular discipline, such as linguistics, biology, history, economics, literary criticism, and who is on the faculty of a college or university. When such a person decides to write and speak to a larger audience than their professional colleagues, he or she becomes a "public intellectual."

Level I: Speaking and writing for the public exclusively about your discipline. This kind of discourse is extremely important, and it involves good, clear, simplified explanations of the national debt, the how cancer genes work, or whatever your subject is. A recent book that illustrates this level is Brian Green's excellent book *The Elegant Universe*, on the branch of physics called string theory.

Level II: Speaking and writing about your discipline and how it relates to the social, cultural, and political world around it. A scientist in this Level II category might include a lot of biographical material, glimpses into the society and anthropology of the culture of science. For example, James Watson's *The Double Helix*. Or Steven Weinberg's essays about science and culture or science and religion in *The New York Review of Books*. Gerald Early's book, *The Culture of Bruising*, with essays on how racial issues are played out in prizefighting, would fit into this category. Or Steve Pinker's op ed piece in the *The New York Times* a year or so ago about the deeper meaning of President Clinton's use of language in the Monica Lewinsky scandal.

Level III: By invitation only. The intellectual has become elevated to a symbol, a person that stands for something far larger than the discipline from which he or she originated. A Level III intellectual is asked to write and speak about a large range of public issues, not necessarily directly connected to their original field of expertise at all. After he became famous in 1919, Einstein was asked to give public addresses on religion, education, ethics, philosophy, and world politics. Einstein had become a symbol of gentle rationality and human nobility. Gloria Steinheim has become a symbol of modern feminist thought. Lester Thurow has become a symbol of the global economy. Some other contemporary people I would place in this Level III category include: Noam Chomsky, Carl Sagan, E.O. Wilson, Steven Jay Gould, Susan Sontag, John Updike, Edward Said, Henry Louis Gates, Camille Paglia.

Of course, these various levels and categories are not as distinct as I have made them, boundaries are blurred, etc. One can move slowly and even unconsciously upward through these various levels I have described. But I would argue that one should be conscious of the movement, and especially the increasing degree of responsibilities. In particular, Level III should be entered with caution and respect. Here, there is the greatest

responsibility. The public intellectual is often speaking about things beyond his or her area of expertise. Some people will refuse such an invitation, others will accept the responsibility that has been given them. Einstein, an inward and essentially shy person, but at the same time a man of great self confidence and awareness of his stature, and accepted the responsibility of the Level III public intellectual. Such a person must be careful, he must be aware of the limitations of his knowledge, he must acknowledge his personal prejudices because he is being asked to speak for a whole realm of thought, he must be aware of the huge possible consequences of what he says and writes and does. He has become, in a sense, public property because he represents something large to the public. He has become an idea himself, a human striving. He has enormous power to influence and change, and he must wield that power with respect. When Steven Jay Gould is asked to speak about the recent Kansas ruling that Creationism must be taught along side Evolutionary Biology in science classes, or when Salman Rushdie is asked to speak to the National Press Club about freedom of speech, these people have been asked to accept a great responsibility. They are private citizens but they are also public servants, they are individual thinkers but their individuality also dissolves and rises and merges with the spirits of all the men and women who have thought and imagined and struggled before them.

I want to end with a few brief remarks about a recent new feature in the geography of the public intellectual: many more such people, these days, have come from the sciences. I think I have a part of an explanation. For many years, it was considered a taboo, a professional stigma, for scientists to spend any time at all in writing for the general public. Such an activity was considered a waste of precious time, a soft activity, even a feminine activity. The proper job of a scientist was to penetrate the secrets of the physical world. Anything else was a waste of time, it was dumbing down. The tide began to change in the 1960s with the books Silent Spring by Rachel Carson, The Character of Physical Law by Richard Feynman, and The Double Helix by James Watson. Then the big sea change occurred in the 1970s. I think of such books as Migraine and Awakenings by Olive Sacks, Lives of a Cell by Lewis Thomas, Ever Since Darwin by Stephen Jay Gould, Dragons of Eden by Carl Sagan, The Ascent of Man by Jacob Brownoski, Disturbing the Universe by Freeman Dyson, The First Three Minutes by Steven Weinberg. These popular books, written by major scientists with unquestionable stature in their scientific fields, had the effect of legitimizing public discourse as a worthwhile activity for scientists. When I myself began publishing essays in the early 1980s, and I know that I was influenced by the examples of Thomas, Gould, and Sagan. In the last ten years, we have seen an explosion of popular books written by scientists, and a fraction of these authors will move into the Levels II and III that I have described. Just a few words about my own case: My professional career began as a physicist, but I was always passionate about th humanities and the arts as well, from a young age. After becoming an assistant professor of astronomy at Harvard, in the mid 1970s, I started in the late 1970s writing popular articles about science, magazine pieces, encyclopedia articles. The stigma within the scientific community of this kind of soft activity was very real at that time, and I could feel it. However, I had spent a couple of years at Cornell and was inspired by Carl Sagan. In the 1980s, my public activities drifted into essays about the human side of science, and then in the 1990s, books of fiction based upon the scientific mentality. My next book will take the final reckless leap, a novel about the American obsession with speed, efficiency, and money, and what this obsession has done to our minds and our spirits. The novel has no science in it all, yet I think it has been shaped by my having lived in that world and its mentality.