

Science informed by Awe
Robert Pollack*
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I am the Director of a small unique collection of people from all over the world, the Center for the Study of Science and Religion, a Center within the Earth Institute at Columbia University. We are pleased to co-sponsor this event, because Awe and Wonder are at the heart of our own enterprise.

I'd like to say just a few words about that in my own personal terms, in honor of the great gift of my long friendship with Monsignor Albacete.

At the beginning of every day – or to be precise, every day that I remember to do it – I say a brief prayer:

“Reshit Chochma Yirat HaShem”/

”The beginning of wisdom is Awe of the Lord.”

But Awe of what, exactly, is the beginning of Wisdom?

Many think this Awe is the internal subjective emotional state instilled by contemplation of the incomprehensible grandeur of nature, as in Psalm 92, a Psalm the Levitical priests would recite in the Temple on Shabbat:

“Ma gad’lu ma’asecha HaShem, me’od am’ku mach’sh’votcha”/

”How vast are your works Lord, your designs are beyond our grasp.”

But in this age of science we no longer have the luxury of incomprehensibility. The natural world is all too comprehensibly dependent upon death for novelty. In earlier times there were no humans, and even earlier times there were no mammals, nor vertebrates, nor any organism bigger than a single cell. From those earliest times until now, all that we might want to think of as progress has been simply the selection of one subset of DNA sequences or another from a constantly refreshing pool of copying errors. We can be fairly certain that replacement or death will be the fate of all humanity as a species, just as death is the certain fate of every person.

Worse, we also know – if we are honest about the data of natural selection and cosmology – that nature is devoid of data suggesting intentionality, direction other than death, perfectibility, or purpose. The living world, ourselves included, is intrinsically imperfect and intrinsically unperfectable. It changes, but even the changes that make each of us individually unique and interesting to each other are meaningless differences in DNA, creating the differences among us toward no purpose beyond the possible improvement in survival of one or another particular version of DNA over time.

I am not exaggerating the seriousness of this problem: scientific insight into the meaninglessness of DNA-based life is not simply missing meaning. It is the demonstration that a satisfactory, even elegant explanation of the workings of this aspect of nature actually conflicts with the assumption of purpose and meaning. Poets seem to have an easier time accepting these facts than people less skilled at self-awareness. Here, for example, is how Edna St. Vincent Millay sees the emptiness of the natural world’s beauty, in her poem “Spring:”

“To what purpose, April, do you return again?
 Beauty is not enough.
 You can no longer quiet me with the redness
 Of little leaves opening stickily.
 I know what I know.
 The sun is hot on my neck as I observe
 The spikes of the crocus.
 The smell of the earth is good.
 It is apparent that there is no death.
 But what does that signify?
 Not only under ground are the brains of men
 Eaten by maggots.
 Life in itself
 Is nothing,
 An empty cup, a flight of uncarpeted stairs.
 It is not enough that yearly, down this hill,
 April
 Comes like an idiot, babbling and strewing flowers.”

Yet I see grounds for Awe in what we may choose to do. Nothing is more inexplicable in terms of nature, than the fact that I or anyone else may choose to act, and to act in a context of what is right, instead of merely behaving rationally. Awe for me emerges not from nature's beauty, but from the thought that despite the dismal facts of nature that allow such beauty to emerge, right choices exist for me to make.

And what determines the right choice, the ethical one? The capacity to choose is necessary but not sufficient for an ethical life. For that, one must choose to act out of love as well as self-love, and to do so even against one's own individual interest.

In the first book of the *Mishna*, “Pirke Avot,” Rabbi Hillel distilled down the burden of choosing right to an obligation to ask oneself three necessary questions at all times when a decision is at hand. The actions that a person will take without delay on proper consideration of each of these questions form, I think, that person's ethical behavior:

“Im Ain ani li, mi li?
 Uch'she'ani l'atz'mi, ma ani?
 V'im lo ach'shav, aymatai?"/
 ”If I am not for myself, who will be for me?
 And if I am but for myself, what am I?
 And if not now, when?”

One must slip the constraints of natural selection when choosing an action that confronts these three questions. What is right according to them is not merely to act or not to act in self-interest, but to act out of self interest for the sake of another person, even at the risk of one's DNA's survival. That is the intersect of awe and science, in my terms.

* These remarks are adapted from an article in the October 2009 issue of *Sh'ma*. Robert Pollack is a Professor of Biological Sciences and the Director of the Center for the Study of Science and Religion at Columbia University.