

Scientific Thought and Poetic Craft: Seeking New Imagery and Vision to Involve the American Scholar

One of my favorite “contemporary” poems was written by Robert Oppenheimer while he was still a student of French Romantic Poetry, as documented by Kai Bird and Martin J. Sherwin in *American Prometheus: The Triumph and Tragedy of J. Robert Oppenheimer*. The energy and insight of the poem leap out of the formalistic structures of its time in the same way his later work in physics does. In fact, the vision from the poem is strongly and hauntingly echoed in the physical science and setting of The Trinity Project:

Crossing

It was evening when we came to the river
with a low moon over the desert
that we had lost in the mountains, forgotten,
what with the cold and the sweating
and the ranges barring the sky.
And when we found it again,
in the dry hills down by the river,
half withered, we had
the hot winds against us.

There were two palms by the landing;
the yuccas were flowering; there was
a light on the far shore, and tamarisks.
We waited a long time in silence.
Then we heard the oars creaking
and afterwards, I remember,
the boatman called to us.
We did not look back at the mountains.

—J. Robert Oppenheimer

The poem might almost be taken as a sketchbook idea for his later work. It is a vision built from discipline, experience and thought, where creative insight expands beyond the creaking oars of the aesthetic and technological craft that carries us across our time in space.

Poetry of whatever form or school can be broken down into two significant areas of study, the combination of which establishes a poet’s voice. One area of study is that of “craft,” which might be briefly defined as the study of how a poet lays out his or her words on paper in such a way as to communicate the intended feeling or understanding in the mind of the reader. Within craft, one can further break the work down into more precise matters, such as line length, meter, imagery, symbolism or others.

The second area of study that is required, however, is “vision.” Of the two, vision is the more important and the harder to teach. It encompasses the sense of *being* that the poet possesses, along with his formal or informal philosophy as to the significance or lack thereof of any image, symbol or metaphor as it relates to that philosophy. A significant poet’s vision is vast, and may contradict itself, but its cohesion provides the material with which readers can dissect and analyze the poet’s work. Vision generally involves the poet’s understanding of art and the humanities, of existence and perception, of nature and human achievement—although

these are often implied by context and juxtaposition of images rather than stated. Craft follows vision in poetry, just as form follows function in architecture, or in evolution.

Together, a poet's use of both vision and craft forms what we usually think of as a poet's *voice*. The different voices that define a generation or a literary era are generally recognizable as being from that era by other writers, as well as by historians and scholars. A significant part of what makes them recognizable as being from one era or another is the furnishings with which the poet provides imagery and metaphor. What kind of social settings are described, for example, or what pastimes, or what technology? Technology is important because it represents what is newly perceivable or achievable due to an increase in general human knowledge. It significantly shapes or impacts the society and people living at that time. Thus, the technological framework of the 1920s could be used to provide a dissolute setting for "The Waste Land," or alternatively for the hearty exuberance of Sandberg's "Chicago." It could also be used as counterpoint for contrasting pastoral egalitarianism. In any of these examples, the technological framework opens doors to and illuminates the understandings of its time. And it provides a uniquely contemporary canvas or milieu for discussing new ideas and their implications across a wide spectrum of the educated public, providing a cross-fertilization of thought that extends beyond the craft of writing.

These thoughts on the importance of utilizing scientific thought and technological achievement in poetry are not entirely new. They were at one time endemic to our literature. Ralph Waldo Emerson first advanced the notion of "the American Scholar" as a person of insatiable and wide-ranging interests and disciplined learning, along with a profound respect for literature. He was among the strongest early supporters of Walt Whitman's *Leaves of Grass*. And it was within *Leaves of Grass* that Walt Whitman wrote, "Scientists, I welcome you. You open doors for me." Thus began the greatest expansion of U.S. literary growth to date.

Whitman lacked significant scientific or technological training, but he did understand the importance of such knowledge in trying to create poetry that could capture the full human potential for understanding and compassion. And, as in the quote above, he encouraged it. He understood that new imagery and discovery could provide powerful images that would lend fire to the public imagination, as well as an enhanced degree of proof for his own beliefs. Out of that understanding and encouragement of others grew at least a century of advancement as poets became concerned with the intellectual examination of ideas within their work, in addition to their continued interest in imagism, meter and stanzaic form. This initiated an environment that fostered the keen intellect of poets such as T.S. Eliot, the business experience of Wallace Stevens, the social understandings of William Carlos Williams and eventually the entire spectrum of social groupings and voices that make up today's contemporary poetry.

Nor was the rest of society, outside of poetic circles, untouched by this sudden infusion of intellectual and scientific interest. T.S. Eliot's description of the gasworks that he visited and the musings they nurtured were close enough to the cutting edge of technological advance at their time that they captured the attention of Robert Oppenheimer as he worked on issuing in the Atomic Age. Richard Rhodes, in his 1986 Pulitzer Prize-winning book *The Making of the Atomic Bomb*, notes several references to Eliot's work in Oppenheimer's notes.

But, of course, gasworks are today an almost-extinct technology; town gas sites across this country are now Superfund sites for toxic remediation. Already, by the time powerful poets like Anne Sexton, Denise Levertov and Sylvia Plath focused attention on the importance, strength and vulnerability of the individual in technological societies, that technology had been replaced. Poetry remained vital because the conflict remained vivid between machinery that is designed to exploit human labor for the good of society and the pressure the individual in such a society must confront when the good of the society conflicts with *personal* good or desire. This conflict, of course, led in part to the anti-intellectual rebellion of the Beats and of society generally.

That rebellion might be said to have helped open the doors for such writers as Robert Bly and W.S. Merwin, writing within the same generation as the above, who could draw upon the translated experiences of earlier nations and cultures to highlight surprising strengths and weaknesses within our still rapidly evolving industrial society, wherein individuals lacked the connection with the natural world around them that was found in the earlier works these

poets translated, as well as in much of their own work. Their work, along with that of increasing numbers of other poets from their time and ours, once again pulled more frequently on nature imagery for its effect, because nature imagery was common to so many readers across our intellectual and emotional landscape. Most of their writing, however, lacked an urban or technological imagery that could communicate viscerally with an educated general readership audience—as opposed to a more specialized poetry audience. An exception to that statement about their work is Robert Bly’s *The Light around the Body*, which drew heavily upon the technology and weaponry of war to achieve a powerful effect not only among poets, but among the larger readership of the general public. That exception, however, strengthens the argument that technological setting is important. The book was a resounding success and helped further resolve against the Vietnam War because the general public was so well able to visualize and relate to its contemporary imagery. The combination of that specificity with the more shamanistic perspective that is a general component of Bly’s work provides a wonderful breeding ground for what he himself refers to as “Dragon Smoke.” It is where the poetry happens. Even so, there still remains, even in that book, little if any sense of wonder or discovery coming from scientific or technological progress. There are few *positive* new images or metaphors for the time.

What is missing in much of our current writing is vital new imagery. The technological imagery of the past generation is no longer perceived as a common part of our shared human landscape. The science employed as imagery and as a door of discovery by past generations is growing old. The technology from those generations is perceived as obsolete. And the metaphor of decay or decline put forward by the imagery of that technology has been greatly weakened by our temporal separation from it.

There remains a way back, of course; a way to draw forth new visions with all that that word implies. That way back calls for poets to welcome back the American Scholar and to open the doors of human advancement once again to the province of poetry. It may call for inclusion of meditations on the implications of mapping the human genome, or of the heavy metals that make up our bodies coming only from the heart of super novae that exploded millions of light years ago to bring us together where we are. There are many, many dark, chilly places where we as poets have not ventured yet, despite receiving scientific fact that shows that over 90% of the universe is composed of dark matter and is not observable through our senses. One hopes that we will begin to do so, that we will step down from defending ourselves as definers of a language that has already expanded well beyond the words we work with; that we will begin to think about these things and include current data in our musings, even as prose writers do.

It would be good to speak again as equals with the likes of Robert Oppenheimer and T.S. Eliot and to drive forward new understandings that once again lie beyond the doors that science opens and can only partially comprehend; to be American Scholars rather than specialists. If we have unique knowledge of the cosmos, and every poet of vision does, let us learn better to communicate with the imagery of our time.

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An earlier version of this essay was published in The New York Quarterly, Number 62, 2006; pp. 151–154.

He Who Says The Name Of God Will Perish [1]

Today we have finished the human genome project.
From the twisted spiral of our days we have labeled life itself,
untwined it to banish and recreate our fears.
We have tied it all into a paycheck that sends our children to college,
or have ignored it all and turned our eyes to entertainment,
so that our lives are filled with canned laughter and starvation

or are filled with tightly wound springs we cannot even see
that propel us to levels where we can leave the city at least once a year
and walk among the mountains or sail on starlit seas sometimes for a week.

It is raining in southern Illinois,
and fishermen slouch the muddy banks of swollen streams,
not because this is the place to come for trophy fish or for vacations that will be remembered,
but because so much of the country, so much of where the grass still grows high
is filled now with tar-papered shacks and hanging walls,
with doors that open darkly into nothing that can be seen,
through which these men come in need of food, in the waters,
and in the evening when the big fish dimple the stars of night,
come from their despair which is so far, so far
from the double helix we speak of in our universities.

What matters it then
if we know the name of the face of god itself,
but cannot recognize its face in the cold cliffs of our minds?
I have known the names of constellations our city dwellers have never seen
and been terrified spinning beneath them on the desert floor
while I Love Lucy filled the minds of our best paid and our most lost;
and it means nothing now. I have forgotten the helix
and the name of the man who found it and was written in our books,
even as it splits apart and searches for itself in the city lights where stars cannot be seen.

What is life
when we cannot reach out and feel our skin against the cold stone of night
and find the warmth we do not find within ourselves?
What is it that fills these sagging shacks in southern Illinois or Arkansas or Colorado,
rising up into the clear cold skies that stand above our laboratories and naming games
that has nothing to do with haste or quick response, but echoes
with the soft flow of waters running inevitably to sea?
What is it makes us turn our deepest discoveries to laughter caught on tape,
thank god I have forgotten the name; only this,
I have forgotten the name.

—Jared R.W. Smith

Reference

1. First published in Jared Smith, *Walking the Perimeters of the Plate Glass Window Factory* (Birch Brook Press, NY, 2001).