Barzun: The Glorious Entertainer

George Gaylord Simpson

When a literary critic and historian writes a book on science, thoughts of the two cultures inevitably arise. That cliché plagues Jacques Barzun repeatedly in **Science: The Glorious Entertainment** (Harper and Row, New York, 1964. 322 pp. $6), although he tries to dispose of it in an early chapter, thus:

There are not two cultures because each is too diverse to count as only one.

There are not two cultures because the only one we have is scientific and not humanistic.

The reason why the two cultures remain mutually aloof is because the scientific culture lacks an equivalent of the criticism so characteristic of humanistic culture.

Stripped of context and style (perhaps unfairly), those are among the somewhat confusing propositions that are fundamental for Barzun's book.

One of the main purposes of this collection of essays and lectures is to supply the overall criticism of science that scientists are said not to have provided. Barzun qualifies himself as a critic by the proposition that a nonscientist is as good a critic of science as a scientist (indeed, by clear implication, a better critic), because the scientist is necessarily a specialist and therefore ignorant of all but one subject. However, he writes that

> . . . to guard against error, rather than to humor the prejudice in favor of expert authority, I have asked . . . a number of colleagues to read my manuscript. Half of them are scientists, and of these several have won great awards.

Barzun's academic domain includes an unusual aggregation of eminent scientists, and this working of both sides of the street must be a particularly useful ploy in dealing with them. It is one that he uses over and over again, in diverse forms, in the present book. Here he claims superiority precisely because he is not an authority, but he also cows the reader by invoking blanket authority ex cathedra. In fact the reading of manuscript by friendly critics can provide corrections only with respect to the substantive contents of the various sciences. Very little of the book refers to such matters, so for the most part the built-in rebuttal is irrelevant. Nevertheless there are a few references to substantive science, and in my own field (evolutionary biology) I cannot agree when Barzun says that "nothing directly deriving from scientific work is misstated in these pages," although that word "directly" gives room for quibble.

It has long been an open secret that the advances of technology (or of "techne," in Barzun's vocabulary) can be mixed blessings. The Greeks had a legend for it. Still earlier, there was doubtless an outburst of australopithecine invective when it was discovered that fire burns as well as warms. Although the hope that we have heard the last word on this subject is certainly a vain one, Barzun is such a master of (usually) polite objurgation that he deserves the last word—

> Our sorry integument is never more than an inch away from things that burn and crush, cut and poison; we move among charged wires, adapt our speed to their commands, and remake our thoughts in the image of their broken idiom. . . . We perish, nullified, if we lose the serial number, the trade name, mislay the key or ticket or device or formula or token. . . .

and

> Something pervasive that makes the difference, not between man and animals, but between man and the robot, grows numb, ossifies, falls away like black mortified flesh when techne assails the senses and science dominates the mind.

These merely average examples show that Barzun is a worthy successor of Jeremiah.

Barzun maintains that techne and science started as quite different pursuits, and that science has become the beneficiary of technology, not, as so often stated, the reverse. It is, then, hard to see why science, to which some nobility of origin is granted, should be taken to task for the faults of techne. Here the ploy of ambivalence is given elaborate form in several chapters. Again the problem of multiple cultures arises, for if we have but one culture, and it scientific, we have within it two sciences. One is traditional, mechanistic, tainted by techne, and philosophically worthless. The other is revolutionary, indeterministic, afflicted with abstraction, and materially worthless.

Abstraction is Barzun's bugbear—the word has many more references in the index than any other, and each reference is to an adverse passage. If the abstraction is numerical it becomes not merely repulsive but also horrible. Medical statistics are particularly heartless because they accept the fact that a percentage of persons suffer. "How absurd in this frame of mind seems the old notion of each human life as a responsible pilgrimage." Barzun seems almost to feel that the statistics create the misery they describe, and he has no thought for the intention of that wholesale description, which is eventually to lessen the misery. For some reason such description is ignoble, but it is noble to describe the misery at retail, with no other aim than to sell a novel.

So in chapter 5 we come to the crucial question: What, if anything, is the good of science? The answer is that it is good, not necessarily clean, fun. Now, it is of course true that much scientific work is trivial and that scientists sometimes do ludicrous things. That is almost as true of science as it is of painting, music, or literature. That is legitimate criticism, and it may even be useful, if the intention is to evaluate the good and the bad in science or in art and to encourage the good. Here, however, the specifically comic is cited only to denigrate the generic field, the abstraction "science" that Barzun pursues in the teeth of his denunciation of all abstractions. The Philistine humor of ignorance is as readily applicable to science as it is, say, to the abstruse formalism of ballet or to the obscure preciosity of most

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literary criticism. Here is Barzun's crowning example of the "ludic" nature of science:

> . . . to make a pair of glass buckets whirl at a great rate on a machine and, having filled them with excreta, hope that an unfriendly virus will isolate itself. . . .

The vulgarity is perhaps excusable; the cheapness is not.

What Barzun has to say directly about science is essentially complete with that fifth chapter, less than half way through the book, at which point he has fought himself to a standstill. Nevertheless, the following seven chapters are even more interesting than the first five. It seems that not only science is wrong in our modern culture: everything is; we are rotten to the core. "Research" is indeed nonsense when done in kindergarten, and "creativity" is a mockery when taught by a literary hack. The profession of teaching is sick, and not only science is unteachable. Here, in his own specialty (much as he decries the authority of specialists), Barzun thoroughly understands the questions even when he seems to have no answers. Behavioral science, the easiest target of all, comes in for rough bumps, some almost deserved. Again we learn that description, at least *quantitative* description, somehow debases what is described. Here is a fair example of the intellectual level of other arguments:

> Washington in 1774 was not willful, stupid, greedy, or afraid; he simply preferred independence and was "a problem" to the British. . . . How could behavioral science have helped—and on which side?

Let us pass over some of the egregious implications, such as the implication that the revolution was the preference of one man or that behavioral science can study willfulness, stupidity, greed, and cowardice but not preference or independence. The statement is still unworthy of a specialist in verbal (hence mental) clarity. If there had been more comprehension of behavioral aspects of humanity on both sides of the Atlantic in the 1770's, the impulsion for choice need never have existed.

The next chapter, on "misbehavioral science," is admittedly not on science at all in any usual sense. It is a mixed bag of complaints, most of them justified and some fascinating, on the degeneration of language, the arrogance of computers, and the shortcomings of codified law. It then turns out (in chapter 10) that the artist, a hero as an abstraction, is a traitor as a person. The argument is, as usual, somewhat involuted. The artists' treason is ". . . reiterating to the point of nausea the proposition which thinking beholders no longer dispute: the life man has made for himself is not worth living." Art has come to shadow science. It has adopted abstraction (an inhumane horror) and has been driven to method (another). That art is not science; that some artists have been self-impelled to imitate science; that artists are not really very good at science—these are all true, and as literary criticism this is pertinent and interesting. The mind boggles at the logic by which this is imputed to science as *its* fault and adduced, further, as evidence of *its* perversity.

The penultimate chapter returns to a theme not new even to this book: The degeneration of the modern world. Some of Barzun's pages fairly drip nostalgia, and yet, as he had admitted in earlier passages, he knows that the golden age he regrets never really existed. The thesis is that things are not what they used to be, and what's more they never were.

The final passage of the book begins with a magnificent reprise of its opening ploy (the both-sides-of-the-street gambit). The scientific mode of thought "is fully justified by many of its results . . . a triumph of the mind, a masterpiece . . . an unrivaled satisfaction . . . a magnificent spectacle. . . . No man capable of understanding what science accomplishes can repudiate or try to dishonor it without giving up part of his manhood." But then: "It is not the work of science in its purity that is open to objection, but the ideas and feelings and above all the habits which science generates and which, with our complicity, it encourages beyond endurance." After a great deal of cogitation, I *think* that Barzun is saying that science would be just dandy if we never thought about it or acted on it.

Up almost to the end, the criticism is nonconstructive, to say the least. Now, although Barzun is "not redesigning Utopia," he does come up with four constructive suggestions. (i) The person should have times and places of retreat from machines. (ii) Language should be watched, its abstractions and bad metaphors kept outside the home at least. (iii) Houses are nicer if not erected by the cheapest mass production. (iv) The human mind is capable of embracing both science and the arts, even at the same time. The only quarrel I have with these conclusions is that they seem somewhat inadequate, even if not totally irrelevant, in view of all that has gone before.

I have not sufficiently praised Barzun's great literary skill or exemplified his mastery of outrageous hyperbole. Here are three such examples, chosen from a few pages in one chapter, among the many in the book:

> *Focus* was borrowed from photography by the educationists half a century ago and we have not had a clear statement from them since. . . .

> Until this triumph of nomenclature we knew that anything could mean anything; now we must wonder whether something can mean everything. . . .

> Up to that point the public had merely been given the impression that computers afforded every kind of knowledge except carnal knowledge; now we are no longer sure.

I do not remember any previous book that says so many wrong things so well. Barzun is indeed a glorious entertainer.

Plant Physiology

The Germination of Seeds. A. M. Mayer and A. Poljakoff-Mayber. Pergamon, London; Macmillan, New York, 1963. 244 pp. Illus. $6.50.

The Germination of Seeds is an up-to-date, competent review of the physiological aspects of seed germination. The treatment is limited to angiosperms, and germination is defined as the processes that take place in the seed up to seedling formation.

The authors begin with a brief description of the structure of seeds and seedlings and a general review of the chemical composition of seeds. In the third chapter, factors affecting germination are treated in some detail, with information on viability and life span, water, gases, temperature, and light.

The physiological aspects of dormancy, germination, inhibition, and stimulation of seeds are discussed in considerable detail, and the metabolism of germinating seeds as it is similar to, or differs from, other plant metabolism is carefully reviewed. In reading these chapters one is impressed by how little is actually known about these processes and by how limited the