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COVER: The universe, as far as we can see, appears to expand smoothly with a fairly uniform deceleration, without any bumps or accelerations, and some recent observations reenforce this theory. See p. 41. (Photo: Mt. Wilson Observatory)

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LETTERS

Human nature writ large

One can fully sympathize with David Park [Letters, Nov. 20], in deploring the inexorable spread of weapons knowledge—due, as he says, to political reasons.

Is it not true however that "politics" is "us"? Are not politics simply human nature writ large? If the Max Planck Institute of Behavioral Physiology is correct (SCIENTIFIC AMERICAN, Dec. 1961, p. 122), "the mind of a newborn animal is not a blank slate to be written on by experience. Aggressive behavior is an adaptive mechanism by which a species [is] spaced out. . . . Learning is no prerequisite for such behavior."

Or to turn to a different authority, Dr. Jules Masserman and his "Four Laws of Biodynamics" (Northwestern University), the second law says: "Behavior is adaptive to the 'external' environment not in any objective sense, but according to the organism's special interpretation of its milieu, which depends on its own special capacities ('intelligence') and its unique association of experiences."

Thus each of us inevitably has his inheritance and his own "unique association of experiences," which color his reception and understanding of all communication, resulting in differences of opinion.

For the Max Planck Institute quotation, refer to the geopolitics of modern dictatorships. For the Masserman quotation, refer to the politics of any popularly governed nation.

Shall the scientist then abandon the latter to the former?

And running through all the generations of nations, the two phenomena operate together to produce inevitable lags and gaps in communication, which impair both the development of ideals and policies within one generation, and their transmission to the next. These are among the root causes for the quotation used by the late Dr. Ernest Fremont Tittle (*Christians in an Unchristian Society*, p. 15), "Every new generation is a fresh invasion of savages."

Surely the built-in barriers to human communication are the real "enemy" of society, and we "make do," the best we can, with what we have.

R. Harland Shaw
Ingleside, Ill.

Hoover learned from experience

Before you apologize too abjectly to R. L. Bullock (Letters, 11/27/76) for forgetting to mention President Hoover as an Executive with "considerable scientific training" and "outstanding mining engineering background," you might want to consider other sources of information. The N.Y. Times, on Oct. 21, 1964, says, "As a student he was less than brilliant. He never had an 'A' in any subject, failed German and almost missed getting his diploma because he had not made up a deficiency in English composition."

Apparently, Mr. Hoover learned as much about mining from working in actual situations as he did at Stanford and achieved his initial success as an administrator and manager of mines in Australia. It would seem that he, like many other engineers, succeeded on the basis of his own merits and ability to learn from experience.

With regard to "his knowledge and reputation in macroeconomics," it is unfair to judge him by the depression associated with his administration. He apparently did what he could to stop the greed, speculation and general financial irresponsibility that led to disaster on a worldwide scale. However, it can hardly be denied that he was the representative of those who were most responsible for the actual turn of events.

L. F. Goeller Jr.
Haddonfield, N.J.

Doubts over lithium battery

I refer to the article "Return to the Electric Auto" in your Oct. 2, 1976, issue, which I received only today.

I think this article is very misleading. It says that lithium is a little-used metal which can be mined, refined and used as a substitute of petroleum products, and that the price of petroleum products will probably rise, and it implies that the price of Li will stay put at about double the energy price of gasoline, as of today.

Well, Li cannot be easily mined and refined like copper or tin, but must be extracted from its molten salts like aluminum at a huge expenditure of electricity. Only then you can use it for producing electricity in its turn, as an anode.

Far from freeing us even partially from the need for oil or other primary energy, it makes us more dependent on it. The lithium car joins the "hydrogen economy" as far as it pretends to be a substitute for failing primary energy, while both are but a distributive system of secondary energy, and the lithium car not a very efficient one.

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