

SCIENCE NEWS®

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Incorporating Science News Letter

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COVER: One of the latest designs for a space-colony habitat, with spherical shell built from the slag of industrial processes carried out on lunar surface material. The spherical habitat is flanked at both ends by cylindrical agriculture modules and heat-loss fins adjacent to manufacturing stations. A study this summer has made detailed plans for the three key stations in a future space-colony complex. See p. 124 (Illustration: NASA)

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LETTERS

Independent inventors

In evaluating "Whatever Happened to Independent Inventors" (SN: 7/24/76, p. 60) a significant factor may have been overlooked. From my former firing line of electro-mechanical research the change over a number of recent years in the training and attitude of many young people entering this field brought the conviction that this result was inevitable. The ability to break away from the traditional and successfully develop the innovative requires a high degree of individualism, an appreciation of the smallest factors involved in the scientific underpinning and knowledge of what has already been done.

The modern behavioral-motivated effort of our school system from grade one up is to "avoid teaching dull facts in favor of concepts," "encourage creativity by abandoning rote-learning," "promote team action rather than individualism," "abandon the lock-step of unvarying schedules," "eliminate the repressive effect of strict discipline, and ignore the other meaning of 'disciplines' in the categorizing of knowledge." I believe the understanding of detailed basic facts must precede appreciation of concepts; that allegedly "dull" facts cannot be adequately fixed other than by rote-learning; that emphasis upon team approaches discourages creativity by destroying individualism; and that breaking the lock-step of scheduled learning and abandoning disciplines, in both senses, establishes a new "lock-step" of lack of unswerving purpose.

Years ago, I noted: "There is nothing sadder than an intelligent graduate who has been so trained that he is unable to function without a five-foot shelf of reference books and a computer terminal; and who, with these, works long and hard to 'invent' many things that were discovered generations ago, studied, and abandoned for sound reasons." I have clear memories of many such cases. I cannot accept that the vast proliferation of highly specialized data must force the elimination of effective teaching of primary basic knowledge, which is the unchanging vital foundation of the inventive process.

While I have never discussed this matter with him, I am inclined to believe my friend Jacob Rabinow might concur.

George V. Morris
Sequim, Wash.

You logically noted that it would be unreasonable for you to attempt to "uncritically acclaim" any of the many requests to publicize new inventions which you receive. O.K. But shouldn't it be your position to take note of, and make comment on, huge gaps in research activity which federal agencies are apparently actively ignoring, if this could be seriously called into question?

If I could command your eye for just a little longer, I would like to suggest that although every efficient wind energy conversion system on which the Energy Research and Development Administration has appropriate data is currently estimated by ERDA to be more cost-effective (if properly sited) than any solar radiant energy system on which it has information, nonetheless, ERDA is refusing to authorize the actual, physical testing, in prototype form, of any wind system of substantial capacity attached to an urban structure. . . .

What is really dangerous about ERDA's ignoring of methodologies that could prove cost-effective right now is that, if ERDA continues on—concentrating heavily on dispersed technologies which must all await the day of much higher conventional fuel prices before such new technologies become competitive—this, the competitiveness of distantly located technologies, might take forever to manifest itself.

Tony Butler II
Houston, Tex.

Despite your policy statement at the beginning of your article on independent inventors, I am sure that some of your subscribers would like to see a page or two of inventions or original thoughts once in a while in our magazine. I don't believe that this is asking too much.

Haman W. Douglas
Clearwater Beach, Fla.

Which is right?

A question: Which is closest to the Milky Way, "Snickers" Galaxy (SN: 11/15/75, p. 309) or Magellanic Clouds (SN: 2/21/76, p. 116)?

Karen R. Mermel
Round Lake Beach, Ill.
(Snickers, if its existence is confirmed. Until then, the Magellanic Clouds are the nearest whose existence is certain.—Ed.)

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