

to the editor

Gravity and infinity

Perhaps I'm way off base, but I thought it was the velocity that required the rest mass of a photon to be zero, not the range (SN: 5/24, p. 512). Then in the relativity

equation, $m = \frac{m_0}{\sqrt{1-v^2/c^2}}$, the photon

itself may have a motion finite mass, m , via the indeterminate form $\frac{0}{0} = \frac{0}{0}$. If the graviton has a

finite m_0 , then v^2 must be less than c^2 and the graviton must be propagated at less than the speed of light, which seems most unlikely.

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(Either criterion works equally well, depending on whether you start from special relativity or from Yukawa's interpretation of the uncertainty principle. The relationship between range and mass of intermediate particles is derived from the uncertainty principle and this allows them to be compared with one another. A graviton with mass would go slower than the speed of light, just as pions, the intermediate particle in strong interactions, are known to do. Ed.)

Clarification

The first paragraph of my letter (SN: 5/10, p. 445) may have served to obscure rather than illustrate my basic argument. A typographical transposition makes it sound as though Amitai Etzioni in his article on "basic human needs" is proposing that aggression is "an instinctive territorial imperative." The term is not Etzioni's but is associated with Robert Ardrey's book "The Territorial Imperative." Etzioni does not posit aggression as a basic human need in his article in the December 1968 AMERICAN SOCIOLOGICAL REVIEW.

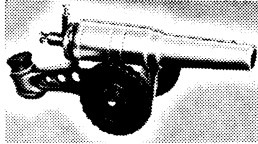
My reason for mentioning Etzioni, Ardrey and Parson's ideas in connection with my previous letter was that they all seem illustrative, in one way or another, of a relatively deterministic view of human conduct which leaves little room for human adaptiveness

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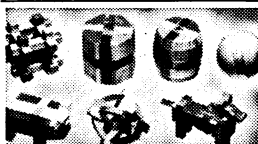
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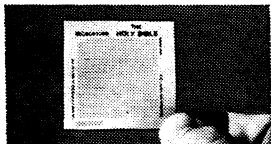
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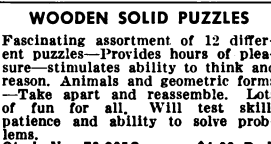
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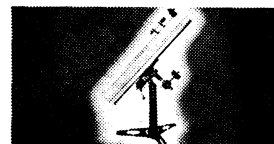
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