creation will likely be rejected as being nonscientific religious indoctrination.

If evolution is taught, special creation deserves to be taught as well. If creation is prohibited from the science classroom on religious grounds, then evolution, too, must be prohibited. There is no room for a double standard, particularly where "objective" science is concerned.

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#### Notes and References

<sup>1</sup>Creation or special creation, when referred to as a theory, refers to the postulate that a few thousand years ago the universe, the solar system, the earth and all basic plant and animal types were brought into existence by special creative processes that are not operative today. Biological variation may be granted to have occurred since the original creation, but such variation has been restricted within the variational limits of each created kind.

<sup>2</sup>Resolutions of learned societies in the textbook controversy,

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# HORSE BRAIN, COW BRAIN

BOLTON DAVIDHEISER\*

That the brain of the horse and the brain of the cow are basically similar is not surprising, but it may be surprising that the cerebral cortex of the two animals is so similar in detail, wrinkle for wrinkle (fissure for fissure). This is especially surprising from an "evolutionary" point of view since in the alleged ancestry between them there were smooth brains that had no fissures.

The ancestry of the ungulates (hoofed animals) is not even claimed to be clear to the evolutionists. Generally, evolutionists have held that both the Perissodactyla (including horses) and the Artiodactyla (including cattle) arose from ancestral forms called Condylarths, which had five toes, each capped with a small hoof.

However, Alfred Romer of Harvard believed that groups of hoofed animals "evolved" separately from a non-hoofed ancestry. This led him to make the statement that a cow is probably as closely related to a lion as to a horse.<sup>1</sup> William K. Gregory of Columbia University and the American Museum of Natural History followed Romer in this view, and wrote in his article on "Mammals" in the Encyclopedia Britannica of 1963, "The Condylarths or primitive ungulates . . .

are not regarded by modern authorities as ancestral either to Perissodactyla or Artiodactyla . . . "2

However, authors of articles in the New Encyclopedia Britannica (1974) return to the more usual concept of Condylarth ancestry for hoofed animals: (a) "The Artiodactyls can be traced back to a probable descent from a group of early generalized animals called Condylarths."3; (b) "The Perissodactyla appeared early in the Eocene. . . . Together with most other ungulate mammals, they were probably derived from the Condylarthra.'

No matter what the "evolutionary" opinion of the origin of horses and cattle, the fossil creature called Hyracotherium (which now includes the former Eohippus) is included by all specialists between the modern horse (Equus) and cattle (Bos). Admittedly Hyracotherium had a smooth brain without fissures, as the following sampling of statements will attest.

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The brain was small and without convolutions. . . . <sup>5</sup>

Another most unhorselike characteristic of Hyracotherium was its brain. Studies of casts of the interiors of skulls (endocranial casts) have revealed that the cerebral hemispheres were small and smooth. . . .  $^{6}$ 

The brain was small and its structure was so primitive that it suggests the most primitive mammal brains, or even the brain of a reptile, more than it does that of living horses or other modern ungulates.7

Hyracotherium (including Eohippus) is firmly established in the "evolutionary" literature as an ancestral horse. Since the various species of this genus had smooth brains without convolutions-and as was presumably also the case in various other presumed missing links between horses and cattle—it is hardly to be expected that the highly developed brains of horses and cattle would have a striking similarity in the configuration of fissures on the cerebral hemispheres. But they do.

Sisson and Grossman<sup>8</sup> diagram and/or describe a number of fissures given the same name in horses and cattle:

- 1. Lateral fissure, with three branches
- 2. Longitudinal fissure
- 3. Transverse fissure
- 4. Marginal fissure
- 5. Entomarginal fissure
- Ectomarginal fissure
- Calloso-marginal fissure 7.
- 8. Presylvian fissure
- Suprasylvian fissure
- Rhinal fissure (called rhinal sulcus in the ox)

Three fissures labeled on a diagram of the ox brain and apparently showing but not labeled on a diagram of the horse brain are the callosal fissure, splenial fissure, and diagonal fissure.

Two fissures are labeled on a diagram of the horse brain, which is an aspect of the brain not diagrammed for the ox. They are the sublimbic fissure and the hippocampal fissure.

Another fissure which is described but not diagrammed for the ox and is not mentioned for the horse is the coronal fissure.

The impression given is that a more detailed description of the brains of the horse and ox would disclose an even greater similarity, with more fissures in

It would seem remarkable indeed if the horse and cow with such similar fissures on the surface of the cerebral hemispheres "evolved" from animals with smooth brains. Rather, their similarity is in perfect accord with design, according to one plan for this particular feature, by One Designer.

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## FROM ADDISON'S ESSAY "ON ZEAL" IN THE SPECTATOR

(FOR "ATHEISM" READ "EVOLUTIONISM"-EDITOR)

. . . I cannot forbear mentioning a monstrous species of men, who one would not think had any existence . . . were they not to be met with . . . I mean, the zealots in atheism . . . . infidelity is propagated with as much fierceness and contention, wrath and indignation, as if the safety of mankind depended upon it. There is something so rediculous and perverse in this kind of zealots . . . they are perpetually teasing their friends to come over to them, although at the same time they allow that neither of them shall get anything by the bargain . . . the zeal of spreading atheism is, if possible, more absurd than atheism itself . . . they are likewise . . . possessed with the spirit of bigotry. They are wedded to opinions full of contradiction and impossibility, and at the same time look upon the smallest difficulty in an article of the faith as sufficient reason for rejecting it . . . I would fain ask... supposing all the great points of atheism... I say, supposing such a creed as this were formed . . . whether it would not require an infinitely greater measure of faith, than any set of articles which they so violently oppose . . .