

Mad Cows and Evolution

Researchers at the University of Oxford and the Institute of Virology and Environmental Microbiology, U.K., have shown that humans and cows share unusual similarities in two regions of the prion protein, PrP, the protein converted into the brain-destroying form in Creutzfeldt-Jakob disease of humans and 'mad cow' disease of cattle.¹

The sequences of amino acids in humans, cattle, and other mammals were compared. Humans, anthropoid apes (except orang-utans), and cattle, shared the same two differences to other

mammals. The PrP proteins differed from other mammals in the substitution of histidine in the place of tyrosine in one place and serine in place of aspartic acid in another place.

Such a pattern of similarity (homology) between humans and cows cannot be explained through any conventional evolutionary just-so story of common ancestry. The probability of this being a chance coincidence was calculated at less than one in 8,000. So what is the 'explanation'?

' . . . cattle and our primate ancestors were supposedly

*subjected to similar evolutionary pressures that drove the PrP to change in the same way. The nature of these pressures, however, remains a mystery.'*²

REFERENCES

1. Aldhous, P., 1996. Matching proteins raise CJD fears. *New Scientist*, 150(2027):21.
2. Aldhous, Ref. 1, p. 21.

D. Batten

QUOTABLE QUOTE: Evolutionary Psychology

'Evolutionary psychology, Chomsky complains, is not a real science but "a philosophy of mind with a little bit of science thrown in." The problem, he adds, is that "Darwinian theory is so loose it can incorporate anything.'

Horgan, J., 1995. The new social Darwinists. *Scientific American*, 273 (4): 154.

QUOTABLE QUOTE: Philosophical Criteria and Cosmological Models

'"People need to be aware that there is a range of models that could explain the observations," [South African cosmologist George F. R.] Ellis argues. "For instance, I can construct you a spherically symmetrical universe with Earth at its center, and you cannot disprove it based on observations." Ellis has published a paper on this. "You can only exclude it on philosophical grounds. In my view there is absolutely nothing wrong in that. What I want to bring into the open is the fact that we are using philosophical criteria in choosing our models. A lot of cosmology tries to hide that.'

Gibbs, W. W., 1995. Thinking globally, acting universally. *Scientific American*, 273(4):29.