

## BOOK REVIEWS

### PLASTIC PROSE

**On the Nature of Human Plasticity; R.M. Lerner, Cambridge University Press, £25.00.**

Lerner's starting point is the "life-span perspective" of the psychology of human development, which emphasises the possibilities for change throughout life, in which individuals may take an active and self-determining role, as "producers of their own development". As someone who makes a living from life-span development, by teaching nature students doing psychology degrees at Birkbeck College, I am all in favour of these emphases. However, Lerner does not say a great deal here about self-improvement, or other forms of flexibility in the human adult. Instead, the bulk of his book is made up of a review of the biological bases of human development. Most broadly, plasticity refers to a capacity to change, but Lerner is especially concerned with "the evolutionary and ontogenetic processes" which lie behind personal development and learning. There are chapters on recombinant DNA technology (looking forward to genetic engineering for human therapeutic interventions); brain anatomy (reviewing the plasticity of synapses and neural circuits, and anticipating transplants of brain tissue); and neurochemistry (mainly about the possibility of altering one's brain transmitter substances by diet). Also, human evolution (interaction between culture and brain-size) and "Comparative-developmental psychological bases of plasticity" (ontogeny versus phylogeny, and retention of childish curiosity throughout life via the evolutionary process of neoteny).

This is in principle a worthwhile exercise, and Lerner has a number of strong points to make about reciprocal influences between various social and biological levels of causation. Basic biology impinges increasingly on politically sensitive issues of social policy; and it may therefore be valuable to have a discussion of evolutionary theory and the structure of DNA in the language of higher social psychology. There are a couple of drawbacks though. First, the biology here is often superficial (e.g. the spider as an insect). Over 100 of the 500 references are to short articles in the journal *Science*. There is nothing wrong with this in itself, but Lerner seems too ready to accept current fashions, or unsubstantiated single reports, as unquestionable facts. For instance he overdoes the idea that diet changes brain chemistry, partly because someone reported that vitamin pills raised the IQ of retarded children by 10 points. Similarly, he should not have put in a chapter conclusion the claim that self-regulation has a significant effect on cancer, quoting one study in which rats given escapable electric shocks rejected implanted tumours rather more often than other rats.

Another drawback for the general reader may be the heavy-metal prose. Lerner has a predilection, not just for long words, but for whole strings of long words of about the same length, which I often found very taxing. I did not myself get the point, for instance, when asked the question: does the fetal alcohol syndrome "require an intergenerational-developmental rather than an ontogenetic-developmental approach?" And, although I am more than willing to accept that any such approach may entail "appraisal of both the unitemporal-multilevel and multitemporal-multilevel features of the problem", bearing in mind that "endogenous maturation-experience interactions are not discontinuous with exogenous organism-environment interactions" I can't help feeling that Lerner's final plea, which is for interdisciplinary cooperation in the study of human development, would have been better served by the use of fewer technical terms.

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