

## Mind and Nature: A Necessary Unity

Gregory Bateson

Bantam Books 1979

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There are a number of books which I have never read but have seen cited literally hundreds of times, and foremost among them is Gregory Bateson's *Steps to an Ecology of Mind*. Following a friend's advice, however, I decided to start reading Bateson with *Mind and Nature*. A first glance at the paperback edition was not encouraging — its classification by Bantam as a "New Age Book" was a bit disconcerting, and the blurb stressed the "interconnectedness of all things" line to the exclusion of anything else — but my fears proved unfounded. *Mind and Nature* is an introduction to epistemology (the study of knowledge) written by someone with a deep understanding of and respect for both the natural and social sciences.

Bateson begins with a list of basic scientific presuppositions that "every schoolboy should know", and further epistemological foundations are laid in two later chapters, one on the importance of combining different perspectives, of having "multiple versions of the world", and the other on different types of relationship. This material is used as the basis for tackling three major topics: finding explicit criteria for the existence of "mind"; examining parallels between learning and evolution as stochastic processes; and constructing a general purpose epistemological schema, a zig-zag between form and process.

While I certainly don't agree with everything Bateson says (and some specific criticisms follow below), my basic response to *Mind and Nature* was along the lines of "Yes! Yes! Yes!". Bateson tackles subjects which have been largely ignored by traditional analytic philosophy, yet which are of crucial importance to understanding science. Despite the complexities involved, *Mind and Nature* is also far more readable than most philosophy, though there is some danger in this — readers lacking the right background information may get entirely the wrong idea, as the writer of the blurb on my copy obviously did. *Mind and Nature* deserves its status

as a classic, and I hope it continues to be widely read (I certainly wouldn't want the schoolgirls to miss out). Unfortunately it is out of print at the moment, as are *Steps to an Ecology of Mind* and *Angels Fear: Towards an Epistemology of the Sacred*, two of Bateson's other books which I want to read.

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The rest of this review consists of some critical comments which won't mean much to anyone who hasn't read *Mind and Nature*. First of all I think some Bateson's basic presuppositions are wrong, or at least need to be qualified:

8. "Nothing will come of nothing." Bateson argues that there can be no new life and no new order without information (most of the time). As it stands this is a bit vague, and I'm not convinced that the exceptions are as rare as he suggests.

10. "Quantity does not determine pattern." There are physical systems which exhibit qualitatively different patterns — periodic cycles or chaotic behaviour, perhaps — for different values of some quantitative (real or complex) driving variable.

11. "There are no monotone 'values' in biology." All other things being equal, the more seeds a plant can produce in its lifetime the "better" (in terms of inclusive fitness). Perhaps this isn't a counterexample, but then I'm not entirely sure what a "monotone value" is — are there any in *physics*, for example? Bateson is obviously trying to generalise from the fact that evolution is not progressive, but I don't think his extension works.

Though I agree with an ontology where relationships are just as "real" as spatio-temporally instantiated entities, I don't like Bateson's reification of "difference", and especially his linkage of it to "mind". His definition of the latter is too broad for my liking; it doesn't distinguish the "mind" of a tree from the "mind" of a human or the "mind" of a society. While I agree that all these things do share common features (and Bateson has done a great job of exploring these), "mind" is not the right word to use for them. Common usage would suggest reserving it for distinctive features associated with complex central nervous systems — and, pace the subtitle,

I think it's clear that there *are* some fundamental differences between people and trees, even leaving consciousness out of the picture. Similarly I think Bateson is inviting confusion when he lumps all ontogenetic change and development together with cognitive change as "learning".

Bateson's discussion of stochastic processes and his suggestion of a parallel between "learning" and "evolution" are provoking, but I feel the latter holds only at a level of abstraction too high to provide useful insight into practical questions. Finally, Bateson's schema with the zig-zag between form and process is supposed to be applicable to a range of things including speciation and variation, continuity and discontinuity, and number and quantity. I think that this is massively overambitious, and that his examples are rather contrived. (Though arguably much less so than those commonly deployed on behalf of the Marxist dialectic or structuralist binary opposition.) I'm also dubious about imposing a *Principia Mathematica* style hierarchy of logical types on human thought, and feel that people are not (even locally) nearly as rational as Bateson suggests.

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