

Inclusive fitness

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Evolutionary theorist William Hamilton showed that natural selection leads organisms to maximise their “inclusive fitness”, not their personal reproductive success. That is, they behave as if they value the lives of relatives, which may lead them to exhibit altruism towards kin.

No such principle exists for multilevel selection, as described by David Sloan Wilson (Instant Expert, 6 August). Except for those special cases in which within-group selection is eliminated, groups cannot be regarded as fitness-maximising “superorganisms”. This is why evolutionary biologists prefer to work with inclusive fitness rather than multilevel selection. Only the theory of inclusive fitness describes both the process and the purpose of Darwinian adaptation.

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