**John Maynard Smith 1920 – 2004**

<http://en.wikipedia.org/wiki/John_Maynard_Smith>

    

Professor **John Maynard Smith**,[[1]](http://en.wikipedia.org/wiki/John_Maynard_Smith#cite_note-fn_1-0) [F.R.S.](http://en.wikipedia.org/wiki/Fellow_of_the_Royal_Society) ([6 January](http://en.wikipedia.org/wiki/January_6) [1920](http://en.wikipedia.org/wiki/1920) – [19 April](http://en.wikipedia.org/wiki/April_19) [2004](http://en.wikipedia.org/wiki/2004)) was a [British](http://en.wikipedia.org/wiki/United_Kingdom) theoretical [evolutionary biologist](http://en.wikipedia.org/wiki/Evolutionary_biologist) and [geneticist](http://en.wikipedia.org/wiki/Geneticist). Originally an aeronautical engineer during the [Second World War](http://en.wikipedia.org/wiki/Second_World_War), he then took a second degree in genetics under the well-known biologist [J.B.S. Haldane](http://en.wikipedia.org/wiki/J.B.S._Haldane). Maynard Smith was instrumental in the application of [game theory](http://en.wikipedia.org/wiki/Game_theory) to evolution and theorized on other problems such as the [evolution of sex](http://en.wikipedia.org/wiki/Evolution_of_sex) and [signalling theory](http://en.wikipedia.org/wiki/Signalling_theory).

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**Biography**

**[] Early years**

John Maynard Smith was born in [London](http://en.wikipedia.org/wiki/London), the son of a surgeon, but following his father's death in 1928 the family moved to [Exmoor](http://en.wikipedia.org/wiki/Exmoor), where he became interested in [natural history](http://en.wikipedia.org/wiki/Natural_history). Quite unhappy with the lack of formal science education at [Eton College](http://en.wikipedia.org/wiki/Eton_College), Maynard Smith took it upon himself to develop an interest in [Darwinian evolutionary theory](http://en.wikipedia.org/wiki/Darwinism) and [mathematics](http://en.wikipedia.org/wiki/Mathematics), after having read the work of old Etonian [J.B.S. Haldane](http://en.wikipedia.org/wiki/J.B.S._Haldane), whose books were in the school's library despite the bad reputation Haldane had at Eton for his [communism](http://en.wikipedia.org/wiki/Communism).

On leaving school, Maynard Smith joined the [Communist Party of Great Britain](http://en.wikipedia.org/wiki/Communist_Party_of_Great_Britain) and started studying [engineering](http://en.wikipedia.org/wiki/Engineering) at [Trinity College](http://en.wikipedia.org/wiki/Trinity_College,_Cambridge) [Cambridge](http://en.wikipedia.org/wiki/University_of_Cambridge). When the [second world war](http://en.wikipedia.org/wiki/Second_world_war) broke out in 1939, he defied his party's line and volunteered for service. He was rejected, however, because of poor [eyesight](http://en.wikipedia.org/wiki/Eyesight) and was told to finish his [engineering degree](http://en.wikipedia.org/wiki/Bachelor_of_Engineering), which he did in 1941. He later quipped that "under the circumstances, my poor eyesight was a selective advantage — it stopped me getting shot". The year of his graduation, he married Sheila Matthew, and they were later to have two sons and one daughter (Tony, Carol, and [Julian](http://en.wikipedia.org/wiki/Julian_Maynard_Smith)). Between 1942 and 1947 he applied his degree to [military aircraft](http://en.wikipedia.org/wiki/Military_aircraft) design.

**[] A second degree**

Maynard Smith then took a change of career, entering [University College London](http://en.wikipedia.org/wiki/University_College_London) (UCL) to study [fruit fly](http://en.wikipedia.org/wiki/Drosophila_melanogaster) genetics under Haldane. After graduating he became a lecturer in Zoology at UCL between 1952 and 1965, where he directed the [*Drosophila*](http://en.wikipedia.org/wiki/Drosophila) lab and conducted research on population genetics. He published a popular Penguin book, [*The Theory of Evolution*](http://en.wikipedia.org/wiki/The_Theory_of_Evolution), in 1958 (with subsequent editions in 1966, 1975, 1993).

He became gradually less attracted to communism and became a less active member, finally leaving the Party in 1956 like many other intellectuals, after the [Soviet Union](http://en.wikipedia.org/wiki/Soviet_Union) brutally suppressed the [Hungarian Revolution](http://en.wikipedia.org/wiki/1956_Hungarian_Revolution) (Haldane had left the party in 1950 after becoming similarly disillusioned).

**[] At the University of Sussex**

In 1962 he was one of the founding members of the [University of Sussex](http://en.wikipedia.org/wiki/University_of_Sussex) and was a Dean between 1965-85. He subsequently became a [professor emeritus](http://en.wikipedia.org/wiki/Professor_emeritus). Prior to his death the building housing much of Life Sciences at Sussex was renamed the John Maynard Smith Building, in his honour.

**[] *Evolution and the Theory of Games***

In 1973 Maynard Smith formalised a central concept in [game theory](http://en.wikipedia.org/wiki/Game_theory) called the [evolutionarily stable strategy](http://en.wikipedia.org/wiki/Evolutionarily_stable_strategy) (ESS), based on a verbal argument by [George R. Price](http://en.wikipedia.org/wiki/George_R._Price). This area of research culminated in his 1982 book [*Evolution and the Theory of Games*](http://en.wikipedia.org/wiki/Evolution_and_the_Theory_of_Games). The [Hawk-Dove game](http://en.wikipedia.org/wiki/Hawk-Dove_game) is arguably his single most influential game theoretical model.

He was elected a [Fellow of the Royal Society](http://en.wikipedia.org/wiki/Fellow_of_the_Royal_Society) in 1977. In 1986 he was awarded its [Darwin Medal](http://en.wikipedia.org/wiki/Darwin_Medal). He also developed and recovered from [colon cancer](http://en.wikipedia.org/wiki/Colorectal_cancer).

**[] The evolution of sex and other major transitions in evolution**

Maynard Smith published a book entitled *The Evolution of Sex* which explored in mathematical terms, the notion of the "[two-fold cost of sex](http://en.wikipedia.org/wiki/Evolution_of_sex#The_two-fold_cost_of_sex)". During the late 1980s he also became interested in the other major evolutionary transitions with the biochemist [Eörs Szathmáry](http://en.wikipedia.org/wiki/E%C3%B6rs_Szathm%C3%A1ry). Together they wrote an influential 1995 book [*The Major Transitions in Evolution*](http://en.wikipedia.org/wiki/The_Major_Transitions_in_Evolution). A popular science version of the book, entitled *The Origins of Life: From the birth of life to the origin of language* was published in 1999.

In 1991 he was awarded the [Balzan Prize](http://en.wikipedia.org/wiki/Balzan_Prize) of Italy. In 1995 he was awarded the [Linnean Medal](http://en.wikipedia.org/wiki/Linnean_Medal) by The [Linnean Society](http://en.wikipedia.org/wiki/Linnean_Society) and in 1999 he was awarded the [Crafoord Prize](http://en.wikipedia.org/wiki/Crafoord_Prize) jointly with [Ernst Mayr](http://en.wikipedia.org/wiki/Ernst_Mayr) and [George C. Williams](http://en.wikipedia.org/wiki/George_C._Williams). In 2001 he was awarded the [Kyoto Prize](http://en.wikipedia.org/wiki/Kyoto_Prize). In his honour, the [European Society for Evolutionary Biology](http://en.wikipedia.org/wiki/European_Society_for_Evolutionary_Biology) has an award for extraordinary young evolutionary biology researchers named *The* [*John Maynard Smith Prize*](http://en.wikipedia.org/wiki/John_Maynard_Smith_Prize).

**[] *Animal Signals***

His final book, *Animal Signals*, co-authored with David Harper was published in 2003 on [signalling theory](http://en.wikipedia.org/wiki/Signalling_theory).

He died — sitting in a high-backed chair and surrounded by books — at his home in [Lewes](http://en.wikipedia.org/wiki/Lewes), [East Sussex](http://en.wikipedia.org/wiki/East_Sussex) on [April 19](http://en.wikipedia.org/wiki/April_19), [2004](http://en.wikipedia.org/wiki/2004), 122 years to the day after the death of Darwin. At his funeral, one of his grandchildren said, " he was very smart... and a jolly nice person". He was survived by his wife Sheila and their children.

**[] Tribute**

* Fellow, [Royal Society](http://en.wikipedia.org/wiki/Royal_Society) (1977)
* [Darwin Medal](http://en.wikipedia.org/wiki/Darwin_Medal) (1986)
* [Frink Medal](http://en.wikipedia.org/wiki/Frink_Medal) (1990)
* [Balzan Prize](http://en.wikipedia.org/wiki/Balzan_Prize) (1991)
* [Linnean Medal](http://en.wikipedia.org/wiki/Linnean_Medal) (1995)
* [Royal Medal](http://en.wikipedia.org/wiki/Royal_Medal) (1997)
* [Crafoord Prize](http://en.wikipedia.org/wiki/Crafoord_Prize) (1999)
* [Copley Medal](http://en.wikipedia.org/wiki/Copley_Medal) (1999)
* [Kyoto Prize](http://en.wikipedia.org/wiki/Kyoto_Prize) (2001)
* Darwin-Wallace Award (2008). This is bestowed every 50 years by the [Linnean Society of London](http://en.wikipedia.org/wiki/Linnean_Society_of_London); Dr. Maynard Smith was one of thirteen co-recipients.

Maynard Smith has an [Erdős number](http://en.wikipedia.org/wiki/Erd%C5%91s_number) of four.

**[] Bibliography**

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  + 1993 edn [ISBN 0-521-45128-0](http://en.wikipedia.org/wiki/Special:BookSources/0521451280)
* Maynard Smith, J. (1968) *Mathematical Ideas in Biology*. Cambridge University Press. ISBN
* Maynard Smith, J. (1972) *On Evolution*. Edinburgh University Press. [ISBN 0-85224-223-9](http://en.wikipedia.org/wiki/Special:BookSources/0852242239)
* Maynard Smith, J. (1974b) *Models in Ecology*. Cambridge University Press. ISBN
* Maynard Smith, J. (1978d) *The Evolution of Sex*. Cambridge University Press. [ISBN 0-521-29302-2](http://en.wikipedia.org/wiki/Special:BookSources/0521293022)
* Maynard Smith, J. (ed.) (1981d) *Evolution Now*. London, Macmillan. [ISBN 0-7167-1426-4](http://en.wikipedia.org/wiki/Special:BookSources/0716714264)
* Maynard Smith, J. (1982d) [*Evolution and the Theory of Games*](http://en.wikipedia.org/wiki/Evolution_and_the_Theory_of_Games). Cambridge University Press. [ISBN 0-521-28884-3](http://en.wikipedia.org/wiki/Special:BookSources/0521288843)
* Maynard Smith, J. (1986b) *The Problems of Biology*. Oxford: Oxford University Press. [ISBN 0-19-289198-7](http://en.wikipedia.org/wiki/Special:BookSources/0192891987)
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* Maynard Smith, J. and [Szathmáry, E](http://en.wikipedia.org/wiki/E%C3%B6rs_Szathm%C3%A1ry). (1997) [*The Major Transitions in Evolution*](http://en.wikipedia.org/wiki/The_Major_Transitions_in_Evolution). New York: Oxford University Press. [ISBN 0-19-850294-X](http://en.wikipedia.org/wiki/Special:BookSources/019850294X)
* Maynard Smith, J. and [Szathmáry, E](http://en.wikipedia.org/wiki/E%C3%B6rs_Szathm%C3%A1ry). (1999) *The Origins of Life: From the Birth of Life to the Origin of Language*. Oxford: Oxford University Press. [ISBN 0-19-286209-X](http://en.wikipedia.org/wiki/Special:BookSources/019286209X)
* Maynard Smith, J. and Harper, D. (2003) *Animal Signals*. Oxford University Press. [ISBN 0-19-852685-7](http://en.wikipedia.org/wiki/Special:BookSources/0198526857)

**[] Footnotes**

1. [**^**](http://en.wikipedia.org/wiki/John_Maynard_Smith#cite_ref-fn_1_0-0) His [surname](http://en.wikipedia.org/wiki/Surname) was *Maynard Smith*, not *Smith*, nor was it hyphenated.

**[] External links**

**[] University of Sussex**

* [Press release announcing his death](http://www.sussex.ac.uk/press_office/media/media399.shtml)
* [Tribute from his colleagues](http://www.sussex.ac.uk/press_office/bulletin/23apr04/article2.shtml)
* [More tributes from colleagues](http://www.lifesci.sussex.ac.uk/CSE/members/jms/jms-display.php)
* [List of publications](http://www.biols.susx.ac.uk/CSE/members/jms/JMSpublications.pdf)

**[] Other academia**

* [Freeview video 'The Origin of Life' A Royal Institution Discourse by the Vega Science Trust](http://www.vega.org.uk/video/programme/63)
* [Freeview video 'Flight in Birds and Aeroplanes' A Masterclass by the Vega Science Trust](http://www.vega.org.uk/video/programme/84)
* [John Maynard Smith Remembered - a series of (frequently amusing) recollections of John by his friends and colleagues.](http://www.lifesci.sussex.ac.uk/CSE/members/jms/jms-display.php)
* [In conversation with John Maynard Smith FRS](http://www.lse.ac.uk/Depts/cpnss/darwin/evo/jms.htm)
* [2003 New Scientist interview](http://www.newscientist.com/opinion/opinterview.jsp?id=ns23991)
* [Five short videos](http://www.blackwellpublishing.com/ridley/video_gallery/John_Maynard_Smith.asp)
* [Video conversation with Robert Wright](http://video.google.com/videoplay?docid=-5719510285700008320)
* [John Maynard Smith](http://www.peoplesarchive.com/browse/movies/3701/) video at the [Peoples Archive](http://en.wikipedia.org/wiki/Peoples_Archive) (interview by [Richard Dawkins](http://en.wikipedia.org/wiki/Richard_Dawkins))
* <http://meaningoflife.tv/video.php?speaker=maynard%20smith&topic=complete>

**[] Obituaries**

* [*Guardian*](http://www.guardian.co.uk/obituaries/story/0,3604,1200211,00.html)
* [*The Independent*](http://news.independent.co.uk/people/obituaries/story.jsp?story=514658)
* [Telegraph](http://www.telegraph.co.uk/news/main.jhtml?xml=/news/2004/04/22/db2201.xml&sSheet=/portal/2004/04/22/ixportal.html)
* [*The Times*](http://www.timesonline.co.uk/article/0,,60-1082979,00.html)
* [Corante](http://www.corante.com/loom/archives/003251.html)
* [*Current Biology* (pdf)](http://www.biols.susx.ac.uk/CSE/members/jms/JMSobitBC.pdf)
* [*Los Angeles Times*](http://www.latimes.com/news/obituaries/la-me-maynardsmith24apr24,0,6745983.story?coll=la-news-obituaries)
* [*New York Times*](http://www.nytimes.com/2004/04/29/science/29SMIT.html)
* [DRAFT for Biology and Philosophy](http://ase.tufts.edu/cogstud/papers/maynardsmithobit.htm) by [Daniel Dennett](http://en.wikipedia.org/wiki/Daniel_Dennett)
* [*Resonance*](http://www.iisc.ernet.in/academy/resonance/Nov2005/pdf/Nov2005p70-78.pdf) [[1]](http://www.iisc.ernet.in/academy/resonance/Nov2005/pdf/Nov2005AiB.pdf)