# Module name: Evolution and Behaviour in Animals and Humans

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| **Norwegian module name** | *Evolusjon og atferd hos dyr og mennesker* | **Study level** | *Bachelor* | **Teaching language** | English |
| **Study points** | *15 study points* | **Requirements** | *None* | **Start** | *Spring* |
| **Module coordinator** | *Espen Sjøberg* | **Recommended existing knowledge** | *None* | **Duration** | *1 term* |

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| **Introduction** | In 1859, Charles Darwin proposed the modern theory of evolution, which after 150 years is still supported by science. Finally, an answer was given to questions on how and why animals have developed to look like they do today. Continued research on evolution provided more and more answers within animal biology and behaviour. The biggest question slowly came crawling: can what we learn about evolution and animals also apply to humans?<br><br>Natural selection is a mechanism where those organisms with the greatest ability for survival are those who pass on their genes. These abilities include behaviours, such as those increasing the chance of producing offspring with a partner. This module will look at applied evolution and how it has formed behavioural properties in both animals and humans. To what degree can our behaviour be explained by the environment or our genes? Primarily, questions regarding evolution and behaviour fall into two overlapping fields: behavioural ecology and evolutionary psychology.<br><br>Behavioural ecology is the study of animal behaviour in order to map evolutionary mechanisms. It covers concepts such as sexual behaviour, competition, intelligence, culture, and helping behaviour. The latter topic on helping behaviour, or altruism, was one of Charles Darwin's greatest mysteries for a long time. If helping one animal comes at the cost of ones own life, how can such a behaviour come to be in the first place? It took over 100 years before the answer found. Another question was the concept of designated sex: practically all animals are divided into sexes, but what is the point of having males and females? By studying the behaviour of animals we can gain a better understanding of evolutionary development and apply this knowledge to humans. If all animals follow specific principles, why would humans be any different?<br><br>Evolutionary psychology was established as a field in the 1990s, and focuses on how evolution can contribute towards explaining human |

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| | behaviour. There are two areas that are researched particularly often: culture and sex/gender. A behaviour can have an evolutionary explanation if it is seen across culture, because this would indicate that the behaviour is dominated by genes and not social influence from the environment. An example of sex research is that men find sexual infidelity more distressing than emotional infidelity (falling in love). This is best explained through evolution: if women were sexually unfaithful it creates uncertainty about who is the father of a child, while emotional infidelity do not have this uncertainty. Even though men and women are more similar than dissimilar, knowledge about evolution can contribute towards explaining those gender differences that exist.<br><br>This module will provide a general introduction into evolutionary biology and natural selection, as well as specialist knowledge on how nature has formed behaviours in animals and humans. Some of the topics that will be looked at closely are: sexuality, partner choice, helping behaviour, intelligence, culture, hunting strategies, a variety of different behaviours in animals and humans, as well as a discussions on nature and nurture. |
| **Learning outcomes** | **Knowlegde**<br>The student:<br>• Can describe applications of evolutionary psychology as explanatory models within important areas of society, particularly sex and culture.<br>• Can account for and express an understanding of central principles within natural selection.<br>• Can define central terms within each domain of evolutionary psychology and behavioural ecology.<br>• Has knowledge of central topics within inheritance, genetics, and environmental influence on behaviour.<br>• Has knowledge about the historical development within naturalism and evolutionary biology, and how this has contributed towards forming evolutionary psychology as a scientific field.<br>• Can explain central principles within evolution and apply them in order to shed light on questions regarding sexuality, helping behaviour, problem solving, and cultural conditions.<br><br>**Skills**<br>The student:<br>• Can locate relevant publications and other source material, and use theory to elaborate on themes within evolution, behaviour and society.<br>• Can plan and conduct an independent project, which investigates an *a priori* hypothesis within evolutionary psychology.<br>• Can discuss and apply central terms within themes and theoretical perspectives in evolutionary psychology and behavioural ecology.<br>• Can, in written form, present the fundamental models, theory and |

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| | research within evolution and behaviour.<br><br>**General competency**<br>The student:<br>• Demonstrate an understanding of how early research in evolutionary biology and animal behaviour sets the foundation for further research on human behaviour<br>• Has insight into ethical problems within evolutionary psychological research with humans, in particular gender research<br>• Can reflect upon central questions within evolution and evolutionary psychology, including the roles of genes and environments in explaining behaviour |
| **Learning activities** | Lectures, group lessons, problem-based group activities, skill training |
| **Recommended use of time** | Lectures: 72 hours<br>Supervision: 2 hours<br>Group work: 30 hours<br>Independent studies: 224 hours<br>Exam: 72 hours<br>Total time use: 400 hours |
| **Tools** | |
| **Connection to industry** | In the module you will meet relevant people/lecturers from the sector. Practical examples and cases are used in teaching settings. |
| **Mandatory activities** | Assignments: Consists of one or more tasks/activities that all have to be approved<br>Marking: G/IG – A/NA (godkjent/ikke godkjent – approved/not approved)<br>Allowed aid: All aids allowed<br>The student must have all their assignments approved in accordance to exam regulations in order to take the exam. |
| **Exam** | Oral, individual exam. Duration: 10-20 minutess. All aids allowed. |
| **Notes** | |