

Selfish gene theory and evolution of altruistic behaviour psychology essay



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Certainly, humans are subject to the same processes of evolutionary changes as all other living creatures on earth. Obviously, these changes are the product of a long period and occur because of genetic transmission, diversity and selection over many generations. However, Barrett invented the 'selfish gene' theory which cited that "selection refers not to the survival of the species but instead to the survival of the genes within the individual, as it is not the individual that persists over time but rather the genes" (Barrett et al., 2002). Therefore, this essay aims to outline the two processes of selection, the natural and sexual selection and the effects they have on genes. Furthermore, it will explain what is meant by altruistic behaviour in relation to selfish gene theory and it will also present the types that have helped to the explanation of altruistic behaviour. Finally, it will conclude that selection definitely refers to the survival of genes within the individual. (A. Phoenix (2007), chapter 2 pg. 116, 117 & 121)

Undoubtedly, Dawkins reference to genes is an interesting approach and specifically his view that "people act as 'vehicles' to contain the genes, and these are passed on when they reproduce" (Dawkins, 1976, 1999).

Furthermore, it is worth mentioning that according to Barrett the term 'selection' refers to the survival of the characteristics that provide some advantages to the individual and the elimination of some other characteristics that are harmful for an individual within a particular environment. As it can be seen, the selection is divided into two processes, natural and sexual selection. (A. Phoenix (2007), chapter 2 pg. 121)

Firstly, natural selection can be said to have occurred when one generation will have inherited positive characteristics from their parents. More

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particular, the individuals which have a variation of a particular trait that enables them to compete more effectively in order to gain more wealth that lead to survival in the particular environment, will definitely live longer than those without the particular trait and therefore will create more offspring and will pass more genes to the next generations. (A. Phoenix (2007), chapter 2 pg. 121)

In addition, the process of natural selection leads to adaptations. More particular, leads to characteristics and behaviours within species that improve the survival and reproductive success of the individuals within a species and therefore increase the possibility of their genes to pass on the next generation. Surely, there is a chance that an adaptation could become a threat to our survival and reproductive success such as our desire for eating fatty foods. Moreover, evolutionary psychologists try to find out which characteristics are adaptations, in order to discover their functions and selective pressures that led them to develop and in the same time to help them to recognize why we have this characteristic. A striking example here is that of art, which shows that a particular behaviour may have multiple functions and that some of these functions do not imply the reason that it developed. In the case of art it may be that it functions as an expression of emotions or as a mean of communication. (A. Phoenix (2007), chapter 2 pg. 122 & 123)

Another significant process of selection is the one of sexual selection, since reproductive success is also achieved through sexual selection because it is the process by which the differences among individuals in their physical and behavioral characteristics influence their access to the quantity and quality

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of available mates. (Gangestad & Thornhill, 1997). Moreover, if there is greater variety of mates available, there can be a larger variety of quality individuals in order to make a better choice. In addition, a quality mate means much better care for the child and therefore, the potential offspring could inherit more adaptive psychical or psychological traits. So there are increased possibilities for survival of the descendant and for the reproductive success of the individual. (A. Phoenix (2007), chapter 2 pg. 124)

As it can be suggested, reproduction and survival are associated with altruism. Altruism is a phenomenon that appears to be visible in all societies worldwide. (Fehr and Fischbacher, 2003 & Workman and Reader 2004) More specifically, it is considered to be the performing of an act that needs effort to complete, but gives advantage on another individual. (Nowak and Sigmund, 2005). (A. Phoenix (2007), chapter 2 pg. 144)

For better understanding of altruism, Hamilton (1964) offered the concept of kin selection. More particular, it means that since the purpose of reproductive success is the increase of copies of genes and not individuals, this can be succeeded either directly, through maximizing your own reproductive success and pass your genes through your offspring, or it can occur indirectly by helping the reproduction of other individuals, such as your relatives, who are able to transmit the same genes. Therefore, it can be said that the more closely you are genetically related to an individual, the more you are willing to behave altruistically towards them, because in this way you help reproduction. (A. Phoenix (2007), chapter 2 pg. 144 & 145)

Furthermore, kin selection cannot offer a complete explanation of altruism because people also behave altruistically towards friends and even people they don't know. In this case the process is known as reciprocal altruism and it can be seen as mutual behaviour between unrelated individuals that favours everyone. (Mc Andrew 2002, Nowak and Sigmud 2005). However, there is a problem in this process since if someone behaves altruistically, he/she cannot be sure that the other person will reciprocate. (A. Phoenix (2007), chapter 2 pg. 146)

Another type of altruism is that of indirect reciprocity, which is the process where one person can behave altruistically towards another person, even when there is no possibility that the other person will return the favour. In this case, the behaviour of altruism depends on the need of the altruist to gain a positive reputation in society. (Fehr and Fischbacher, 2003, Nowak and Sigmund 2005) A typical example here is the case of a person who gives money to a charity so he can gain a reputation as a good and giving person and increases the possibility that other persons, who haven't gained from the charity, will help him. Indeed this could improve the survival chances of an altruist or even help him to attract more sexual partners. (A. Phoenix (2007), chapter 2 pg. 149)

In summary, it is obvious that selection regards that the most important thing in the evolution of human being is the survival of genes and not the survival of species, because genes will continue to persist since they pass through many generations over time while humans will not. In addition, selfish theory helps us to have a better explanation of the types of altruistic behaviour. Finally, it can be concluded that people seem clearly to act as the <https://assignbuster.com/selfish-gene-theory-and-evolution-of-altruistic-behaviour-psychology-essay/>

vehicle which contains the genes, which pass successfully to the next generations through reproduction. (Dawkins, 1976, 1999).

Reference:

Phoenix, A. (2007). Evolutionary psychology. In D. Miell, A. Phoenix, & K. Thomas (Eds.), *Mapping Psychology* (2nd ed., pp. 105-160). Milton Keynes: The Open University.

PART II METHODS EXERCISES

QUESTION 1

Q1 (a) Total time spent practising & exam mark

Q1 (b) (iii) neither

Q1 (c) (iii) medium

Q1 (d) (iv) There are many determinant of piano exam marks

Q1 (e) VARIABLE 1 = Total time spent practising

VARIABLE 2 = Hours spent practicing

Q1 (f) Yes I think this is a valid conclusion

Q1 (g) I think that the correlation coefficient between the two variables will become stronger because pupil's 3 practise time hadn't a strong association with exam marks.

QUESTION 2

Q2 (a) (ii) whether or not stooges were present

Q2 (b) (iii) whether or not a participant was influenced by the stooges

Q2 (c) (iv) between participants because some worked with stooges and some did not

Q2 (d) (i) the time taken for each testing session

(v) the gender of the participants

Q2 (e) (ii) time of day of the session

(iii) the gender of the participants

(v) the length of the experiment

Q2(f) It was important to have both critical and non critical trials in order to compare the accuracy of the participants on both critical and not critical trials.

Q2 (g) I think that this is a valid criticism because the accuracy rates were low.

Q2 (h) (ii) quasi-experimental

QUESTION 3

Firstly, I will recruit 60 people (30 Cretans: 20 females, 10 males and 30 Greeks: 10 females, 20 males) as participants and I will allocate all of them randomly in the experimental and control condition. In the experimental condition I will put in one room the group of 30 Cretans (20 females and 10 males) and I will show them a videotape in which one Cretan male actor

telling a mixture of truths and lies about himself. At the same time and in another room I will put the group of 30 Greeks (10 females, 20 males) and I will show them a videotape in which one Greek male actor telling a mixture of truths and lies. On the other hand, in the control condition which will take place the next day and at the same time, I will put in one room the group of 30 Cretans (20 females and 10 males) and I will show them a videotape in which one Greek male actor telling a mixture of truths and lies. At the same time and in another room I will put the group of 30 Greeks (10 females, 20 males) and I will show them a videotape in which one Cretan male actor telling a mixture of truths and lies. Certainly, in this experiment the independent variable is the videotape either showing the Cretan or the Greek actor lying to each group and the dependent variable is the rating of the ability to detect lying behaviour. Obviously, through good experimental design we aim to eliminate or control any confounding variables. In this experiment I tried to control the individual differences that come from the culture so I have divided them according to their culture. Moreover another confounding variable might be the gender of the participants so I allocated them randomly. More exactly women could interpret different than men the lying behaviour of someone. Finally it might be necessary to explore this question using a follow-up study such as the quasi-experimental.