

# Factors influencing the reactions of cats to humans and novel objects

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Individual differences between animals are of increasing interest to today's applied ethologists and those who work closely with animals. Particular personality types may be better suited to particular environments (e.g. being kept under laboratory conditions). The welfare of laboratory cats might therefore be improved by manipulating breeding selection and early experience to give rise to desirable personality traits.

This study aimed to identify temperament differences in kittens and factors which influenced their behavioural responses to an unfamiliar person, handling, an alarm clock and a clockwork mouse. Suggestions to improve the adaptability and suitability of cats for specific uses are concluded. The behavioural responses of 29 litters of pedigree British Shorthair kittens (84 kittens) and their parents, were scored to these tests. Spearman rank-order correlation coefficients were calculated to measure the association between kitten and adult scores. There was a significant positive correlation between the responses of kittens and their mothers to a clockwork mouse, ( $\rho=0.441$ ,  $P<0.01$ ). The most fearful mothers had the most fearful kittens. Kittens which had received least handling from their owners and were housed in the most isolated living areas, struggled more when handled by an unfamiliar person ( $P<0.01$ ) and showed more fear of an alarm clock ( $P<0.05$ ). Their latency to approach an unfamiliar person was also significantly greater, ( $P<0.001$ ). Kittens with red or cream coat colour (indicating the presence of the red coat colour gene), made the most escape attempts when handled by an unfamiliar person and struggled for a longer time compared to kittens which did not carry the red coat gene, (Mann Whitney U-test,  $P<0.05$ ). There were no significant correlations between the behavioural responses of fathers and their kittens to any of the four tests.

Selective breeding of cats which show the least fearful responses in behavioural tests will produce kittens which are more suitable to being handled in laboratories. Cats without red coats are less fearful and more handleable than cats with red coats. The degree of socialization they receive when they are young is fundamental to the level of fear that they show to handling when adult.