



8. *Michael Meaney wonders how can early experiences affect an animal's behavior. How do handled animals compare with non-handled animals?*

- a. The older animals were as adept at finding the platform as the younger animals but couldn't stay on it
- b. The older animals show very poor memory of where the platform is located

Natural selection: the brain working with evolution to ensure the survival of the fittest

9. *According to Charles Darwin: those animals adapting to the challenges of the environment pass on their _____ to their offspring.*

Survival of the group is what matters.



Russell Fernald

10. *Dr. Fernald's long-term work focuses on the African cichlid fish and how its social system regulates not only brain structures, but also bodily functions.*

T or F The nucleus in the brain is larger in animals that are socially successful.

11. *James Barry, who wrote the Peter Pan books suffered from stress dwarfism. His small size was caused by:*

- a. social stress under extreme conditions
- b. a lack of a specific gene that made his cortex smaller than usual

Dr. Fernald's research illustrates one example of how animal and human brains receive and translate signals from the social environment, resulting in physiological change.



Robert Sapolsky studies baboon social structure

Their social rank happens first and then their body functions better in dealing with stress. It's largely a function of having control of their environment. SEE PAGES 551 AND 563 IN TEXT.

12. *Which style of social dominance leads to being better able to deal with stress?*

- a. The most social involvement leads to the best physiology
- b. The individual dominator has the best physiology

