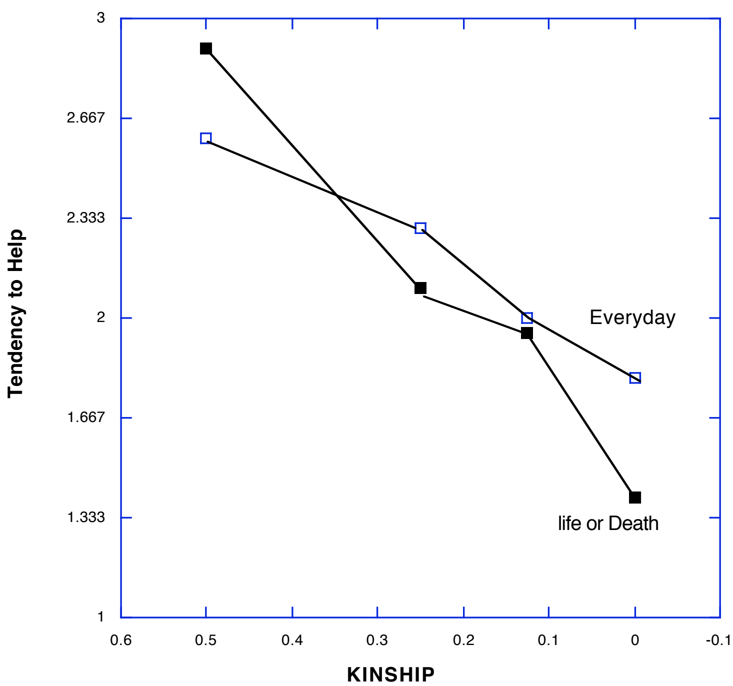
Bio 97 November 2006

Evolutionary Psychology Exercise-1

In 1994, E. Burnstein and colleagues published a paper in Journal of Personality and Social Psychology that tested the kin-selection theory. They asked Japanese and American undergraduate students to imagine themselves in several hypothetical situations. In each case, there are several people who need help, but there is only time to help one of them. The students were simply asked which individual they would help. Some of the scenarios portrayed extreme circumstances in which those who did not receive help would perish while others were as simple as helping someone run an errand. Those needing the assistance were indicated as belonging to various categories of relatedness (sibling = 0.5 kinship, niece or nephew or grandfather = 0.25, cousin = 0.125, 2^{nd} cousin = 0.0625).



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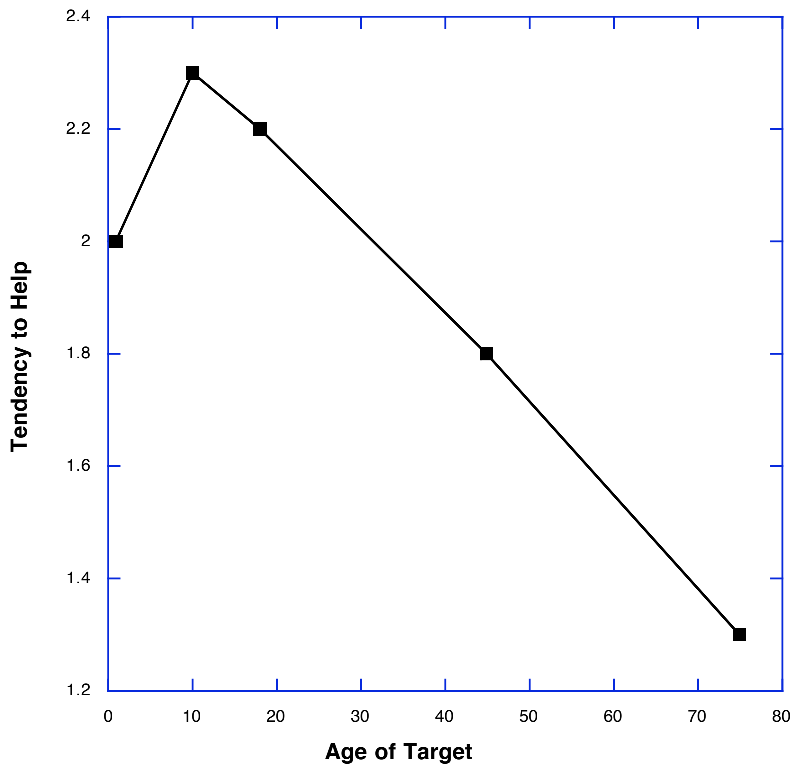
B. In a second set of experiments, they asked the students to imagine they lived in a country where disease and famine were widespread and where average lifespan was short. For these scenarios the people in need were portrayed as being equally related but of different ages. For example, one might be asked to choose between helping a 10 year-old nephew (r = 0.25) or a 75 year-old grandfather (r = 0.25). When they added up the results, they obtained the following diagram



1. Pretend you are a evolutionary psychologist. How would you explain these results?

2. Pretend you are skeptical about evolutionary psychology. How might you interpret these results?

3. These graphs are redrawn by me, but are faithful copies of the originals. Do you see anything “wrong” with the graphs themselves?