Outliers BEYOND THE NORM



Human reliability we BREAK DOWN JUST LIKE MACHINES

Reliability engineering may be a way to understand our longevity believe University of Chicago biologists Leonid Gavrilov and Natalia Gavrilova.

Developed to describe the failure of complex electrical and electronic equipment, reliability theory is so general that it can be applied to understanding aging in living organisms as well, find the husband-and-wife researchers.

In the ways that human beings age and die, we are not so different from the things we build. "We are like machines made up of redundant components, many of which are defective right from the start," they write in the article "Why We Fall Apart" in the September issue of *IEEE Spectrum*.

By looking at human aging data, the researchers noted striking similarities between how living organisms and technical devices age. In both cases, failure follows a curve of infant mortality, normal working, and aging. Death rates are high during infant mortality and drop to a low constant rate during the normal working period.

As humans approach the age of 100, the risk of death stops increasing exponentially and begins to plateau, as it does in machines. "If you live to be 110, your chances of seeing your next birthday are not very good, but, paradoxically, they are not much worse than they were when you were 102," according to the authors. If that's any consolation.

DILBERT® By Scott Adams



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A MAD, CROOKED MAN

How aggressively an angry person will react may be predicted by physical proportions. The farther certain paired body parts are from symmetrical — if one ear, index finger, or foot is bigger than the other, for example — the more likely it is that a person will show signs of aggression when provoked.

Post-doctoral researcher Zeynep Benderlioglu of Ohio State University says deviations from symmetry are thought to reflect stressors during pregnancy such as poor health, alcohol and tobacco use — that may affect development of the fetus in a variety of ways. Those stressors could also affect development of the central nervous system, which involves impulse control and aggression.

Therefore, a little nip and tuck might help one's looks, but it won't help a short fuse.

ONCE UPON A FORMULA

Math and storytelling may seem like very different abilities, but University of Waterloo scientist Daniela O'Neill suggests that preschool children's storytelling abilities are predictive of later mathematical ability.

O'Neill looked at several aspects of children's storytelling ability. The children who scored highly on a math test two years later were the same ones who had scored well on certain storytelling measures, particularly their ability to relate all the events of a story, to shift among characters' actions, and to understand the story from different characters' perspectives.

O'Neill can't explain the phenomenon, but she does encourage parents to urge their children toward tales. "Storytelling is something every parent can easily do and foster with their children without the need to buy any fancy toys or materials," she said.