

Human Brains Shrink with Age. Apes Don't.

Why this matters for AI safety in neural architecture design

601

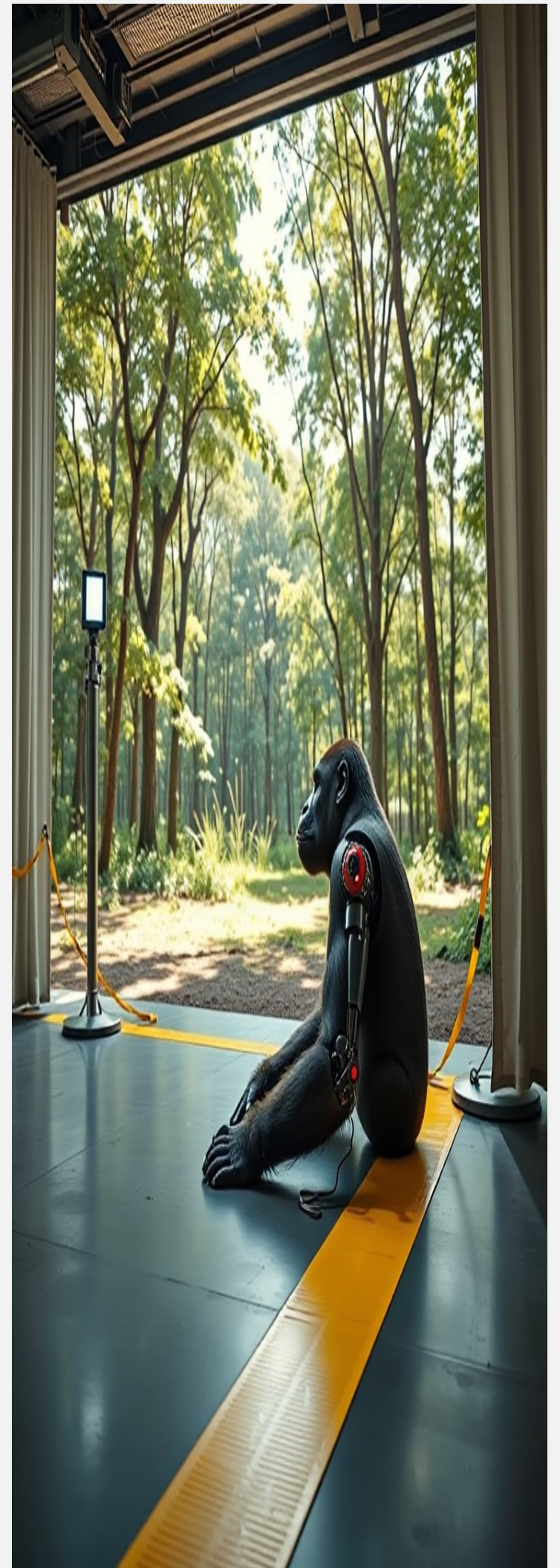
Great apes studied

A new analysis of brain mass across aging great apes reveals a stark divergence from human patterns.

The study examined 601 chimpanzees, gorillas, orangutans, and bonobos across their lifespans. Unlike humans, whose brains begin losing mass at age 45–50, these primates maintain consistent brain volume into old age. This suggests evolutionary constraints on neural atrophy may differ significantly between species, even among close relatives.

Source: Nature · Published October 09, 2026

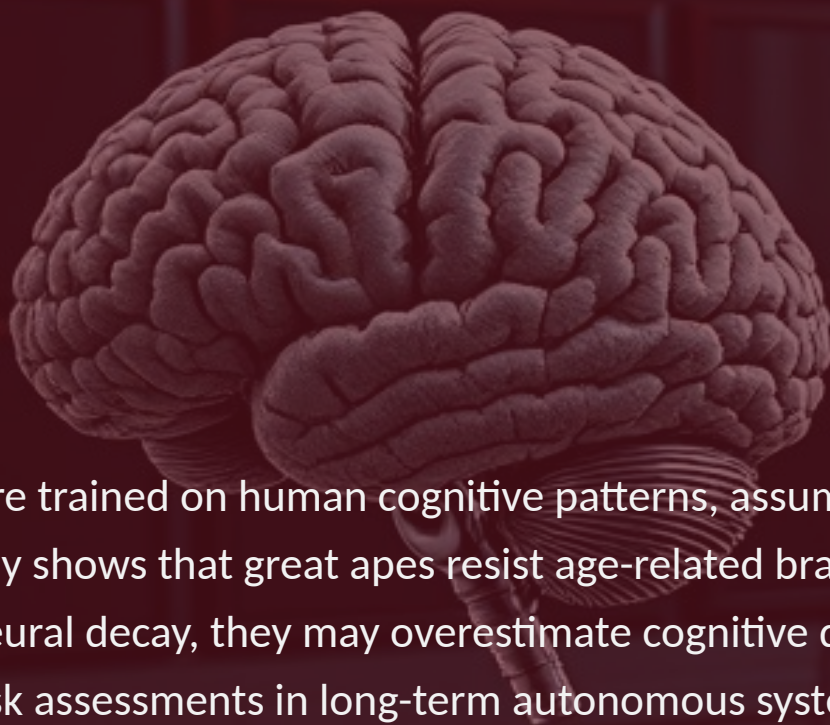
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01

AI Models Mimic Human Aging — But Not Apes

Most AI neural architectures are trained on human cognitive patterns, assuming brain aging is linear and degenerative. Yet this study shows that great apes resist age-related brain volume loss. If AI safety systems assume human-like neural decay, they may overestimate cognitive decline in non-human-like models — leading to flawed risk assessments in long-term autonomous systems.





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Evolutionary Resilience in AI Design

The persistence of brain mass in aging apes may reflect a different evolutionary trade-off — prioritizing neural stability over plasticity. This challenges the assumption that cognitive decline is inevitable in complex systems. For AI safety, this implies that long-term stability in machine learning models might be achievable through design choices that mimic evolutionary resilience, not just through constant retraining or updates.

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