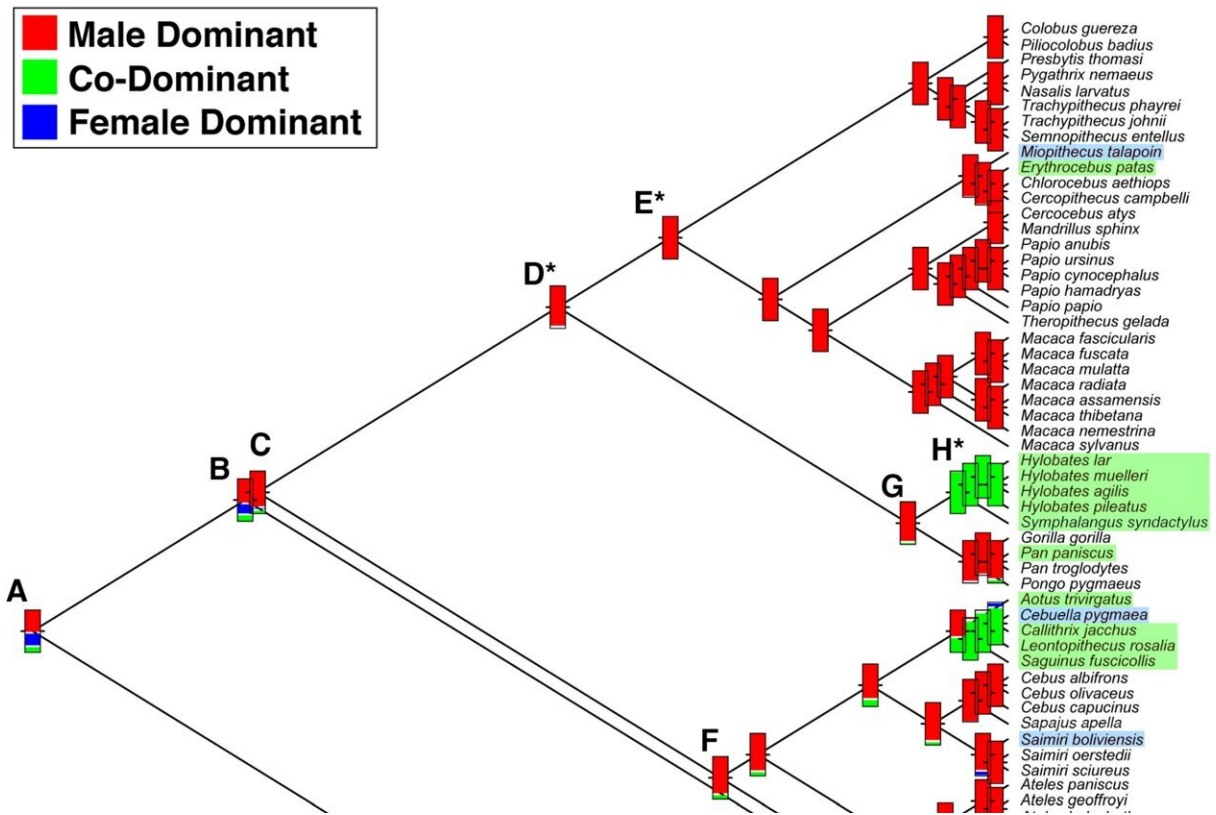


# Male power over females is not the default social dynamic in primates, says study

January 18 2024, by Alex Reshanov



Intersexual power is highly variable in primates. Colored boxes indicate type of intersexual power reconstructed for ancestral nodes in the ASR analysis of discrete power categories. In each box, the width of the color band (red = male dominant, green = co-dominant, blue = female dominant) is proportional to the scaled likelihood of each power category occurring at the node. The character state of a clade’s last common ancestor (LCA) is unambiguous when the box is a solid color. Extant taxa with non-male-biased power are highlighted on the right (green = co-dominant, blue = female dominant). Key nodes are identified by

capital letters. \* identifies nodes with a scaled likelihood of  $\geq 0.95$  of a single power category occurring at the node. Male-biased power is more likely in the LCA of Anthroidea, while female-biased power is more likely in the LCA of Lemniformes. Greater uncertainty exists for the LCA of Primates, Strepsirrhini, and Haplorhini. If the LCA of Anthroidea exhibited male-biased power (scaled likelihood = 0.844), then the various anthropoid taxa that do not exhibit male-biased power are probably derived and document  $>7$  transitions to power that is not biased towards males. Credit: *Animals* (2023). DOI: 10.3390/ani13233695

Male dominance has long been assumed to be nearly universal in primates, with female power viewed as a rare exception to the rule. However, according to researchers at The University of Texas at Austin, female-biased power structures or social equality between the sexes can be found within every major primate group and probably existed throughout evolutionary history.

The study, published in the journal [Animals](#), challenges presumptions of male dominance in primates and may also have implications for other [animal species](#).

The team reviewed previous literature on 79 primate species, dividing them into male-dominant, female-dominant, or co-dominant categories, and then analyzed which variables correlated with these social patterns.

They found that male-biased power was likely to develop in species in which males had larger body sizes and longer [canine teeth](#) than their female counterparts. Female power may emerge when the supply of available female mating partners is lower than male demand, thus giving the females in those species greater social leverage, particularly if size differences between the sexes are minimal.

"In the past, primatologists have often focused on the role of males and male power in primate societies," said Rebecca Lewis, a professor of anthropology and co-author of the paper. "What has sometimes been overlooked is the important role of female power in primate societies. Our work suggests that more economic forms of power might really come to the forefront in primate species in which males and females are similar in size and in which females are therefore less readily coerced by males."

Among primates, female power structures are commonly seen in lemurs. Previous researchers often tried to explain this occurrence as an anomaly resulting from unique environmental factors. However, the new study calls attention to the presence of female-biased and equal power structures within many additional [primate species](#), such as gibbons in Southeast Asia and marmosets in the Americas.

Additionally, the study was able to estimate the probability of male-biased power in ancestral groups of primates. The study found that no particular pattern of intersexual power can confidently be attributed to the ancestors of many major groups of primates, and therefore, an assumption of ancestral male-biased power is not warranted.

"Primates have been thought to be mainly male dominant, which would suggest that male dominance was present in primates from early in their [evolutionary history](#)," said Chris Kirk, a professor of anthropology at UT and a co-author. "If this assumption is correct, then what would need to be explained is the occurrence of female-dominant societies and those with greater equality between the sexes."

"However, we show that this assumption of ancestral male-biased power in [primates](#) isn't necessarily supported by the data. In fact, other types of intersexual power relationships are sufficiently common in primate societies that it's not clear what the ancestral condition might have been.

Thus, all types of intersexual power need to be explained, not just the presence of female-biased power."

**More information:** Rebecca J. Lewis et al, Evolutionary Patterns of Intersexual Power, *Animals* (2023). [DOI: 10.3390/ani13233695](https://doi.org/10.3390/ani13233695)

Provided by University of Texas at Austin

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