Nov 08, 2015 09:25 PM EST

Humans and Animals Lead Social Groups In Similar Ways, Researchers Say

In social groups of both humans and animals, members look to their leaders for guidance and support. Researchers have long studied the roles of animals within groups as they work together to hunt, forage or fight; but the ability a leader has to encourage members to work collaboratively has remained slightly more ambiguous.

In a recent study, researchers from the [National Institute for Mathematical and Biological Synthesis](http://www.nimbios.org/workinggroups/WG_leadership) have taken a closer look at leadership patterns of small-scale mammalian societies, including those of both humans and animals. Their study revealed that human leaders have more in common with their animal counterparts than previously thought. "While previous work has typically started with the premise that leadership is somehow intrinsically different or more complex in humans than in other mammals, we started without a perceived notion about whether this should be the case," Jennifer Smith, one of the study researchers from Mills College in Oakland, California, said in a [news release](http://www.eurekalert.org/pub_releases/2015-11/cp-wma102915.php). "By approaching this problem with an open mind and by developing comparable measures to compare vastly different societies, we revealed more similarities than previously appreciated between leadership in humans and non-humans."

For their study, researchers examined the role of a leader as a group travels, forages, and handles conflict in and outside of their respective groups. This provided a better understanding of how individuals are pronounced leaders (achieved versus inherited), patterns of leadership across groups, and the general payoffs of leadership.

So what did they find? Researchers concluded that leadership is generally achieved through experience in both human and animal social groups. That said, in some cases, such as spotted hyenas and a native Canadian tribe known as Nootkan, leadership is inherited. Researchers also found that leadership among animals tends to be more concentrated, where each respective leader has more power over their group.

The similarities between humans and animals suggest common cognitive mechanisms govern dominance and subordination, alliance formation, and decision-making, according to the researchers. Even so, humans do tend to take on more specialized roles.

"Even in the least complex human societies, the scale of collective action is greater and presumably more critical for survival and reproduction than in most other mammalian societies," Smith said, adding that there is still much to learn about the characteristics of leaders throughout mammalian societies.

Their study was recently published in the journal [*Trends in Ecology and Evolution*](http://www.cell.com/trends/ecology-evolution/abstract/S0169-5347%2815%2900249-9?_returnURL=http%3A%2F%2Flinkinghub.elsevier.com%2Fretrieve%2Fpii%2FS0169534715002499%3Fshowall%3Dtrue)*.*