

Force and Persuasion: How Do We Humans Climb the Social Hierarchy?

Luckily, for humans, it's not just an alpha male (or female) thing.

By Joey Cheng

It's not easy being a chimpanzee. Surviving is all about mastering politics. The biggest and most aggressive males win top rank, and all the perks that come with being king—choice of females for mating, fathering the most offspring, first choice of food, bouts of grooming on demand.

That's how things played out for Ferdinand, the famous alpha-male chimpanzee of the Gombe National Park, Tanzania. Having first established his prowess by dominating everyone else in the troop, over the years he has maintained his authority and power by aggression, threat, and brute strength. One tactic he relies on is launching random and surprise attacks including biting his subordinates. So, for others lower on the social ladder, life can be tough. One thing is for sure—in the primate world, it's all about fighting to climb up or falling down the social ladder.

Here's an interesting question: Chimpanzee politics and power dynamics in humans—do they relate? One reaction from an optimist—"Nah, that's just monkey business. The game in humans is totally different."

And yet, the evidence is to the contrary. We humans, much like our primate cousins, ascend the social hierarchy of our groups and societies, too, using force, coercion, and intimidation. What *is* unique about our species, however, is that by sheer luck we have another way to get ahead—we care deeply about who is competent, who has knowledge, and who can contribute to our collective goals. We *choose*, by our free will, to give deference to these admirable experts in hopes that they will lead and show us the ropes. These two pathways to

ascend human social hierarchies—*dominance* (inducing fear and using coercion) and *prestige* (earning respect and exercising persuasion)—fundamentally govern where we fall on the social ladder and how groups and societies are organized. In the Leadership, Competition, and Collaboration (LCC) Laboratory at the University of Illinois, my team and I are studying how these pathways to social rank shape our lives as social beings, and the effects that they have on our psychology, biology, and behavior.

The research that we have conducted over the years tells a simple yet sophisticated story: Indeed, to climb our way to the top, we humans use two distinct yet co-existing strategies—dominance and prestige. To demonstrate this, we brought in over 1,000 subjects to our laboratory. We placed them into small collaborative groups to observe how hierarchies emerge 'in real time' among these 4–6 people tasked to work together. Which of them ends up making key decisions and directing the conversation? In other words, who achieves the highest ranks? Our results show that, time and again, the highest rungs of the social ladder are occupied by members who have either effectively cultivated fear or have earned respect.

The patterns in our data are amazingly consistent. These dominant and prestigious people are judged by others in the room as having the most influence; the same applies to observers from the *outside*, who are less biased about who they like more or less. Next, we tracked people's eyes to figure out who becomes the center of attention. Yet again, it's the same kinds of people who ends up 'hijacking' and monopolizing everyone's attention. A clear pattern is really starting to emerge here.

As our final step, we compared every one's private

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opinion to what the group eventually adopts after they collectively discussed and pitched their own ideas. And from this we find that, behaviorally, these individuals do in fact end up being the most impactful over the group's collective decision. So, by all measures, people who maintain fear and those who inspire respect win out by a mile. They top the hierarchy.

But, we must also ask: Do these tactics work for everyone? In our groups, dominant women and men rise in ranks. And the same goes for prestige. However, our teams were all-men or all-women. So we don't yet know precisely what happens in mixed-gender arrangements common in contemporary workplaces and other settings. But we do know that whether you're formally in charge doesn't matter; both appointed leaders and non-leaders are able to increase their influence by wielding these strategies.

But a big caveat here—for force and persuasion to work, one must manage to instill a menacing sense of threat and intimidation in others, or to truly inspire warm and bubbly feelings of respect. Neither of these are naturally very easy for everyone to do over situation and time.

Well then, *what is it* that the dominant alphas actually do to intimidate others? Luckily, there was no biting. Compared to chimpanzee hierarchies, human dominance (at least in most settings) is more psychological than physical. Speaking over others; putting down or ridiculing others' ideas; ignoring their comments.

But, crucially, there's more to dominance than what's verbally communicated; this is where nonverbal signals come in. We dug out recordings of every group interaction and ran snippets of each member's speech through acoustic software to precisely measure their voice pitch. We wanted to know if there was something unique to the voices—a vocal signature, if you will—of people who were considered by their team as formidable. And there it was: dominants lower their voice over the course of interaction. As it turns out, this 'vocal recipe' for signaling threat and aggressive intent abounds in nature. Frogs, for instance, lower the pitch of their calls during aggressive encounters to exaggerate its size and bluff intruders away. Red deer stags produce low-pitched roars to deter other male competitors.

Moreover, from carefully observing and coding people's posture, we discovered that dominants sit differently—they take up a lot of space and puff themselves up. The subordinates, by contrast, adopt a constricted posture that makes them look smaller. It's no news that alpha chimpanzees, too, are famous for strutting around with chest puffed out to look deceptively big and ferocious. So here, again, there are great similarities with other species.

Zooming out, it turns out that climbing our way to the top by force or persuasion may even be a human universal. Quite

remarkably, they surface in all kinds of ecologies and contexts where we and other scientists have looked.

Consider this array of findings: For starters, there is growing evidence from diverse societies around the world, including traditional, small-scale societies. From the Tsimané horticultural people of Bolivia to the Chabu hunter-gatherers of Ethiopia's highlands, anthropologists are finding that villagers who manage to earn considerable respect, for instance, by being the best hunter around, or can more easily boss others around by their

sheer physical strength and stature, are precisely those who rise to the top rungs of their community. It is remarkable that, even in these egalitarian societies, dominants get to dominate, despite an incredibly strong cultural emphasis on equality and respect for individual autonomy.

The depths of these dynamics in shaping hierarchies are shown by how early on they occur in our development. In one study, preschoolers who are dominant and those who are prestigious end up controlling the world's most valuable resource (according to 3-6-year-olds)—playtime with a cherished toy,

while another kid only gets to sit and watch. And there is even reason to believe that beginning at an amazingly young age your brain is already dividing the world between the dominants and the prestigious, and links them to who's in charge. This is demonstrated by groundbreaking research from the Infant Cognition Laboratory here, directed by my colleague Dr. Renée Baillargeon. Infants who are just 21-month-old are able to distinguish between leaders who rule by respect versus fear.

We can even push this back some more. The brains of 10-month-old babies associate being big with being mighty. Suppose you watch two characters approaching each other head-on in a narrow corridor that only one can pass. The babies' response to these sorts of situations reveals the expectation of a pattern that we adults are all too familiar with—they expect the smaller agent to bow faced down and scoot out of the way, letting the larger agent get its way. But not vice-versa.

So, the evidence is abundantly clear: Across cultures and groups, bullies get ahead just as much as the nice and competent guys and gals. Bowing down to the big and mighty is probably automatic, unconscious, and deeply hard-wired in our brains, possibly with an evolutionary legacy. After all, humans and chimpanzees (who, as noted, are all about dominance) shared a common ancestor only up until 5 to 7 million years ago. This is a relatively recent event in evolution terms. So somewhere in our brains there is likely a deeply ingrained biological blueprint (that we share with other primates) to be submissive towards those who are bigger, bolder, and stronger. It's automatic—you're not consciously thinking to yourself "What happens if I disobey?", and then running through all the possible outcomes. You're likely to unconsciously pause for a fraction of a second, and

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instinctively recoil and scurry way. Now, in most cases this is probably unnecessarily subordinate. Pretty depressing and unfair.

But crucially, it's not all doom and gloom. A special feature of human societies is that we have prestige; we can achieve rank by excelling in our skills, knowledge, and achievement to earn respect. Now, this kind of competition is suddenly far more appealing—we can get ahead without being brutal or destructive, but rather by generating value, contributing to our groups, and acting altruistically. So, by fostering social structures based on prestige rather than dominance, we can lessen the temptation to use force. In addition to us not needing dominance, there are also other reasons to think that sorting ourselves on prestige is a better solution.

First one: Although intimidation begets rank, this comes with a huge caveat—the power of purely dominant alphas rarely endure. Take Ferdinand as an example. This former king reigned Gombe for eight years. But ultimately he was toppled from his throne after becoming victim to a group attack that left him heavily injured. His aggressive leadership over the years had weakened his social support and alliances, without which he was unable to maintain the threatening and formidable demeanor that he once cultivated. Similarly, if there is one thing that human history has taught us, it is that however strong or fearsome, leaders who rely purely on dominance, tyranny, and oppression cannot rule long.

Inspired to explore this question of whether the power of dominants erodes, my collaborators and I recently set up a longitudinal study of small collaborative student groups at the University of Illinois. Our goal was to track how the control and influence that prestigious and dominant acquire unfold over time. One startling revelation was that, like much of what we see over and over again in history, threatening individuals rose to influence when power is up for grabs, when the groups initially form, but their impact over group decision-making declined rapidly. They ceased to be influential by the four-week mark, even though they never stopped being feared. A key lesson from these findings is that, although dominance may win you rank, usually it's not for long. Our data show that the only viable route to stable influence over the long run (at least in these task groups) is prestige.

There's another reason why leading by force might not pay—because it fails to persuade and produce true attitude change. In Dr. Baillargeon and her team's important study noted above, the gaze of the 21-month-old babies reveals that they expect a prestigious leader to be obeyed by subordinates even in her absence. But that's not the case for dominants. Quite remarkably, the babies expect a dominant leader to be obeyed *only* when she is present to watch over everyone. This hints at a crucial lesson on leadership: While force and dominance might allow a leader to fiendishly extract compliance and submission, only a respected leader can truly persuade and inspire deference, motivation, and loyalty among the people they are leading.

So what's next? There are many more puzzles waiting to be

solved. Our team is busy at work, leveraging these insights to expand our knowledge about social hierarchy in its full complexity. Much of this is spearheaded by my passionate graduate students Randi Vogt and Fan Xuan Chen, and made possible by our motivated and enthusiastic undergraduate lab members.

Some questions that we are currently exploring: How do the two ways to the top differ across different environments—varying in prevalence, form, and function? In business settings, does the recipe for managerial success call for being “both feared and loved”, as Niccolò Machiavelli famously proposed?

How does a leader's dominance and prestige affect the team's response to stress, producing more or less cortisol? How does being in charge change a leader's biology—does it increase their testosterone?

In summary, from children's playground and high school cliques to corporate boardrooms, the power of dominance is visible at every corner. Amid this bad news, however, is room for optimism. We have at our disposal an alternative avenue for achieving

high rank. Prestige is altruistic, non-violent, and even heroic. Dominance might let you rise to the top, but prestige is what keeps you there. In this regard, we are unlike any other primate. A major goal of the LCC lab is to expand our knowledge of social hierarchies, and use the latest emerging science to dampen force and coercion. The secret is to nudge people to reach for the prestige ladder instead.



Joey Cheng is an Assistant Professor of Psychology at the University of Illinois, Urbana-Champaign, where she directs the Leaders, Competition, and Collaboration (LCC) Laboratory. Joey's work focuses on how natural selection has shaped human competition and how this in turn influences people's psychology, behavior, and biology in competitive situations, and ability to coordinate within groups and teams. Methodologically, she places an emphasis on studying social phenomena “in the wild” among naturalistic teams, communities, and organizations (e.g., sports teams, marching bands, military squads). Joey's fascination with human social psychology began while she was an undergraduate at the University of Toronto, where her mentor Marc Fournier opened her eyes to the fascinating points of intersection between social hierarchies and evolution. She later completed her PhD at the University of British Columbia under the wings of Jessica Tracy and Joseph Henrich, who furnished her enthusiasm to pursue these questions deeply and interdisciplinarily, drawing insights from psychology, anthropology, and evolutionary biology. In 2016, the Association for Psychological Science awarded her its Rising Star Award. In 2018, she received the American Psychological Association Achievement Award for Early Career Psychologists. To read more about Joey's work, see joeytcheng.com/.