

Is lethal violence an integral part of chimpanzee society? Like it or not, yes.

Kevin D. Hunt
Indiana University

In her March 29, 2011 blog post, “Male chimps and humans are genetically violent—NOT!” Darcia Narvaez asks “is violence in our genes? Do chimpanzees in the wild want to kill others?” She concludes that evidence that lethal violence plays a critical role in chimpanzee society is flimsy. Narvaez, who is a psychologist by training, relied on a 2009 book Donna Hart and Bob Sussman and a 20-year-old book by Margaret Power for her information. These authors maintain that deadly chimp-on-chimp violence is so rare we can conclude little from the few instances where it has been seen, and that in many cases the evidence is over-interpreted and exaggerated.

Full disclosure: Richard Wrangham, a coauthor of *Demonic Males*, a book many view as the quintessence of the chimps-are-murderers view, was my doctoral co-supervisor.

In responding to the rarity of our observations of chimpanzee murders, I can't help returning to that old saw, the proverbial Martian anthropologist sent to earth disguised as a human to study human society. Let's imagine she logs many hours studying people in my hometown, Bloomington. While her language and cognitive capacities are bizarrely different from ours, leaving it nearly impossible for her to understand human language or even to de-code the written word, she is a keen observer. I see her around town often at public gatherings, watching people, making notes. Meanwhile, unbeknownst to me, there are other Martians studying humans, too. Like my Martian, they've found humans to be a relatively peaceful lot, the occasional murder notwithstanding.

In a breakthrough, one day I manage to communicate with my Martian friend, teaching her just a few words of English but mostly communicating through pointing and gesturing. Relying on my information, she returns to Mars to offer the astonishing theory that human society is divided into large units she calls 'nations.' Nations exist, she hypothesizes, in part as coalitions to protect their members against aggression from other such groups. Humans invest enormous resources in building special killing tools, 'weapons,' and maintain thousands of their members in readiness to defend their 'nation' against other potentially hostile such groups. She suggests that violence occurs most often when members of one coalition cross an invisible line, a 'border' between two 'nations,' and such incursions can act like a spark in a gas-filled room. Even when only a few individuals are killed, border crossings can escalate into an incredible mobilization of people and machinery, leading to mass killings and devastation of whole cities. 100s of thousands, even millions of humans may be arrayed against one another once the killing starts. Her informant has told her, my Martian relates, of many such border incursions and mass killings, including one less than 75 years ago in which 40

million humans died, a 'war' that resulted in large parts of 'Europe' and 'Japan' being leveled.

Our Martian anthropologist finds her hypothesis greeted with great skepticism, even scorn. Other anthropologists have studied humans for thousands—tens of thousands—of Martian-hours, at 100s of sites randomly distributed across the globe, and have seen no evidence of such mass killings or 'border crossings.' A quick examination of 'Europe' and 'Japan' shows no evidence of devastation. And where are these 'weapons'? Are we to believe the incredible coincidence that they just happen all to be stored in those few places the humans seem to be very touchy about outsiders visiting, these so called 'military bases'? How convenient!

No, Martian scholars conclude, humans form nations only to pool resources to build highways, regulate trade and control the miniscule number of humans who truly are violent. This 'war' hypothesis is a just-so story, cobbled together from over-extrapolating from paltry data.

Lesson: a behavior may be extremely important even if it is rare and difficult to observe.

Not surprisingly, to me at least, chimpanzee lethal violence is rare and similarly difficult to observe. Despite this difficulty, there is irrefutable evidence that the threat of lethal violence has exerted a strong evolutionary force on chimpanzee nature, and its effects are visible on a minute-to-minute basis in chimpanzee society. It is the origin of the very unusual social bonding among male chimpanzees—they must to hang together to protect one another against extra-group murderers.

Despite the rarity of deadly violence—it takes 15 years to grow a chimp; if every community lost a chimp a month, there would soon be no chimps—evidence of it is far from paltry, including one chimpanzee killing has been documented on film, from first wraa-bark to the dead body lying on the ground. Those who disagree with my perspective attempt to throw doubt on individual data points by citing a few episodes where the cause of death truly is doubtful, as if these few cases were all the scientific community has to rely on in our attempt to understand lethal violence.

Let's consider the evidence from the four chimpanzee populations that are perhaps the best-studied, Gombe, Mahale (both in Tanzania), Tai (Ivory Coast) and Kibale (Uganda).

Some maintain that Jane Goodall failed to find violence among Gombe chimpanzees on her own, and it was only when other more bloody-minded scholars arrived on the scene that killings became a focus of attention. A quick perusal of Goodall's 1986 chapter on aggression in *The Chimpanzees of Gombe* will show that this is not true. Moreover, Goodall was a coauthor on a 2008 publication by Williams and colleagues that documented the cause of death in a staggering 130 cases at Gombe. Williams, Goodall and colleagues found that after illness (58% of deaths), murder by other chimpanzees was the most common cause of death (20% of deaths).

At Mahale Nishida (1996) reported on circumstances that he felt were clear evidence that chimpanzee Ntologi had been lethally attacked by members of his own community. I mention this one incident because Nishida's description of it is so compelling. In the 70s Nishida and his colleagues watched as every male member of Nishida's original study group, the so-called K-group, disappeared; he and his colleagues believe Ntologi's community, the M-group, killed most of them.

At Tai, Boesch and colleagues published an article in 2008 documenting intergroup killings in which they wrote, "in the past 3 years, two cases of fatal intercommunity attacks have been observed;" they recount one attack that lasted 39 minutes. When the victim was near death, an attacking male "bit his arm and the noise of the breaking bones could be heard" meters away, after which "the victim seemed dead."

At Kibale-Ngogo Mitani, Watts and colleagues report that they "observed the Ngogo chimpanzees kill or fatally wound 18 individuals from other groups." Mitani and Watt's team taped from beginning to end one horrifically brutal attack in which the victim died.

Richard Wrangham and Dale Peterson's book *Demonic Males* is commonly cited as the epitome of the exaggerated chimpanzee violence genre, so I have avoided discussing Wrangham and colleagues' comprehensive review of lethal violence among chimpanzees, "Comparative rates of violence in chimpanzees and humans." I find their argument, based on data from 75 chimp-on-chimp killings, to be utterly convincing. It is to me a clinching observation that no scholar who specializes on chimpanzee social behavior, no scholar who has studied them in the wild, doubts that chimpanzees can be murderously violent, and that chimpanzee society cannot be understood without considering the role of violence plays in their social organization.

I completely agree with Dr. Narvaez when she writes that when it comes to violence, "we have ourselves to blame, not selfish genes, not evolution," and when she goes on to suggest that "we can change the practices and beliefs" to become nonviolent. However, so also would many of those who have documented violence among primates agree with her. Certainly Wrangham agrees with her on this point. In *Demonic Males* Wrangham and his co-author Peterson wrote "we are blessed with an intelligence that can...draw us away" from violence, from a demonic evolutionary history.

References

Christophe Boesch, Catherine Crockford, Ilka Herbinger, Roman Wittig, Yasmin Moebius, and Emmanuelle Normand (2008). Intergroup conflicts among chimpanzees in Tai National Park: lethal violence and the female perspective. *American Journal of Primatology*. 70: 519-532.

Jane Goodall, (1986). *The Chimpanzees of Gombe: Patterns of Behavior*. Cambridge, MA: Harvard University Press.

Donna Hart and Robert W. Sussman (2009). *Man the Hunted: Primates, Predators, and Human Evolution*. Boulder, CO: Westview Press.

John C. Mitani, David P. Watts, DP; Sylvia J. Amsler (2010) Lethal intergroup aggression leads to territorial expansion in wild chimpanzees. *Current Biology* 12: R507-R508.

Darcia Narvaez (2011). Male chimps and humans are genetically violent---NOT!
<http://www.psychologytoday.com/blog/moral-landscapes/201103/male-chimps-and-humans-are-genetically-violent-not>

Toshisada Nishida (1996). The death of Ntologi, the unparalleled leader of M Group. *Pan Africa News* 2(2): 9-11.

Margaret Power (1991). *The Egalitarians, Humans and Chimpanzees: An Anthropological View of Social Organization*. Cambridge, England: Cambridge University Press.

J.M. Williams, E.V. Lonsdorf, M.L. Wilson, J. Schumacher-Stankey, J. Goodall, and A.E. Pusey (2008). Causes of death in the Kasekela chimpanzees of Gombe National Park, Tanzania. *American Journal of Primatology* 70: 766-777.

Richard Wrangham & D. Peterson (1996). *Demonic Males: Apes and Origins of Human Violence*. Boston: Houghton Mifflin.

Richard W. Wrangham, Michael L. Wilson and Martin N. Muller (2006) Comparative rates of violence in chimpanzees and humans. *Primates* 47: 14–26.