

## What Animals Say to Each Other When They Play

[From Marc Bekoff, Reviewed by Gary Drevitch, Psychology Today/Animal Emotions](#)

June 2021

*New research shows vocalizations are a widespread mode of play signaling.*

I've been studying social play for decades and have always wondered what individuals might be telling each other as they're wrestling, biting, rolling around, and zooming here and there. While we know a lot about visual signals used to initiate and maintain play such as play bows—and how they serve to punctuate play bouts—we know very little about play vocalizations and play odors and how they might be used on their own or combined into what ethologists call "composite" signals.<sup>1</sup> But now, based on research and a landmark essay called "[Play vocalisations and human laughter: a comparative review](#)" by UCLA's Sasha Winkler and Gregory Bryant, we know much more.

I've been waiting for such an analysis for quite a while because it helps explain different ways in which individuals can ask each other to play and maintain ongoing fair play on the run that go beyond thinking about only visual signals. It also sets the ground for exciting future comparative research.<sup>2,3</sup> I'm pleased Sasha could take the time to answer a few questions about their seminal work.



*Are these dogs saying something to each other as they play?*

Here's what she had to say.

## **Why did you and Gregory Bryant write "Play vocalisations and human laughter"?**

Greg and I were inspired to write this paper based on discussions we had about play signaling in animals and comparative work suggesting that laughter evolved from a play vocalization similar to one used in great apes today. I drew on my own years of experience as a research assistant in the McCowan lab at the California National Primate Research Center, where I had noticed soft panting sounds that young rhesus monkeys made during play. We started wondering how many other animals might also have quiet play vocalizations, which expanded into a more ambitious project to thoroughly search the existing literature on animals vocalizing during play, document the acoustic descriptions of those sounds, and see how it could inform theorizing about human laughter.

## **How does your essay relate to your backgrounds?**

I have studied social behavior in several primate species, including gorillas, rhesus macaques, and capuchin monkeys. As a graduate student at UCLA, I began working on multiple projects investigating the evolution of play with my advisors (Erica Cartmill and Susan Perry). Play is fascinating to me because it is so ubiquitous in the animal kingdom, but the evolutionary benefits are not well understood (and are often extremely delayed). My undergraduate degree is in linguistics and cognitive science, so I draw a fair amount on my experiences there and my time working in a psycholinguistics lab at Pomona College. Working on this paper allowed me to merge my backgrounds in communication, [animal behavior](#), and evolutionary biology as they relate to the topic of play.

## **Who is your intended audience?**

Greg comes from an [evolutionary psychology](#) and psycholinguistics background, while my background is more rooted in animal behavior and primatology. One of the [goals](#) of this paper to help bridge the gap between those two worlds. The paper was invited by the journal *Bioacoustics*, which almost exclusively publishes animal vocal signaling research. Psychologists and animal behaviorists alike might not realize the bigger picture of evolutionary continuity between rough-and-tumble animal play and human laughter. Research on human laughter serves as a great comparison point to look for universal communication patterns across species, while insights from animal behavior can improve our understanding of the psychology of laughter in humans.

## **What are some of the topics that are woven into your piece and what are some of your major messages?**

Our review reveals that play vocalizations are more widespread than previously thought. They appear in a large number of mammal species, and even in a few birds. There is also a remarkable diversity of different sounds used to communicate during play, from chuckles and chatters to peeps, squeals, barks, and trumpets. Many mammals, most importantly the great apes and monkeys most closely related to us, have play signals that are similar to voiced breathing or panting. Because this is such a common feature, it lends support to the theory that laughter in humans evolved from a panting-like play signal.

We also argue that human laughter is somewhat unique, both in its form and function. It is louder than the play vocalizations of other great apes, and has some distinct acoustic features. Humans have two acoustically different forms of laughter—spontaneous and volitional (think of an uncontrollable giggle compared to a forced laugh during conversation). In function, human laughter is extremely flexible, and is often used outside of play—for example, nervous [laughing](#) during speech, or aggressive laughter during taunting or schadenfreude. Laughter can be used strategically as a pragmatic marker to indicate irony or [humor](#) in speech, which has important play components. Finally, we think there are unique functions of

laughter having to do with our species' social complexity, particularly seen in laughter's ability to communicate group membership and shared knowledge.

**How do you see future research on play changing to account for exchanges of information via vocalizations?**

Research on play signaling has tended to focus on visual signals, such as your own groundbreaking work on the play bow in dogs. This research has been crucial for understanding how play is initiated and maintained, and how animals recognize the difference between play and aggression. Future research on the multimodal aspects of play signaling could be particularly useful. For example, is something different communicated in a playful facial expression versus a playful vocalization? How do humans and animals successfully induce others to join a play session? I am particularly interested in the mechanisms by which this works—how one's underlying playful mood can be sparked. Focusing on vocalizations could open up new methods that are not possible with visual signals—for example, in playback experiments, scientists can play prerecorded sounds to animals over a hidden speaker to study the perceptual effects of laughter.