

UT professor defines play, discovers even turtles need recess

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Seeing a child or a dog play is not a foreign sight. But what about a turtle or even a wasp? Apparently, they play, too.

In fact, according to Gordon Burghardt, a psychology professor at the University of Tennessee, Knoxville, many animals -- not just dogs, cats, and monkeys -- need a little play time.

"I studied the behavior of baby and juvenile reptiles for many years and never saw anything that I thought was play. Then I had an epiphany when I saw Pigface, a Nile softshell turtle, batting around a basketball at the National Zoo in Washington, D.C. I realized reptiles play, too," said Burghardt.

Burghardt's findings are discussed in the October issue of *The Scientist*.

The article, entitled "Recess," highlights Burghardt's five criteria for play. Burghardt is one of the first researchers to define "play" in people and also in species not previously thought capable of play, such as fish, [reptiles](#) and invertebrates. Topics raised in the article appeared in Burghardt's book, "The Genesis of Animal Play -- Testing the Limits."

Burghardt sums up his five criteria in one sentence: "Play is repeated behavior that is incompletely functional in the context or at the age in which it is performed and is initiated voluntarily when the animal or person is in a relaxed or low-stress setting."

According to Burghardt, by more accurately characterizing play and observing it throughout the entire [animal kingdom](#), humans may better understand themselves.

"In animals we can evaluate more carefully the role of play in learning skills, maintaining physical and [mental fitness](#), improving [social relationships](#) and so on than we can in people," said Burghardt. "We can then develop ideas and apply them to people to see if the same dynamics are at work. For example, the role of play in lessening the effects of [attention deficit hyperactivity disorder](#) in children is being studied based on research in rats."

Play has already helped therapy with disturbed children. Also, studies are under way on the beneficial role of active and intellectually stimulating leisure for retirees. Similarly, jobs that resemble play are highly coveted by humans.

"Human children and adults often want to do enjoyable self-rewarding activities and will work hard to have the opportunity to do so. For the luckiest people, their work is itself play when it meets the five criteria," said Burghardt.

Burghardt's research illustrates how play is embedded in species' biology, including in the brain. Play, as much of animals' psychology including emotions, motivations, perceptions and intellect, is part of their evolutionary history and not just random, meaningless behavior, he said.

"[Play](#) is an integral part of life and may make a life worth living."

More information: www.the-scientist.com/2010/10/1/44/1/

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