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Playing Dead As A Defense Against Angry Bears And Rapists

Harold Herzog, *Animal Studies Repository*



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Hal Herzog, Ph.D., Animals & Us

Playing Dead As A Defense Against Angry Bears And Rapists

Paralysis as a defense against predation and rape?

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On the morning of Wednesday, July 28, 2010, a bear attacked three campers near Yellowstone National Park, killing one of them. The animal grabbed Deb Freele's arm as she was sleeping in her tent. She told reporters, "I felt teeth in my arm and heard bones breaking." Her screams just incited the bear to bite harder, so she decided to play dead. As soon as she went limp, the bear lost interest and ambled away. Deb said later, "I thought I would be dinner."

Freele's description of her bear encounter reminded me of the 19th century explorer David Livingston's description of his near fatal encounter with a lion. Livingston wrote, "He shook me as a terrier dog does a rat. The shock induced stupor similar to that which seems to be felt like a mouse after the shake of the cat." Livingston did not feel pain, but a "sort of dreaminess" which was accompanied by a temporary muscle paralysis. Like Deb Freele, he played dead and survived the attack.

A Last Ditch Anti-Predator Strategy

Playing dead is a widespread defensive strategy among animals. Sometimes called "animal hypnosis" or "death feigning," the response is most often referred to by scientists as **tonic immobility**. But does it work? Yes. In a 1975 study that would not be approved today by any animal ethics committee, researchers tossed 50 ducks into cages containing foxes. In every case, the ducks showed the immobility response, and in 60% of the trials, the foxes quit their attacks, and the ducks survived.

Tonic Immobility During Sexual Assaults.

The connection between attacks by a four-legged carnivorous predator and by a two-legged sexual predator was first made in a 1979 article by Susan Suarez and Gordon Gallup, a pioneer in tonic immobility research. The authors argued that immobility is a hard-wired involuntary response that originally evolved as a defense against creatures that want to eat you. Suarez and Gallup reasoned that the closest situation to being attacked by a predator in the modern world was being raped. Interviews with rape victims confirm their hypothesis that the immobility response often kicks in during sexual assaults. For example, in describing her experience, one rape victim said, "I felt faint, trembling and cold...I went limp." Another said, "My body went absolutely stiff."

While the Suarez and Gallup article was generally ignored at the time it was published, there is renewed interest in the similarities between involuntary reactions to predation and responses to sexual assault. Researchers at the University at Albany-SUNY recently developed a Tonic Immobility Scale and used it to assess the frequency of immobility symptoms among sexual assault victims. They found that 40% of the victims experienced some immobility during the assault, and 10% of them experience extreme immobility or paralysis.

The Legal and Clinical Implications of Rape-Induced Immobility

Clearly, the instinctive immobility response renders some rape victims completely incapable of active defense. They cannot flee, fight, or call for help. Yet these are exactly the behaviors that police and prosecutors sometimes look for when deciding if a sex act was rape or consensual. Further, as described in a recent article in the journal *Clinical Psychology: Science and Practice*, individuals who experience immobility during incidences of childhood sexual abuse show higher levels of subsequent psychological problems, including post-traumatic stress disorder. Finally, women who are literally paralyzed with fear during sexual assaults are more likely to blame themselves for the attack, and subsequently, they experience more guilt after their rape.

Needless to say, the evolutionary connection between our reactions to being attacked by a grizzly bear and by a rapist has important implications for both the law and clinical psychology.