CURRENTS

The Seven-Year Glitch

Looking for a Better Man-to-Dog Lifespan Ratio

The equivalent age in humans
of a one-year-old dog:

Miniature Poodle	Schnauzer	Irish Setter	Beagle	Golden Retriever	Doberman Pinscher	Great Dane
10.9 Human years	**14.6** Human years	**16.9** Human years	**20.0** Human years	**20.0** Human years	**22.4** Human years	**26.8** Human years

If a human year really were equivalent to seven dog years, then people would reach reproductive age by seven, and some would live past 150.

For more than 50 years, scientists and dog lovers have been trying to debunk the dog-years myth. Yet, it persists in books, news articles and the popular imagination. No matter how you measure it, this numerical notion has impressive longevity.

By Carl Bialik

"You can't really kill the seven-year rule," says Kelly M. Cassidy, curator of a biology museum at Washington State University, who in her spare time maintains an on-line compilation of dog-longevity studies.

The rule's one-size-fits-all simplicity makes it a compelling way for people to track their pets' development, or to monitor their own lives through their pets. That simplicity, however, is also the rule's undoing—the seven-year glitch.

Scientists would prefer more-nuanced conversions. Typical lifespans among the hundreds of canine breeds can range from 8 to 16. And dogs grow quickly in the first couple of years, with bigger breeds reaching the equivalent of U.S. voting age in toddlerhood, by age two. "Eight years in one breed is not equivalent to eight years in another," says David J. Waters, associate director of Purdue University's Center on Aging and the Life Course.

It remains mysterious to scientists why big dogs die younger. Across different species, bigger animals tend to live longer: Compare men with mice. Within species, an inverse relationship sometimes takes hold: Smaller rats live longer than big ones. Prof. Waters prefers a physiological explanation for small dogs' longer lifespans.

Tracing the dog-year mythology to its source is difficult. An inscription at Westminster Abbey—no relation to the dog show—from the 13th century puts the ratio at 9 to 1, noting that dogs live nine years and men 81, with other life forms living longer by ratios of three, up to the predicted planet lifespan of 19,683 years. A similar ratio was calculated by 18th-century French naturalist Georges Buffon, who reported that dogs can live to 10 or 12, and man to 90 or 100.

Somewhere along the way, it seems likely to several veterinarians, typical lifespans were pegged at about 70 for humans and about 10 for dogs. Thus, the seven-year rule was born. "My guess is it was a marketing ploy," says William Fortney, a veterinarian at Kansas State University, "a way to educate the public on how fast a dog ages compared to a human, predominantly from a health standpoint. It was a way to encourage owners to bring in their pets at least once a year."

The rule has endured in many corners of world culture. In May, unverified reports of a 29-year-old mixed-breed dog in Chesterfield, England, headlined its supposed 203-year-old age. The notion has even been adopted by the Internet culture to explain its faster-than-life pace. The book "21 Dog Years" is about the author's three years at Amazon.

Vets who tested the rule found several problems. Some 55 years ago, researcher A. Lebeau studied life-stage markers common to dogs and humans, such as puberty, adulthood and maximum lifespan, and found that aging in dogs can proceed 20 times as fast as human aging before age 1, gradually slowing to a ratio of about five. Since then, scientists have used veterinary-hospital records and breed-club surveys to refine the relationship further, by breed and by weight.

The improved formulas have appeared in general-interest books such as "Dogs for Dummies" and recent editions of "Old Farmer's Almanac."

But the new orthodoxy is itself based on uncertain numbers. There is no equivalent to the National Center for Health Statistics for dogs. Instead, there are three main sources for data on their longevity: pet-insurance companies, breed-club surveys and veterinary hospitals.

The first two may be biased toward longer-living dogs, because owners who belong to clubs and buy insurance may spend more to prolong their pets' lives. Dr. Cassidy adds that surveys require dog owners to recall their pets' lifespan, a number they tend to exaggerate. She has documented the gap by comparing ages from death notices on a poodle email list she belongs to with birth records in a poodle database. (Like other investigators in the field, Dr. Cassidy is a dog owner—three in all, ages 2 to 10 actual years.)

Meanwhile, hospitals may be biased toward shorter lifespans, because they tend to admit the toughest cases, not healthy dogs. "It's not good data, but it gets you in the ballpark," says Prof. Fortney.

The true numbers are moving targets, adds Jeff Sampson, canine-genetics consultant to the Kennel Club in the U.K. As veterinary medicine improves and more dogs are immunized, fewer die young of distemper and parvovirus today than 30 years ago, Mr. Sampson says.

To dog lovers, fixed mathematical ratios of lifespan matter far less than the comfort that their companion lived a long and happy life.