

How Americans Think About Animals

A new Google tool shows that pets rule!

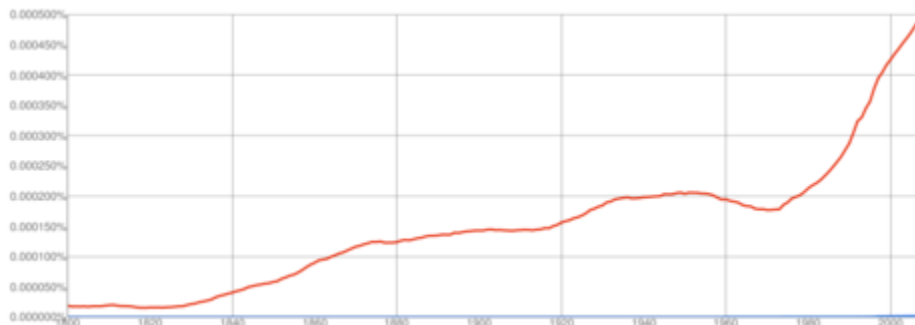
By Hal Herzog



I'm fascinated by new trends in how people relate to animals, and I recently came across an amazing new tool from Google, called Ngram, that helps me do this. You can use it, too, to discover almost anything to do with cultural changes in our attitudes to animals – and indeed anything else.

The first thing I looked into was our changing relationship with pets. The result was quite eye-opening.

Ngram works by examining the number of times a word (or number of words) has been used in the ever-growing number of books that have been digitized by Google. So, I instructed the Ngram Viewer to make a graph of the relative frequency of the word “pet” in books published in the United States between 1800 and 2000. As the graph below illustrates, while several waves of interest in pets have occurred over the past 200 years, the real jump in our culture’s fascination (obsession?) with companion animals began about 30 years ago and is still going strong.



Relative frequency of the word “pet” (1800 – 2000)

How Ngram works

Ngram offers a window into understanding cultural change of almost any kind. A recent [article in the journal *Science*](#) describes how a Harvard-based team of researchers took a collection of five million books that have digitized by Google Books and produced a database that includes up to two *trillion words*.

They then used this database to usher in a new academic field they call “culturomics.”

The authors are correct in their belief that Ngram offers a window into understanding cultural change. After all, people write about what they’re thinking about. In the *Science* paper, the researchers used Ngram to document the suppression of art in Nazi Germany, historical changes in the actual length of one’s proverbial “fifteen minutes of fame” and fluctuations in the popularity of God. To top it off, Ngram data are free and easy to access.

Further, Google Labs has developed a graphing tool, [Ngram Viewer](#), that allows anyone to explore changes in the relative frequency of words and phrases – and hence thoughts – since the development of the printing press.

Tracking the animals we eat

My next experiment was to look at changes in the kinds of animals we eat.

I told Ngram to start at the year 1900 and I entered the words “chicken” and “beef” into the search engine. As you can see below, the graph accurately illustrates a major dietary shift over the century – one that has resulted in a 20 percent decrease in the number of cattle slaughtered each year in the United States but a 200 percent increase in the number of chickens killed for our dining pleasure.

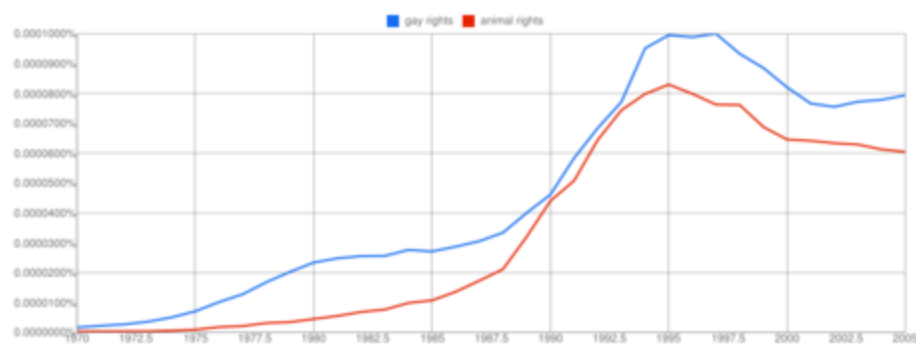


Changes in the animals we eat (beef in blue, chicken in red)

Animal rights vs. gay rights

The third experiment I did was to compare the relative popularity of “gay rights” and “animal rights” between 1965 and 2005.

The graph reveals parallels in the visibility of these two liberation movements on our cultural landscape, and it shows that, at least in terms of public discourse, Americans are more concerned with the rights of gays and lesbians than with the rights of pigs and lab rats.



"Gay rights" (blue) and "animal rights" (red) (1965- 2005)

Playing with Ngram

Ngram Viewer is easy to use and loads of fun. To play with it yourself, go to the [website](#) and start plugging words and phrases into the search bar. If you want to compare the frequency of several items, just separate them with commas.

Note that there are three options that can affect the shape of the curves:

First, the dates you specify. Because of the quirks of sampling, the graphs become less reliable before 1800 and after 2000.

Second, the language you want to search. I used American English for the graphs in this post, but nine other options are available including British English, Chinese, Spanish, German and Russian.

And third, you can "smooth" graphs to varying degrees by having Ngram average word frequencies over different numbers of adjacent years.

Also, note that the search engine is case sensitive. You get completely different graphs by typing in "God" and "god".

Warning! If you like to play with numbers and are interested in cultural change, Ngram Viewer can be as addictive as Grand Theft Auto. For example, I found that the word "vegan" began to enter our collective consciousness in 1992, and that the Beatles have had more impact on America's musical landscape than the Rolling Stones and Elvis Presley combined. (But Ngram also proves that John Lennon was wrong: the Beatles were never more popular than Jesus.)

More information on using Ngram Viewer is available [here](#). And [here](#) is an excellent radio interview with Erez Lieberman Aiden, one of the developers of the program.

Hal Herzog is the author of [*Some We Love, Some We Hate, Some We Eat: Why It's So Hard To Think Straight About Animals*](#) (Harper, September 2010).

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