

# Criminal Machine Learning - Biased Training Set?



(a) Three samples in criminal ID photo set  $S_c$ .



(b) Three samples in non-criminal ID photo set  $S_n$

# Criminal Machine Learning - Biased by Smile?



(a) -0.98



(b) -0.68



(c) -0.28



(d) -0.38



(e) 0.76



(f) 0.98



(g) 0.66

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# Cognitive Biases (Kognitive Verzerrungen)

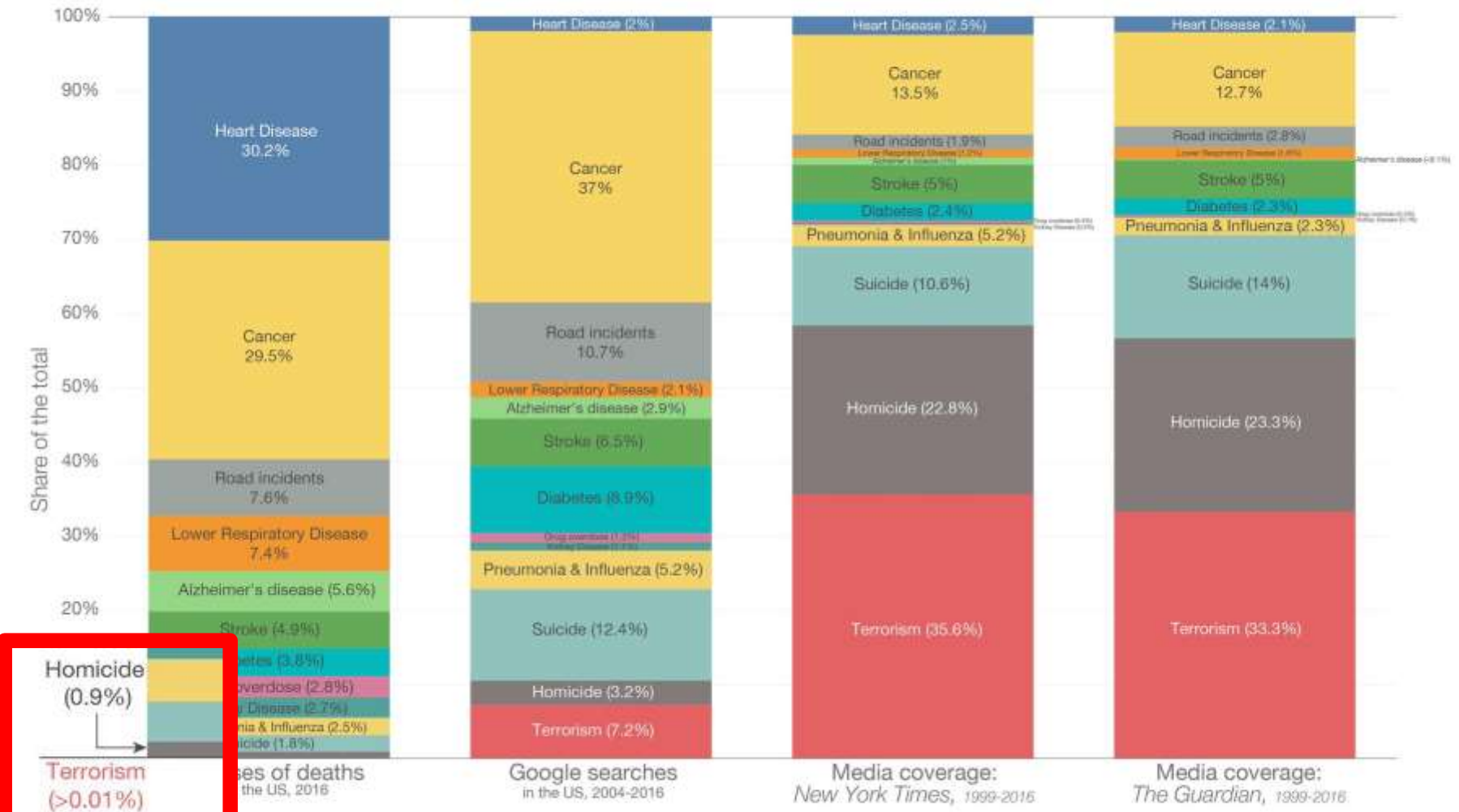
Eine **kognitive Verzerrung** ist ein **kognitionspsychologischer Sammelbegriff** für **systematische fehlerhafte Neigungen** beim **Wahrnehmen, Erinnern, Denken und Urteilen**. Sie bleiben meist **unbewusst** und basieren auf **kognitiven Heuristiken**.  
(Wikipedia)

# Cognitive Biases durch Medien

## Causes of death in the US



What Americans die from, what they search on Google, and what the media reports on



18] – Death: reality vs. reported. All data available at: <https://owenshen24.github.io/charting-death>  
16; Google search data averaged over the period from 2004 to 2016; and NYT and Guardian data from 1999 to 2016.  
Shown is the data on the ten leading causes of death in the United States plus drug overdoses, homicides and terrorism.  
All values are normalized to 100% so they represent their relative share of the top causes, rather than absolute counts (e.g. 'deaths' represents each causes' share of deaths within the 13 categories shown rather than total deaths). The causes of death shown here account for approximately 88% of total deaths in the United States in 2016.  
This is a visualization from OurWorldinData.org, where you find data and research on how the world is changing. Licensed under CC-BY by the authors Hannah Ritchie and Max Roser.



# Survivorship Bias

A man with blonde hair and a beard, wearing a grey long-sleeved shirt, is kneeling in a forest. Behind him is a makeshift shelter made of sticks and branches. To his right, a fire is burning brightly. The background is filled with trees and foliage, creating a natural, outdoor setting.

**Survivorship bias** or **survival bias** is the **logical error of concentrating** on the **people or things** that made it **past some selection process** and **overlooking** those that did not. Typically because of their **lack of visibility**. This can lead to **false conclusions** in **several different ways**.