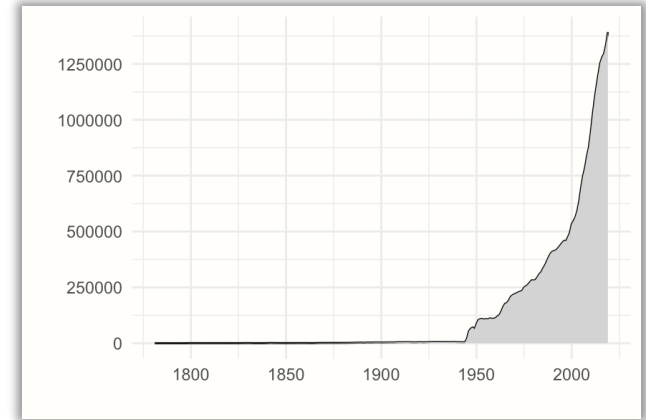


# On the shoulders of giants...

*"If I have seen further, it is by standing on the shoulders of giants."*

- Isaac Newton

- We think of science as “cumulative” and progressive, because we can build on the knowledge created by others
- Since the scientific revolution in the 17<sup>th</sup> century, there has been an explosion of knowledge in the form of published literature.
- Nowadays, petabytes of research findings are produced every day all around the world.
- In biomedicine alone, more than one million peer-reviewed articles are published each year (Björk, Roos, and Lauri 2008).



*Articles indexed in PubMed by year, 1781-2019*

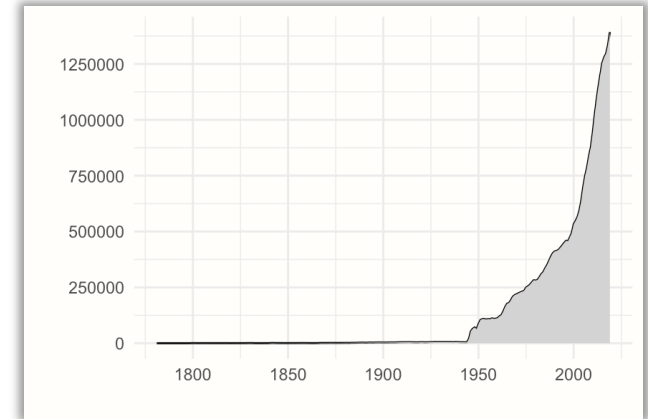
# On the shoulders of giants...

*"If I have seen further, it is by standing on the shoulders of giants."*

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- How do we “make sense” of this gigantic amount of evidence?
- Can we trust the published findings? Are some results more trustworthy than others?
- How can we summarize all the evidence that we have on one research question?

→ **This is where meta-analyses provide a solution**



*Articles indexed in PubMed by year, 1781-2019*

# Who needs systematic reviews & meta-analyses?

*Take 5 minutes to write down groups of people who are interested in the kinds of questions we discussed before.*

- Researchers/Research Institutions
- Health Insurances
- Governmental Institutions
- Practitioners/Health Care Professionals
- Research Funding Agencies
- Regulatory Agencies (FDA, BfArM)
- “Meta-Scientists”
- ...