



ACTUARIAL SCIENCE  
VS  
DATA SCIENCE:

COMPETING FOR RELEVANCE

# CAS ANTITRUST STATEMENT

**The Casualty Actuarial Society is committed to adhering strictly to the letter and spirit of the antitrust laws. Seminars conducted under the auspices of the CAS are designed solely to provide a forum for the expression of various points of view on topics described in the programs or agendas for such meetings.**

**Under no circumstances shall CAS seminars be used as a means for competing companies or firms to reach any understanding – expressed or implied – that restricts competition or in any way impairs the ability of members to exercise independent business judgment regarding matters affecting competition.**

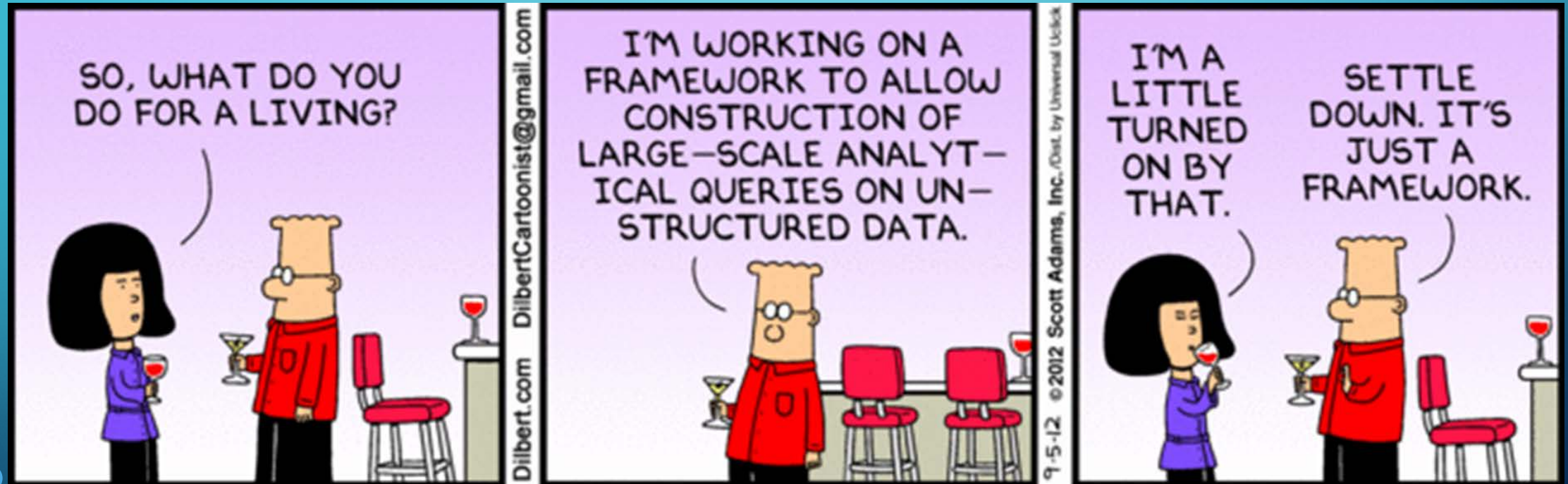
**It is the responsibility of all seminar participants to be aware of antitrust regulations, to prevent any written or verbal discussions that appear to violate these laws, and to adhere in every respect to the CAS antitrust compliance policy.**

# AGENDA

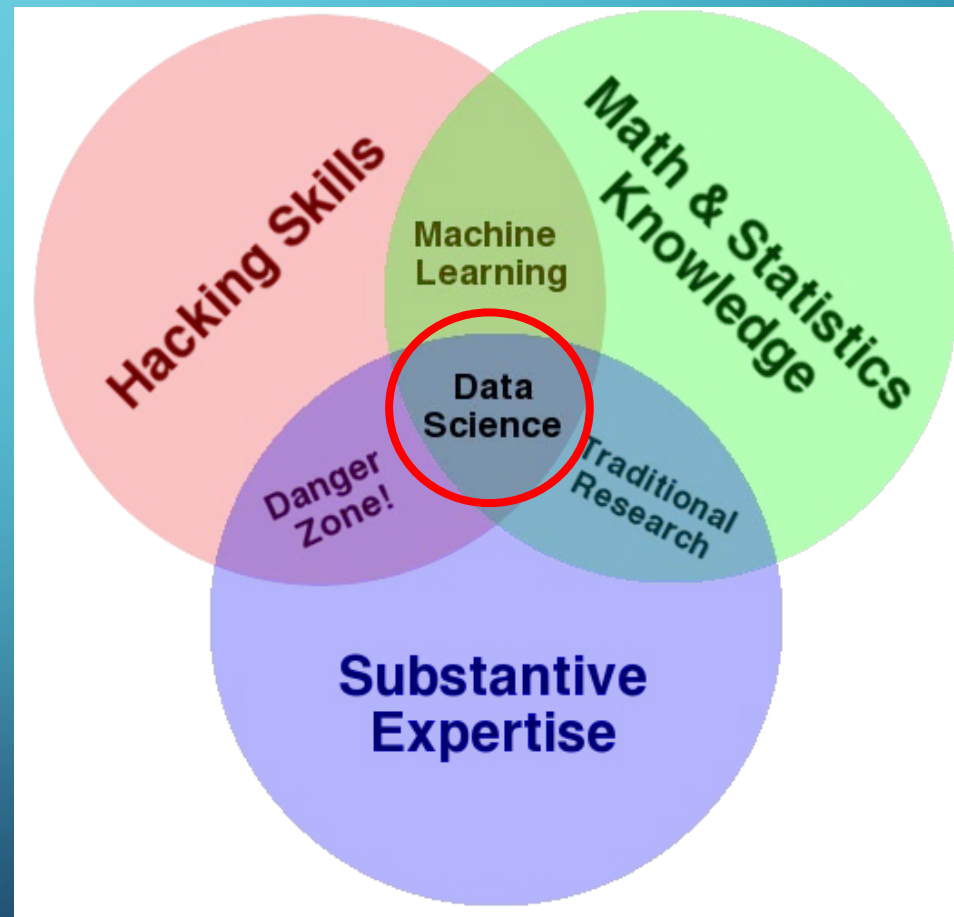
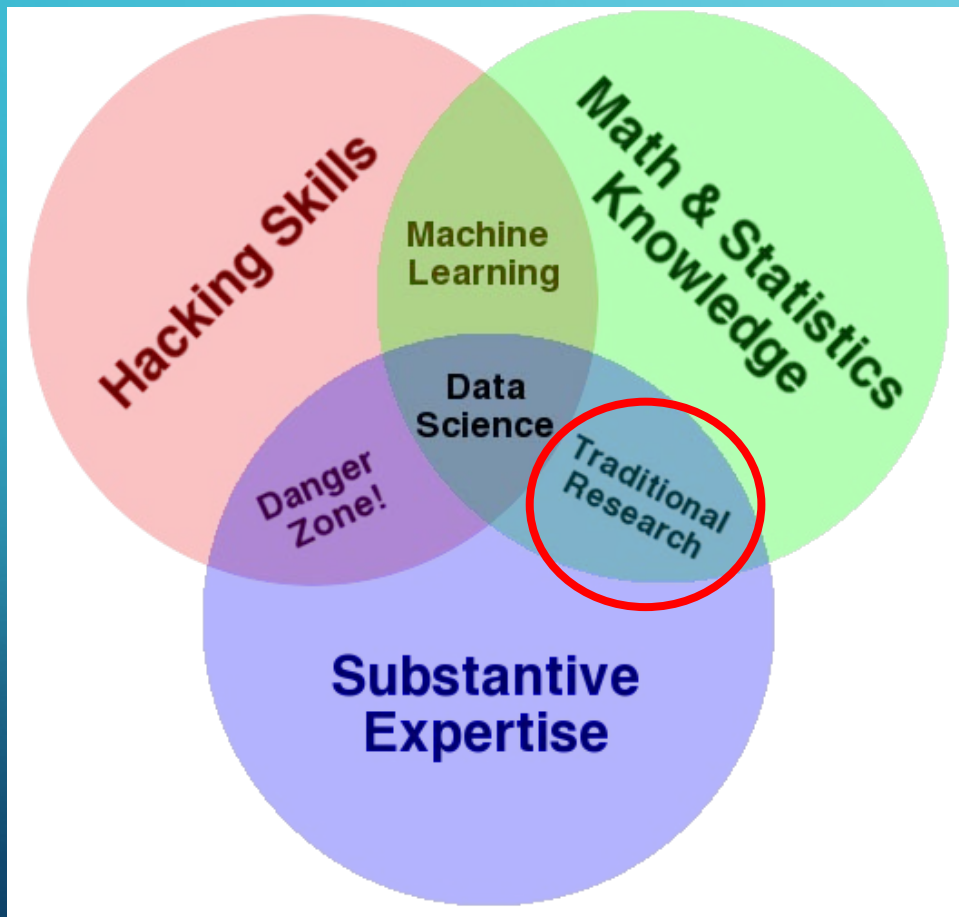
- Audience Survey / Presentation
  - Mary Jo Kannon
- Panelists
  - Moderator: Steve Lowe
  - Pete Bothwell
  - Louise Francis
  - Chris Monsour
- Discussion/ Q&A



# ACTUARIES – STILL THE BEST CAREER?



# ACTUARIAL VS DATA SCIENCE?



# DATA & TECHNOLOGY WORKING PARTY

## Mission:

Working party members will research and define the knowledge and skills required for actuaries to successfully partner with IT to participate in the Data and Analytics revolution - including:

- Data Quality
- Data Structures
- Business Intelligence
- Data Science



# DATA QUALITY PRINCIPLES

Data quality – data science requires an understanding the data's value for analysis and paleontologist's passionate curiosity

- Validity
- Accuracy
- Completeness
- Timeliness
- Reasonability
- Data Transparency







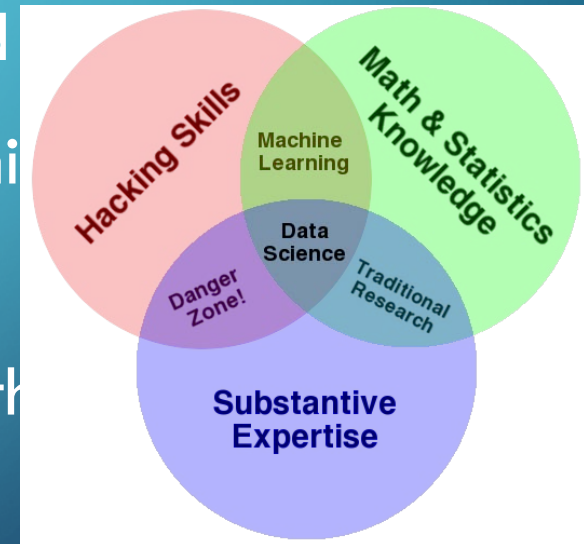


# DATA SCIENCE

## Data Science is...

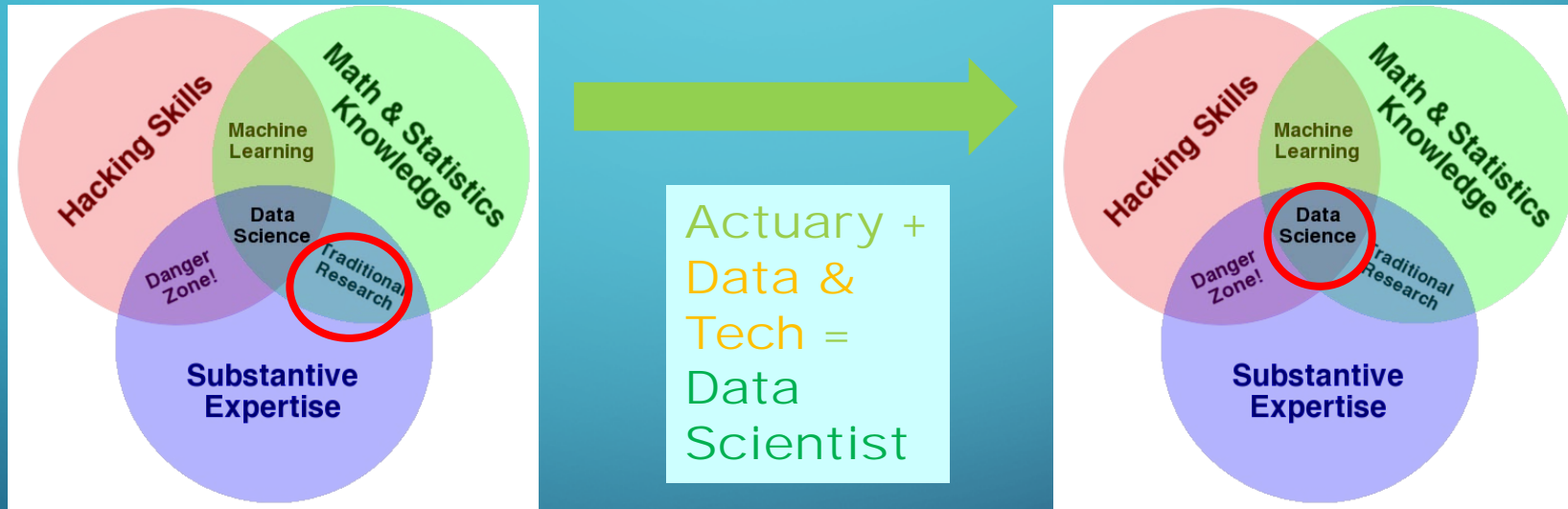
- methodologies to extract knowledge and insights..
- from data in various forms, either structured or unstructured
- and a continuation of data analysis fields such as data mining, operations research, and predictive analytics..

The depth of domain knowledge and analytic rigor defines the difference between dangerous, misleading hacking and true data science



# ACTUARY AS DATA SCIENTIST

In insurance, the actuary has a tremendous head start in domain knowledge and analytical rigor



The Working Party's research is aimed at beginning to fill any remaining gaps in data and technology knowledge



# WORKING PARTY MEMBERS

- Pete Bothwell, Co-Chair
- Mary Jo Kannon, Co-Chair
- Benjamin Avanzi
- Joe Izzo
- Stephen Knobloch
- Ray Nichols
- James Norris
- Andrea Pan
- Dimitri Semenovich
- Linda Waite
- Dom Yarnell
- Cheri Widowski
- Tracy Spadola
- Michele Wetzel