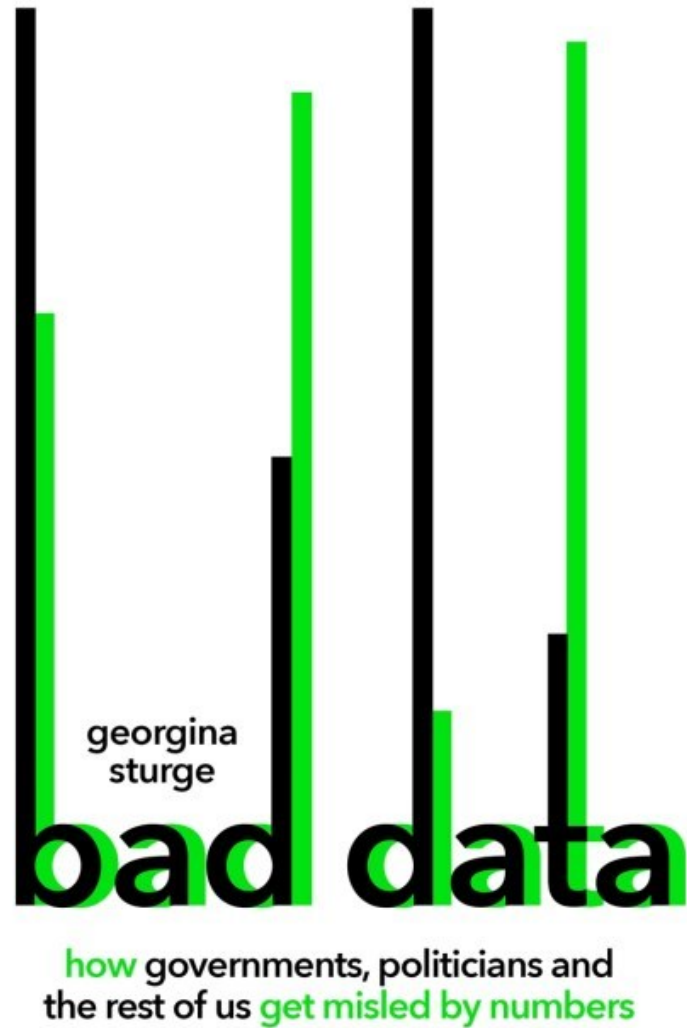


**True values: one version of the truth**

Provide an operational definition of a “defective animal cookie”  
How many defective cookies are there?





- “Data is essential...it is supposed to be...neutral and objective”..pg3
- How to measure
  - Poverty, number of disabled people, empowerment, equality, etc..

# Britain's Farms

- 2004 – Britain would be the first in the EU to switch from
  - Payments for produce to payments for **land capable of being farmed**
  - Fair, good for environment and less red tape
- 2005 - Claims to register land capable of being farmed
  - Jumped from **9000** per year to **100,000** per year
- 2012 –
  - £680 million in (unforeseen) costs
  - £160 million in fines (for failure to disburse funds)
  - Delayed payments
    - Caused distress - some farmers committed suicide

# A system of measurement

## Must have an aim

- Absent an aim there is no system

## An operational definition

- Communicates a practical meaning
- Different people observe the same entity and record the same result

## Three key elements of an operational definition

- A criterion to be applied to an object.
- A test procedure to determine compliance
- A decision rule (yes/no)



Japan take sensational lead after VAR check



# WHY IS PLUTO NOT A PLANET?

## PLANET



Is in Orbit around the sun



Assumes a spherical shape



Has cleared the neighborhood around its orbit.

## PLUTO



Is in Orbit around the sun



Assumes a spherical shape



Has not cleared the neighborhood around its orbit.

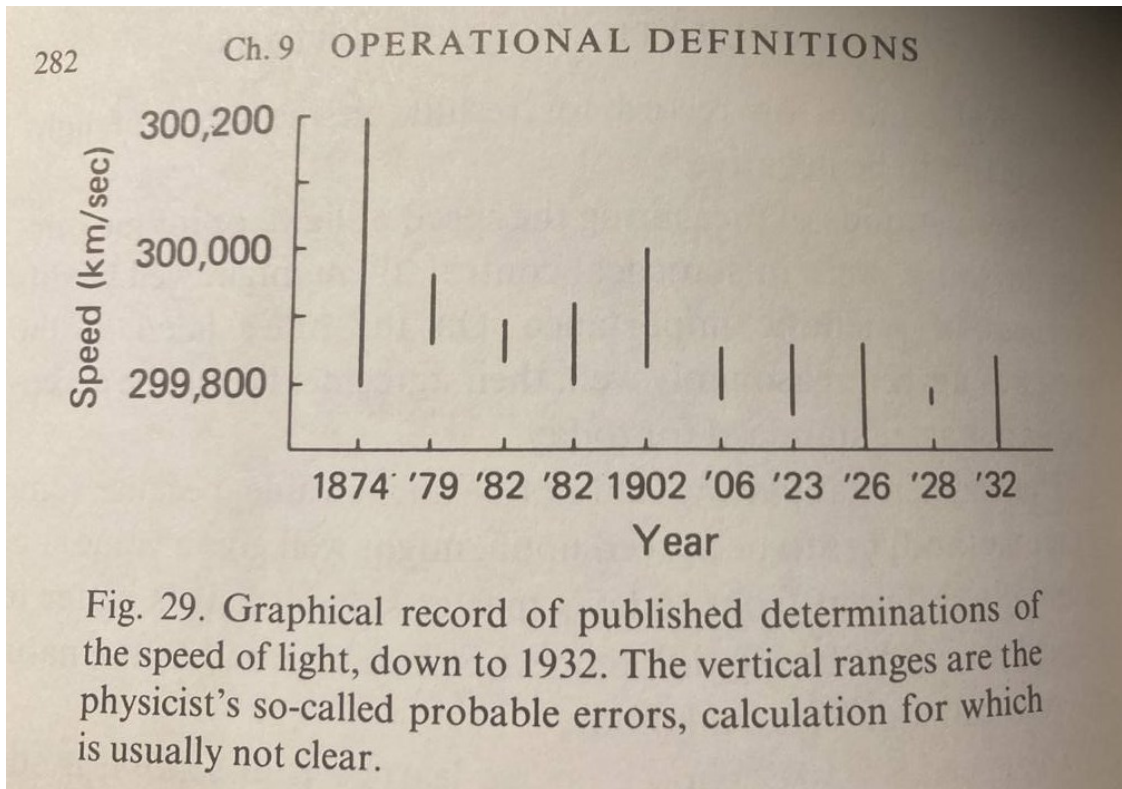
**So, Pluto is not a Planet. It is classified as a "Dwarf Planet"!**

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# There is not true value

- “It comes as astonishment to most people that there is no true value for the speed of light.” Deming (pg 280 OOC)



He acknowledged an everlasting debt to C. I. Lewis's *Mind and the World Order* (Scribner 1929), which he recommended to me. I had the usual difficulty with it, and I recall saying to Dr. Shewhart at the end of the seventh reading that so far it had meant nothing to me. “Stay with it,” he said, “I read it fourteen times before it began to mean anything.” I wonder how he came upon it in the first place, and how he knew how important it was that he should pursue it.





# A system of measurement

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# Share your insights...



Any key insights...



So what...

(any scope for application)



One wish...