**— title: How do we know that we arn't wrong? author: Houjun Liu source: KBISOSMasterIndex course: ISOS101 —

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#flo #disorganized

- Prominent scientists could be wrong!
  - Consensus formed during the 20th century about a long of scientific discovery, for most thought that the important questions have been answered
  - So, consensus does not mean correctness
- Climate science unusual because of political motivations
- One way to test hypothesis is to do a review of the state of that field
  - This was originally trivial, but gets much harder nowadays
  - Too many papers published for one to read efficiently
- Now, Knowledge = Scientific Consensus => only over the simple *realities* of a hypothesis
  - Claims with scientific consensus are rounded on verified new realities
  - Claims of current causes is not prediction of the future
- So, why do people think that people disagree on scientifically confirm consensus?
  - People are conflating scientific evidence with political decisions
  - Climate science heavily predicated upon future effects, which is not always easy and effective
  - Scientists have sometimes failed to explain themselves beyond their communities
    - Actually, scientists sometimes thought that the mere worry about dissemination is wasting time
    - "Popularizers" are dismissed
  - Scientists commenting on contested issue often called "politicizing"
  - Organization sometimes propergating alternative views
- How do we know that we arn't wrong?
  - There is actually no singular scientific method!
  - No one answer and standard method of science
  - Scientists use a variety of methods & philosophers proposed various helpful criteria:
    - Inductive and deductive reasoning => generalizing from examples "100 white swans means that all swans are white. 10000 white swans? I am more sure now"
    - Hypo-deductive model => proving hypothesis "if I wash my hands after doing an autopsy, I won't hurt babies"
      - Easy to get trapped in "affirming the consequent" => autopsies don't cause died babies, dead people germs do. However, people for a while seriously thought that cadaveric matter in and of itself causes dead babies/dead people.
    - Falsificationism => you could never proof something true; you could only prove it false
    - Consillience of Evidence => look for multiple independent lines of evidence that allow a fact to be shown
    - Inference to the best explanation => getting a lot of evidence and choosing from it simply the "best available."