

# Worse-is-better

Emmett Witchel

CS380L

# Worse is Better:

Simplicity, Correctness, Consistency, Completeness

## MIT / “The right thing”

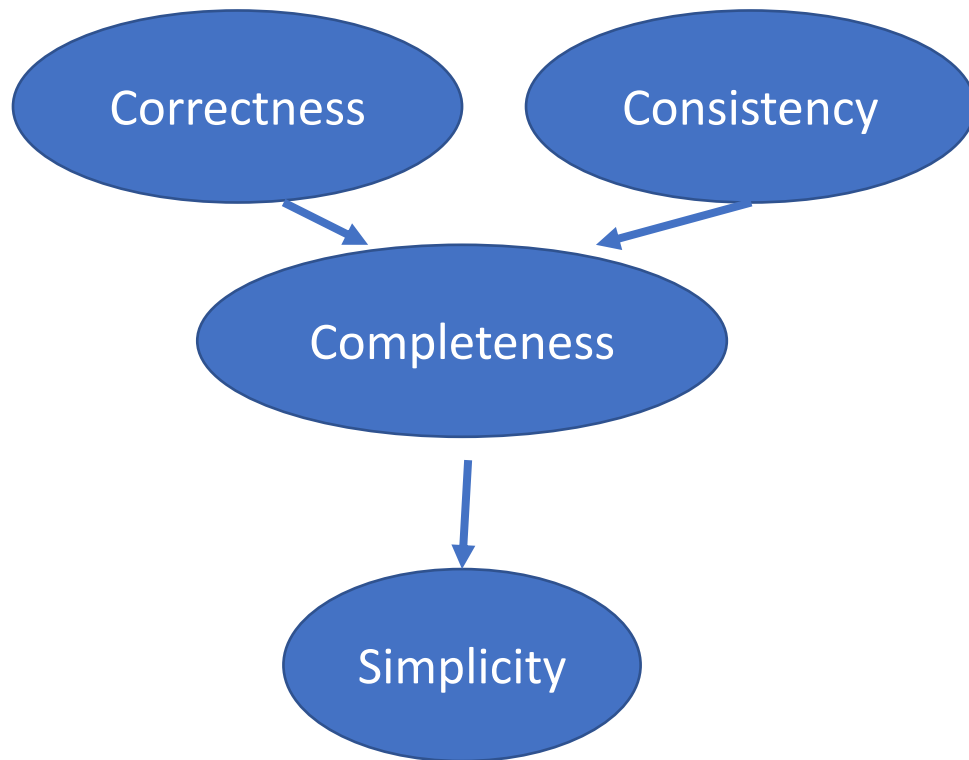
- Simplicity good
- Correctness: incorrectness not allowed
- Consistency: more important than simplicity, less than correctness
- Completeness: more important than simplicity

## New Jersey / “Worse is Better”

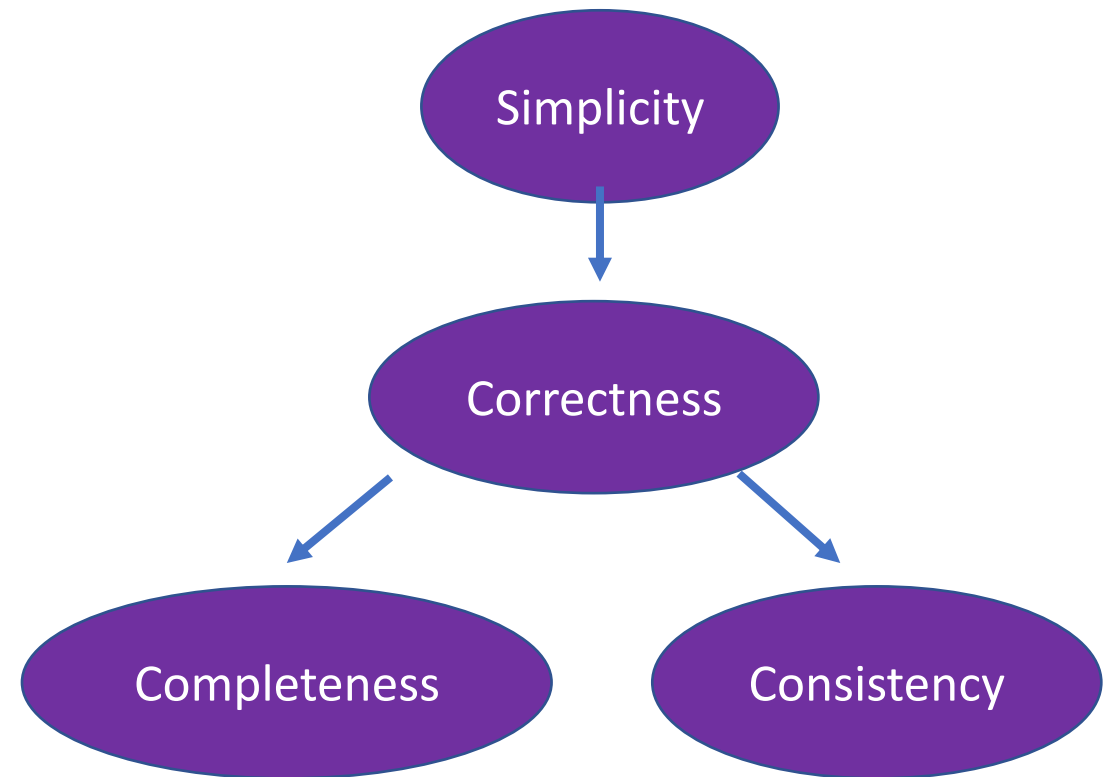
- Simplicity is most important
- Correctness: simple better than correct
- Consistency: drop things that introduce inconsistency
- Completeness: more important than consistency, less than simplicity

# MIT vs New Jersey: partial orders

The right thing



Worse is better



# Why is worse is better better?

- Who wants a simple but incorrect system?
- Implementation simplicity → easy to port → better adoption
- Programmers conditioned to trade safety/convenience for performance and reuse.
- Better to get half the right thing fast so it spreads.

# Worse is better examples

- UNIX/C
- iOS?
  - Originally didn't have cut & paste
- x86\_64 vs Itanium?
- ARM?
  - debuts without media acceleration instructions
  - Adds them later
- NoSQL? (Cassandra, MongoDB)
- MapReduce?

# Discuss

- Give a modern example of worse-is-better
- Give an example that seems to contradict worse-is-better.
- Is worse-is-better a good thing or an unfortunate reality? Why?