Eratosthenes, Hypatia, and Friends: Ruminations on Potential Patron Philosophers of Biomedical Informatics

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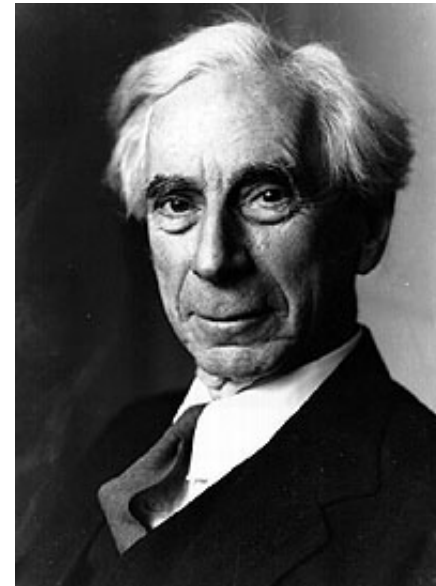
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Would Aristotle be admitted to the Pitt training program?

- What would eminent thinkers from the past bring to our programs, if we were to admit them?

- What are these thinkers/doers already bringing, or could bring, indirectly, through the faculty and students' intellectual histories?
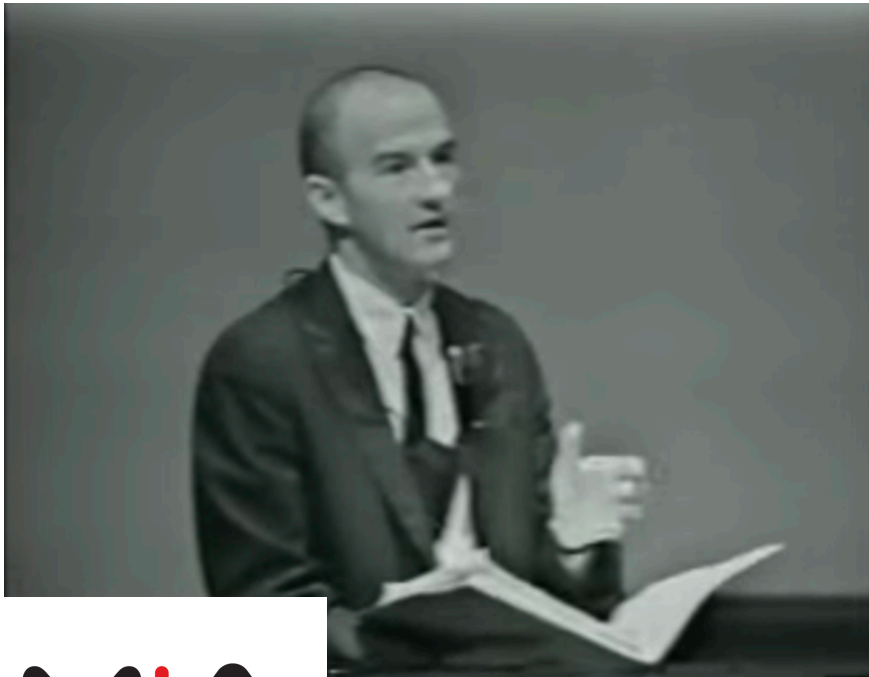
Greg Cooper looks to Aristotle

Bruce Buchanan looks to Bertrand Russell

Larry Weed looks to Francis Bacon

Francis Bacon: Patron Saint of Socio-Technical Informatics

- *Idols of the Mind*

- Universal mental limitations
  "inherent in human nature"

- Acquired beliefs of human problem solvers
  "corrupts the light of nature"

Francis Bacon's "Idols of the Mind"

- The limits of language
  "throw everything into confusion"
- Developed systems of thought
  "which have become inveterate by tradition, implicit credence and neglect."

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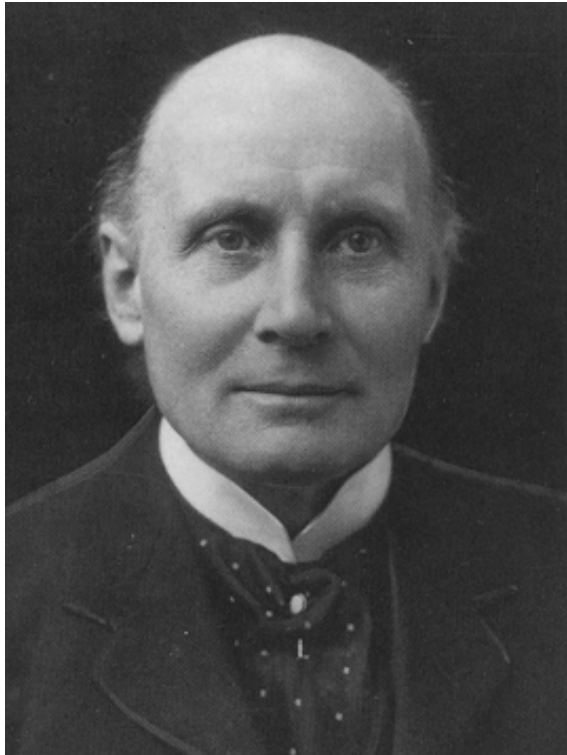# I looked to Whitehead, James, and Eratosthenes

"Classification is necessary. But unless you can **progress from classification to mathematics**, your reasoning will not take you very far."[1]

*1. Science and the Modern World, (*published 1925)
Compare creation of Quantitative Imaging Network circa 2007, 80 years later
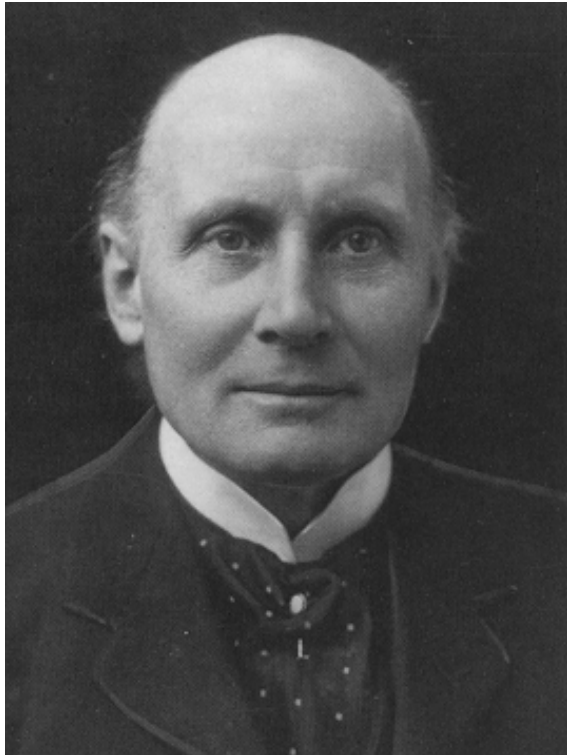
Whitehead: Patron Saint of Automating Processes

"Civilization advances by extending the number of important operations which we can perform without thinking about them."[1]
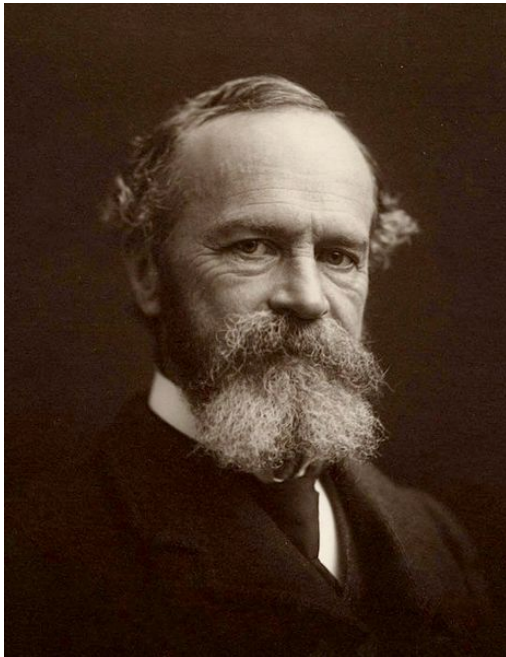
1. *An Introduction to Mathematics*

Whitehead: Patron Saint of Informatics Education?

"Novel ideas are more apt to spring from an unusual assortment of knowledge—not necessarily from vast knowledge, but from a thorough conception of the methods and ideas of distinct lines of thought."[1]
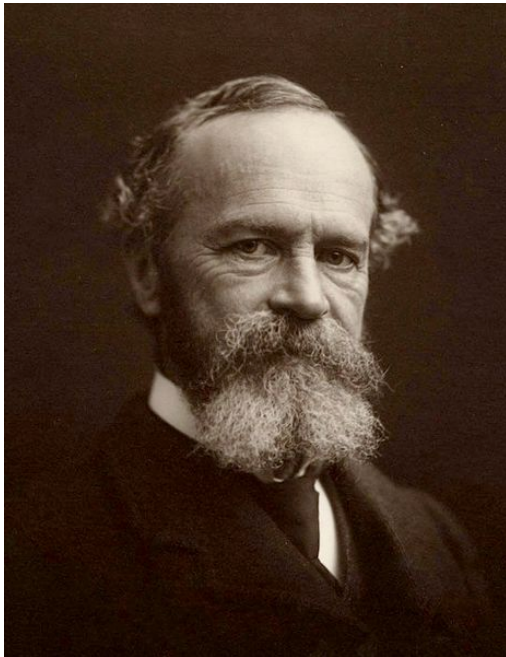
1. *An Introduction to Mathematics*

William James: Patron Saint of Despairing Students?

"Is life worth living?"

"Believe that life *is* worth living, and your belief will help create the fact."

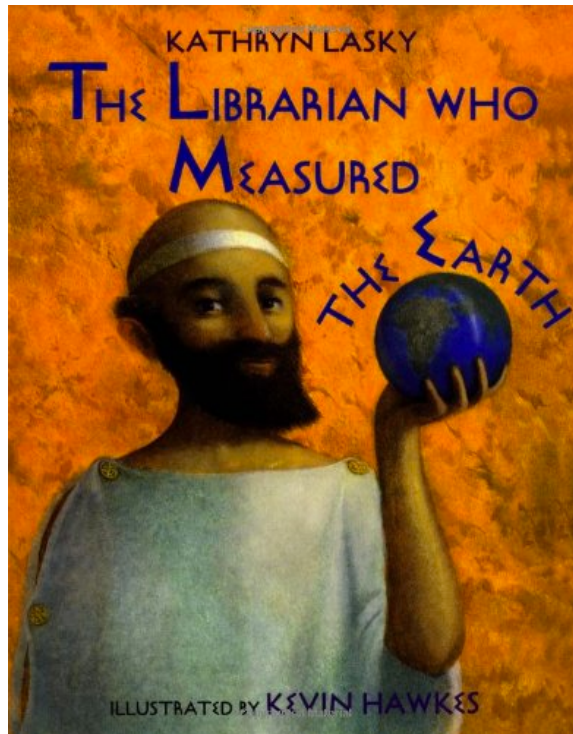# William James: Variety, Pluralism, Radical Empiricism

Easy to recommend since they say Henry James wrote novels like philosophy but William James wrote philosophy like novels

Eratosthenes: Patron Saint of Imaging Informatics?

- Chief Librarian at Alexandria
- Mathematician
- Geographer
- Poet
- Pen pal of Archimedes

Eratosthenes: Early Greek Informatician

Blended
- mathematics,
- human workers,
- and simple devices

to accurately measure the circumference of the Earth

Ada Lovelace: Patron Saint of Women in AMIA?

- "The first tech visionary"[1]
- "Founder of Scientific Computing"[2]
- From Lovelace we can infer that Medicine is (mostly?) a computable problem

1. The New Yorker
2. San Diego Supercomputer Center

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What does the current state of affairs point to for a patron saint?

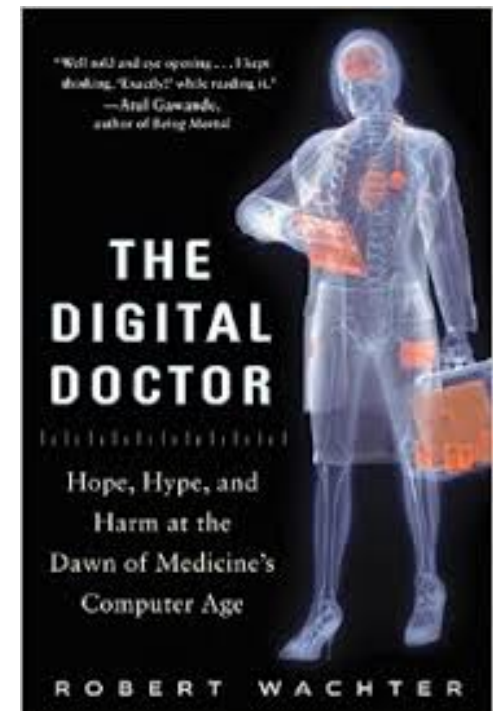"We've built the Frankenstein I was most afraid of."
   David Brailer[1]

Note: David Blumenthal disagrees

1. *The Digital Doctor*

HITECH Act has disrupted medicine

- Put Informatics in the center
- Created
  - Hope
  - Despair
  - Anger

Hypatia of Alexandria: Patron Saint of Implementation?

- Last successor to Eratosthenes at Alexandria

- Mathematician, Philosopher, Pagan

- Dragged from the library and killed by mob of angry Christians

- Worse has happened to your predecesoors!

Philosophers, Saints, Metaphors

- I think (hope) Pitt would have accepted Aristotle
    - I hope I would have voted to admit him, despite lack of prerequisites
- More so I think (hope) our education will be more engaging, fruitful if we can draw upon the rich metaphors that can be created from our broader intellectual history

Metaphors direct thinking in a particular way, bringing in useful associations from other contexts, but also concealing other factors. Metaphor is one of the many devices available to the scientific community to accomplish the task of accommodation of language to the causal structure of the world. (**Robert Stephens**)

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Thank You!

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