

The Prediction Project

The Past and Present of the Future

Alyssa Goodman
Harvard University

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Prediction Essentials

Take a look at the essential elements of the course, including the framework for predictive systems.



Omens & Oracles

Gain insight into prediction as a human venture by studying the most ancient forms of prediction in Omens and Oracles.



Rise of Theory

Learn how humanity moved from mystical divination practices to genuine, scientific theories to explain natural phenomena.



Modern Prediction

Discover the cutting edge predictive methods and modeling from preeminent experts across many fields.



How it all fits together

PREDICTIONX: THE PAST & PRESENT OF THE FUTURE



ESSENTIALS



Omens, Oracles & Prophecies



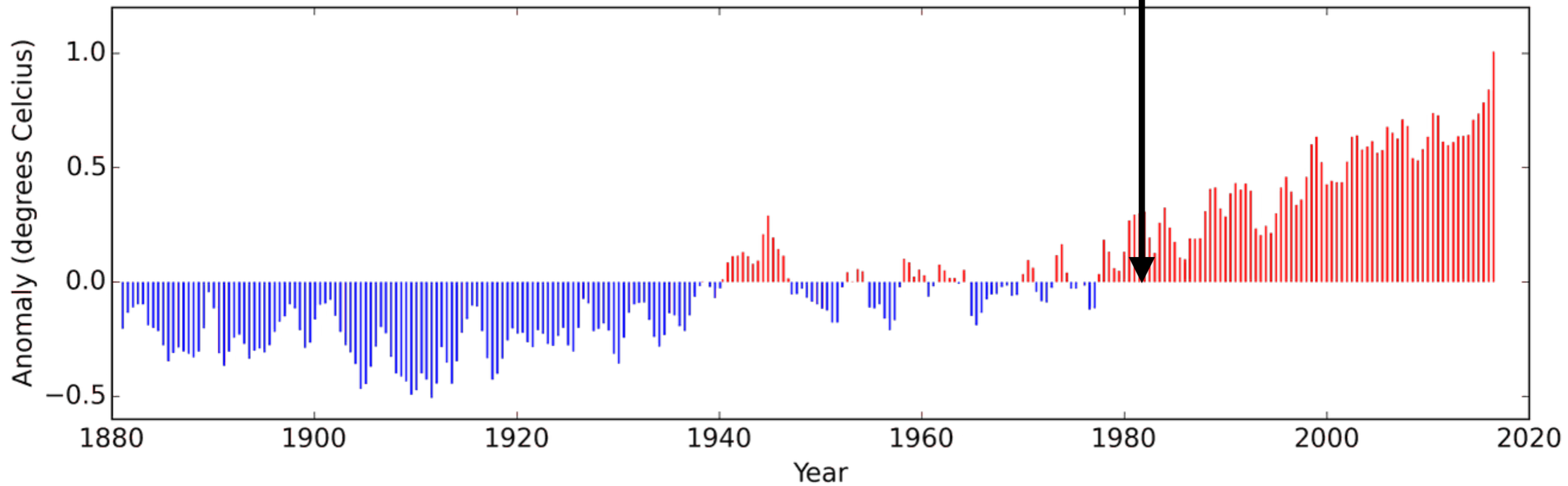
THE RISE OF THEORY



MODERN PREDICTION

Health Wealth

ORIGINS
1983 NASA/GISS INTERNSHIP
WITH JAMES HANSEN



The Prediction Project

The Past and Present of the Future



HOME

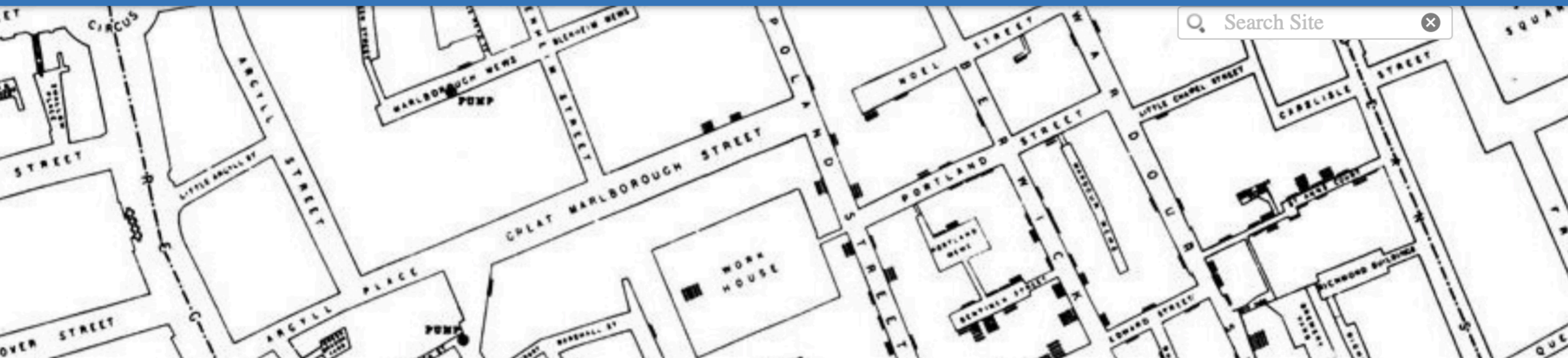
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PREDICTIONX: THE PAST & PRESENT OF THE FUTURE



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Predictive Systems Framework

Phenomena → Predictions

Understanding Uncertainty

Study Design

Timelines

Why predict?



Omens, Oracles & Prophecies

Mesopotamian Haruspicy

Roman Augury

Chinese Oracle Bones

Oracle of Delphi

Aztec Rituals

Egyptian Priests

Tarot

The Diviner's Guide

Turkish Tasseography

Maya Spacetime

Yoruba Ifa

Casting Lots

Greek Astronomy

Astrology

Comets of Doom

cross-cultural conversations



THE RISE OF THEORY

Ancient Mesopotamia, Egypt, Greece & Rome

The Path to Newton

Indian Mathematics
European Renaissance

The Royal Society

Lost without Longitude (Navigation)

Help, I'm Lost!
Tools of the Navigator



MODERN PREDICTION

Health

- ▶ Epidemiology
- ▶ Personal Genomics
- ▶ Population Genetics

Wealth

- ▶ Climate & Wealth
- ▶ Behavioral Economics

The Future of the Future

- ▶ AI, Derek's Day
- ▶ Philosophy
- ▶ Uncertainty

Earth

- ▶ Climate & Energy
- ▶ Climate Policy
- ▶ Tent Tarot
- ▶ Earthquakes

Space

- ▶ Futures of our Universe
- ▶ SETI

Coming Soon

Interactive Resource

video(s)

available on edX

available on LabXchange

...all linked at predictionx.org

IN TRUTH, A WINDING PATH...

PREDICTIONX

2008
WGBH

2011


2014
HarvardX
edX

2015
 **HARVARD COLLEGE**
Freshman Seminar Program

2016




2017
The TIMELINE CONSORTIUM
SPIN-OFF
(TSF METADATA STANDARD, TOOL)

2019

Harvard College
Program in General Education
Explore. Expand. Engage.

2018

PATH TO
A project to track the evolution of science

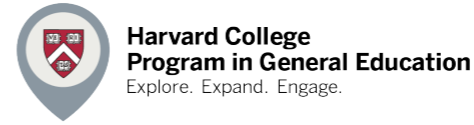
2019
2020


2020
LabXchange™
Science and learning-connected.

2021




2022

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John Snow & Cholera

Cholera Map

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Phenomena
→ Predictions



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Rituals

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Maya
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Yoruba
Ifa

Casting
Lots

Greek
Astronomy

Astrology

Comets
of Doom

cross-cultural
conversations

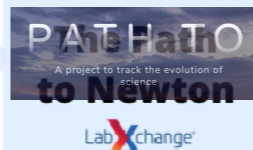


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Ancient
Mesopotamia,
Egypt, Greece &
Rome

Islamic Science



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Mathematics
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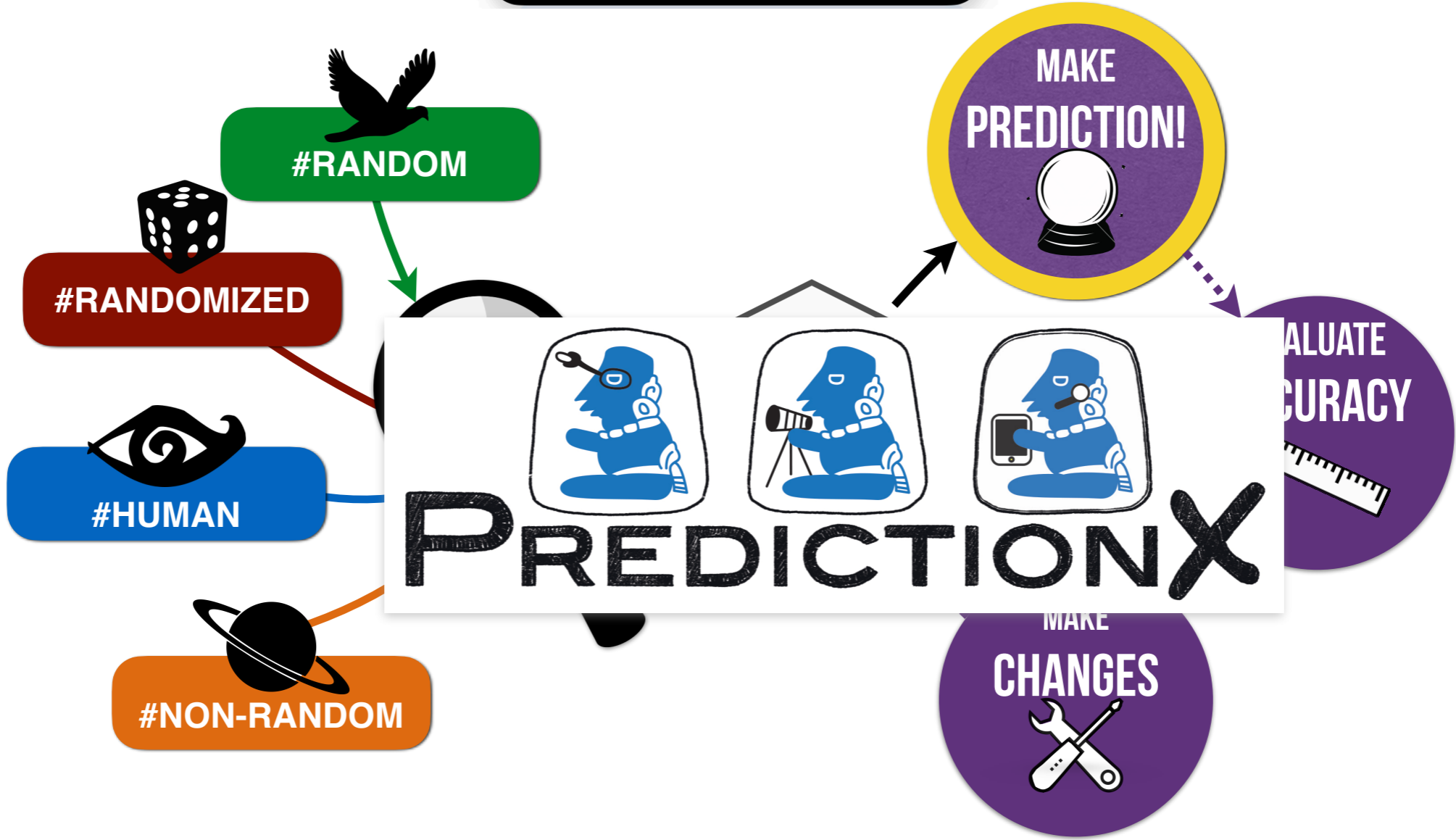
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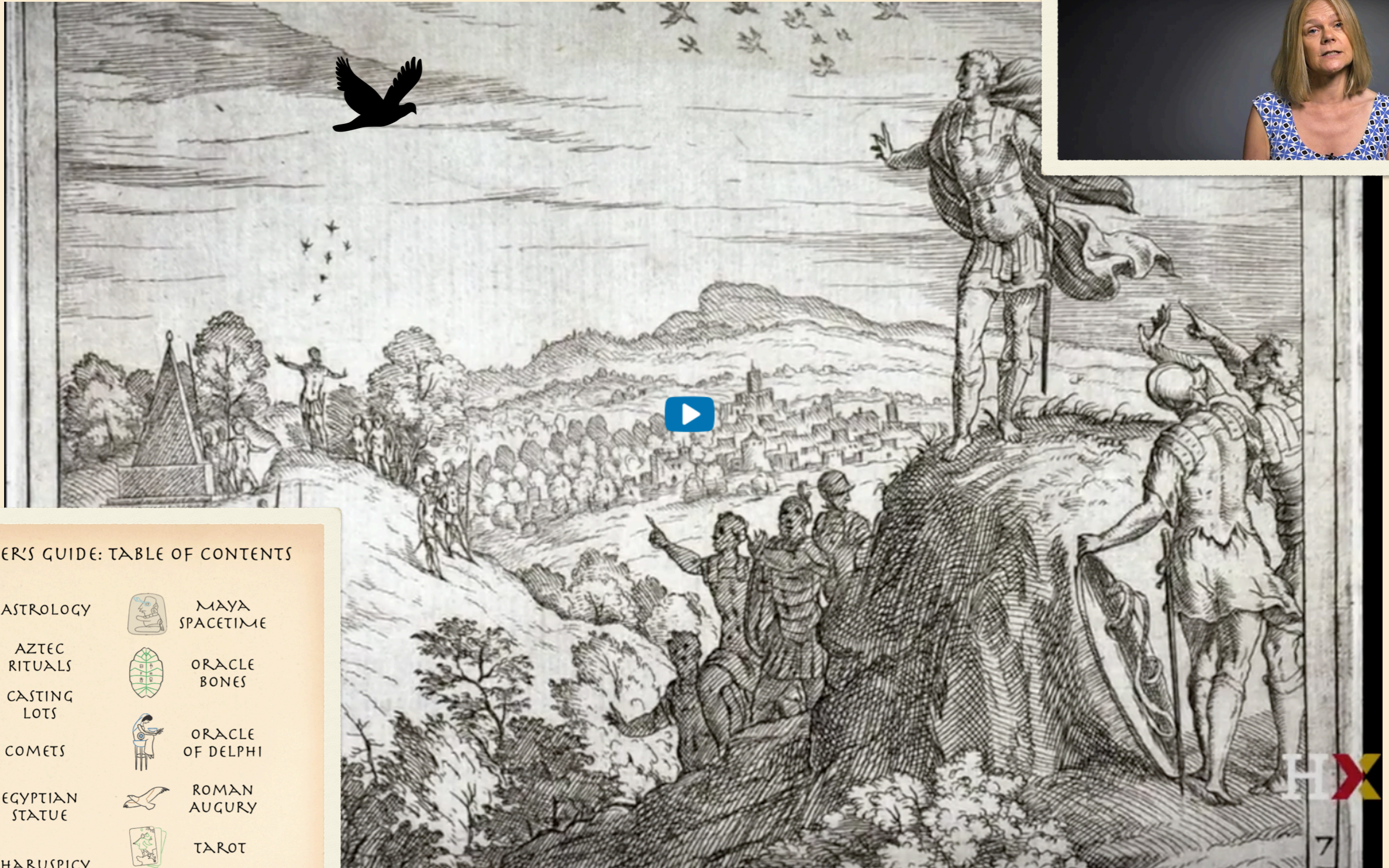
Predictive Systems Framework





ROMAN AUGURY

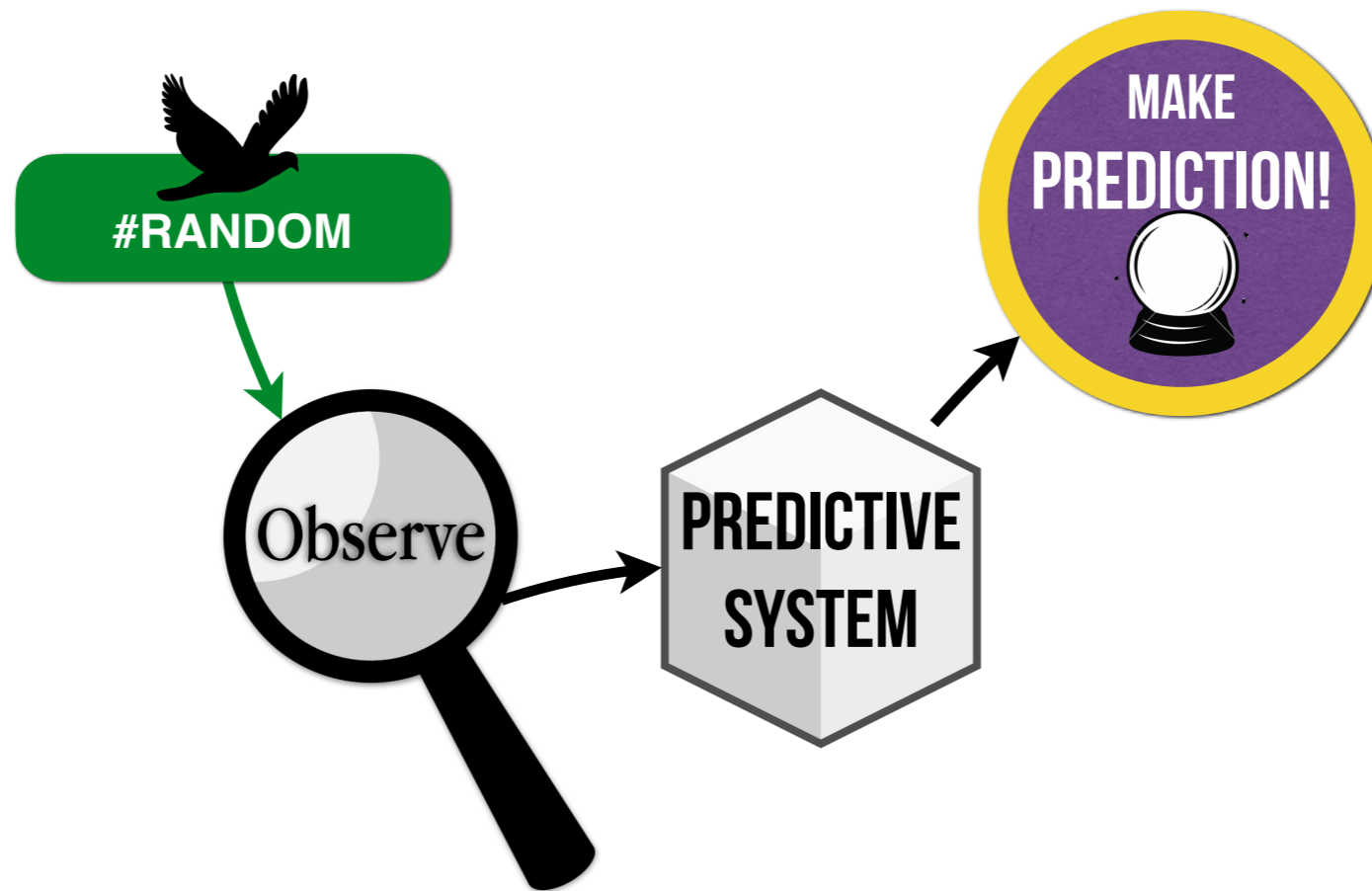
"Senior political officials of the Roman state had to take auspices before any major political event like elections." —Emma Dench

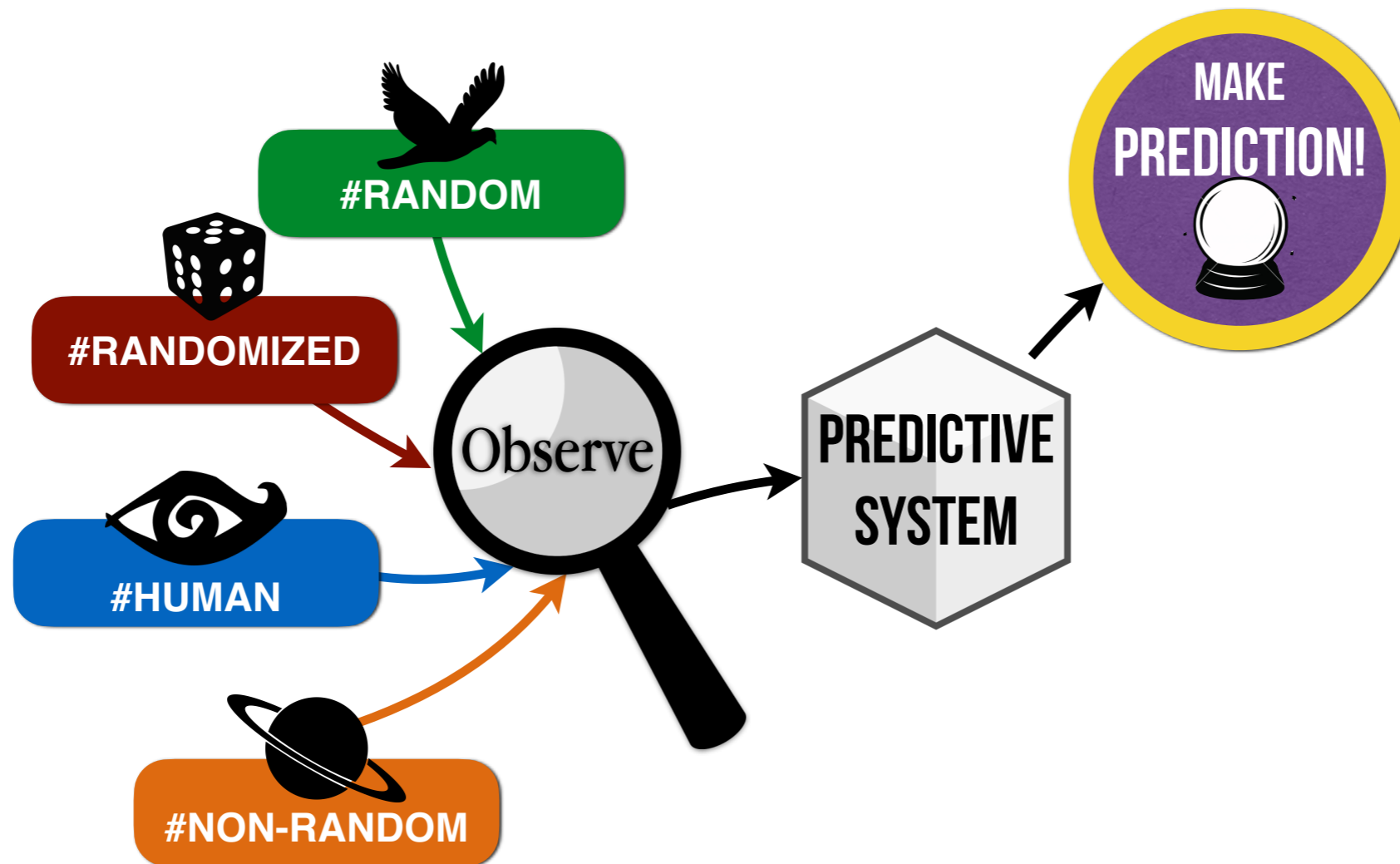


DIVINER'S GUIDE: TABLE OF CONTENTS

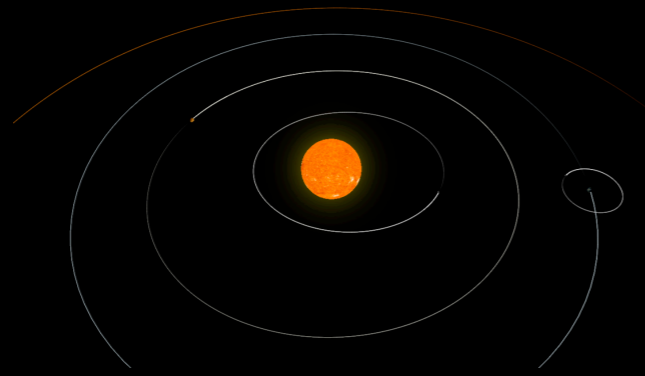
 ASTROLOGY	 MAYA SPACETIME
 AZTEC RITUALS	 ORACLE BONES
 CASTING LOTS	 ORACLE OF DELPHI
 COMETS	 ROMAN AUGURY
 EGYPTIAN STATUE	 TAROT
 HARUSPICY	 TASSEOGRAPHY
 IFA	

see "Roman Bird Augury" video on  or at predictionx.org/roman-augury





#NON-RANDOM



Celestial Motion

#RANDOMIZED



Ifa

#HUMAN



Egyptian "Bobble Head"

#RANDOM

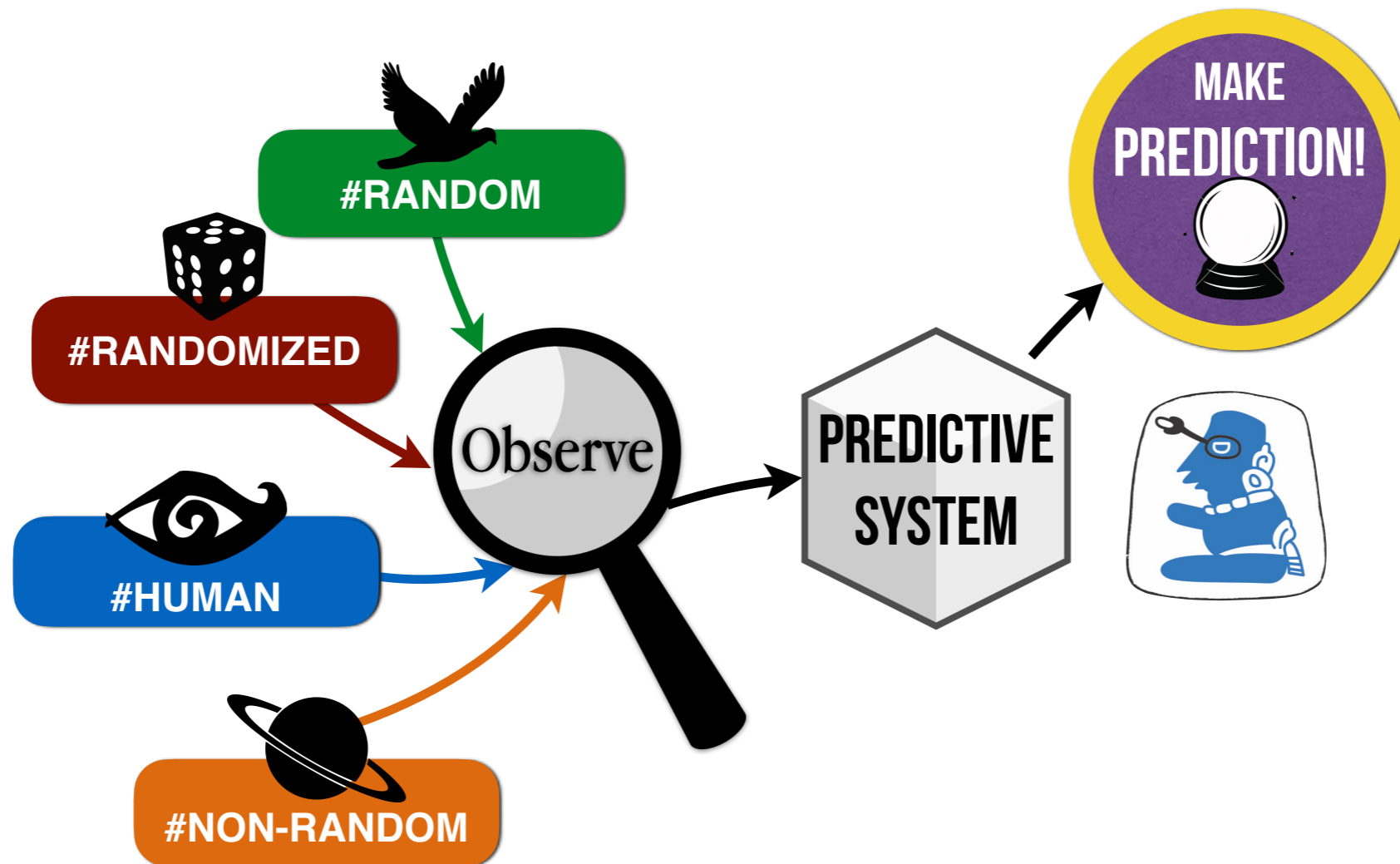


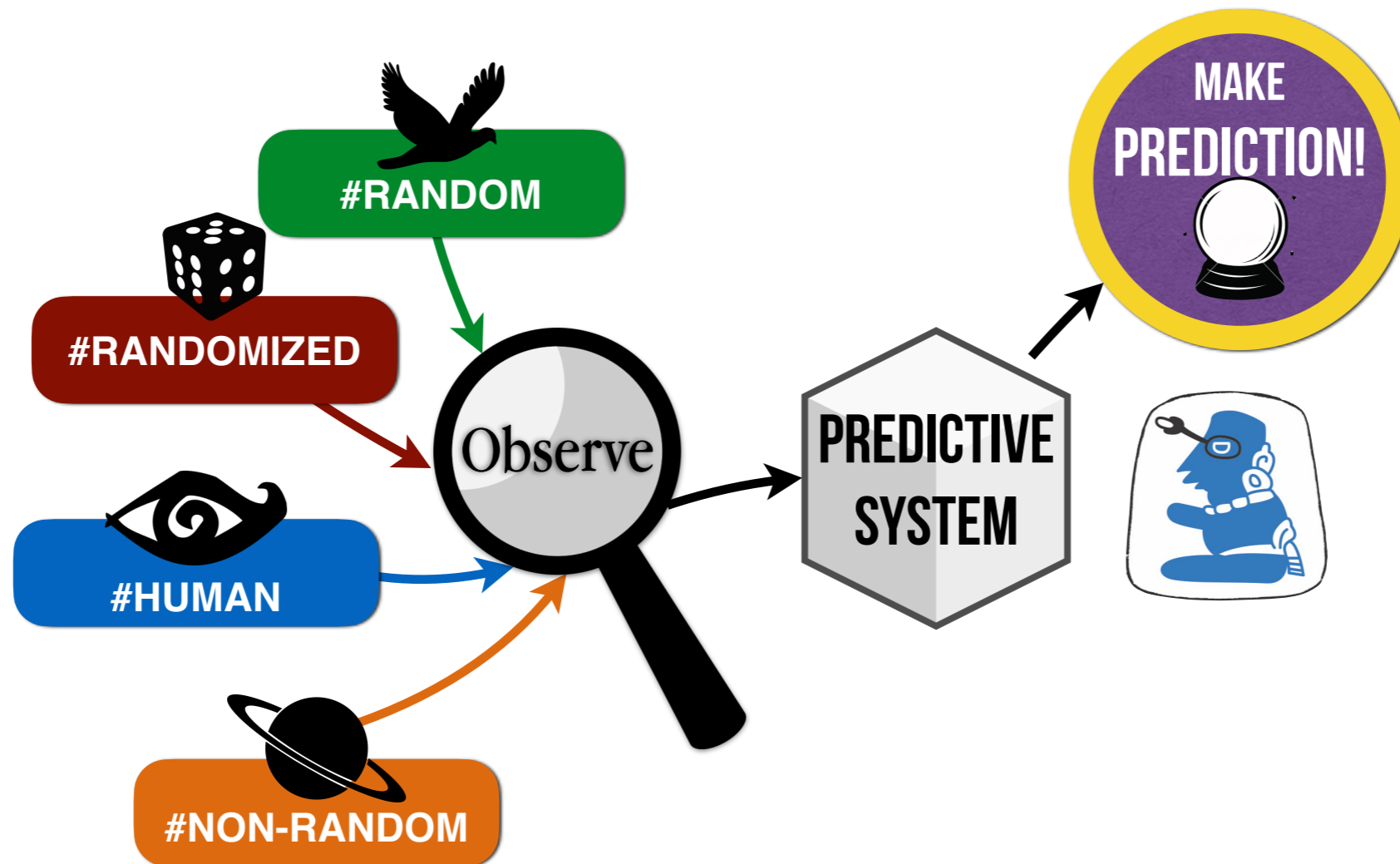
Comets of Doom

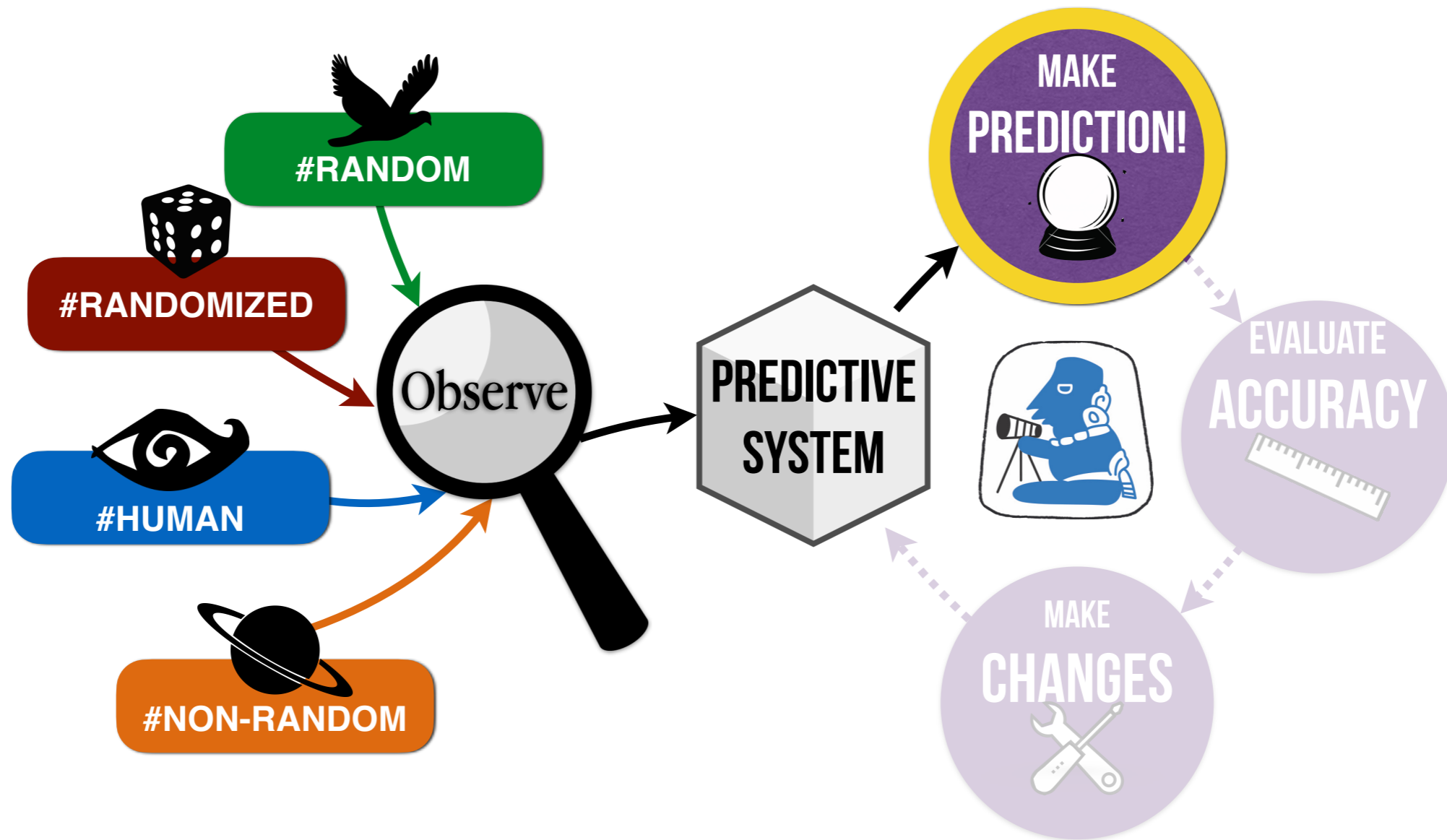


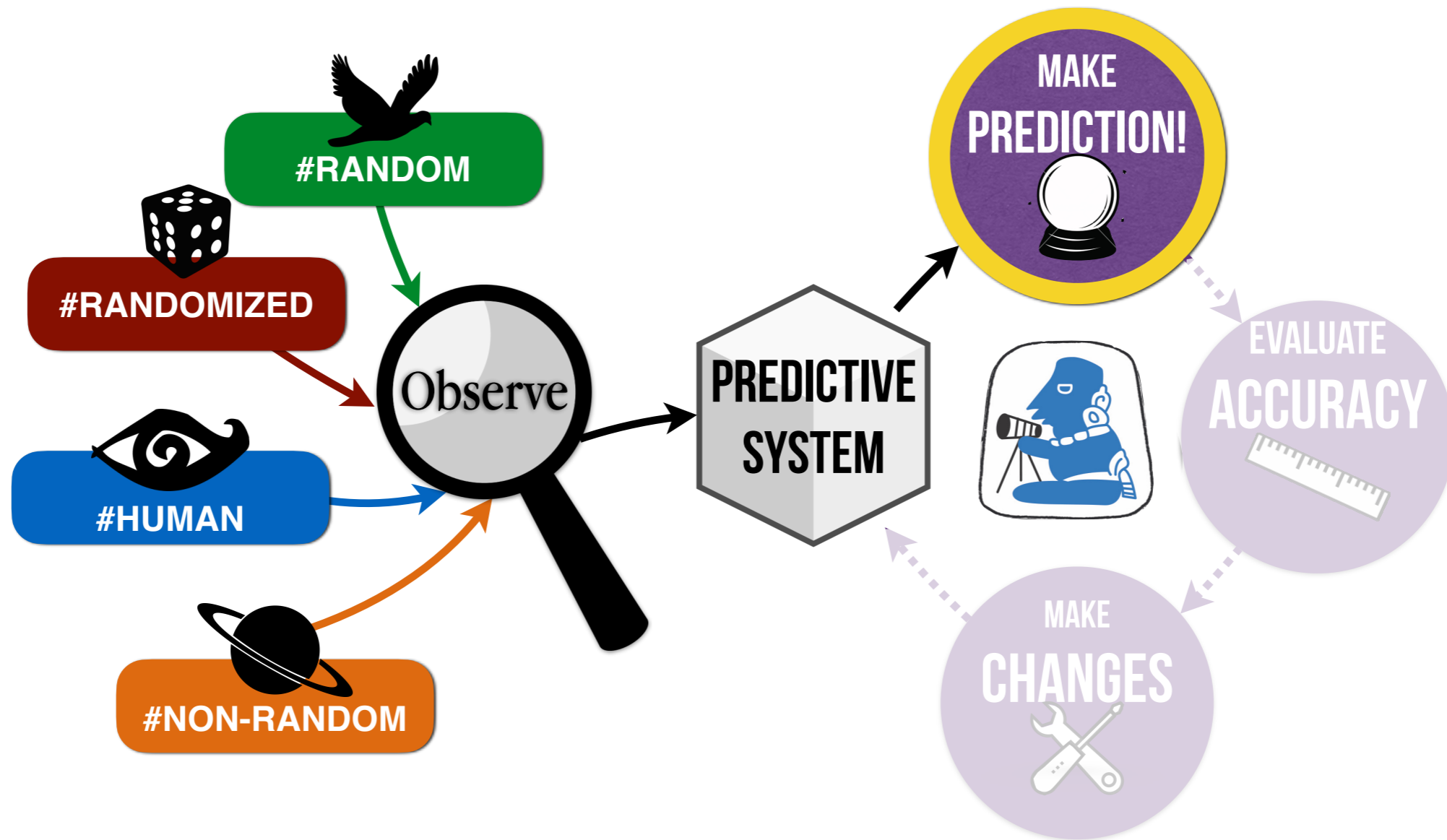
#HUMAN

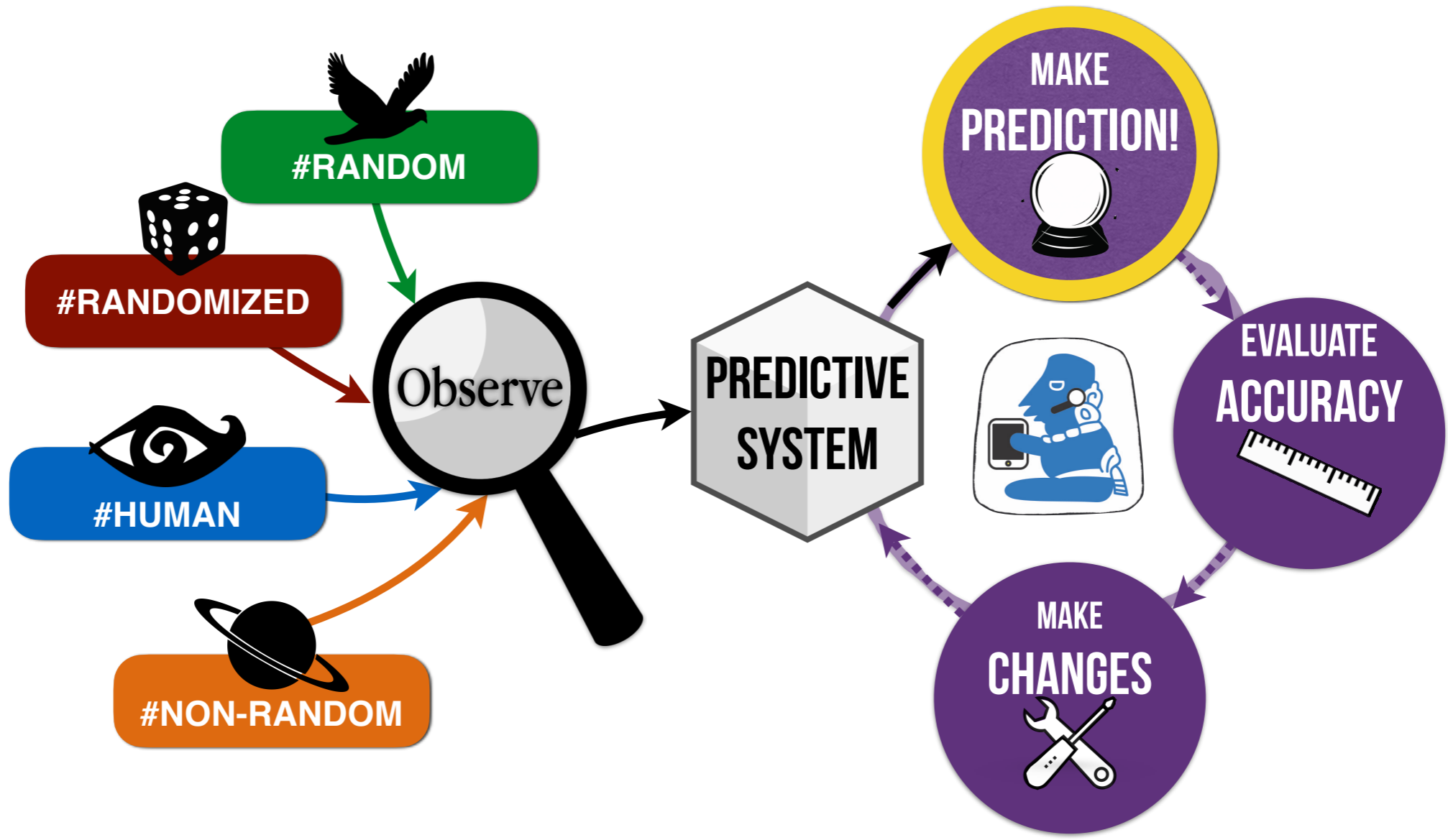
Ancient Egyptian Divination, featuring Prof. Peter der Manuelian (Harvard Semitic Museum)

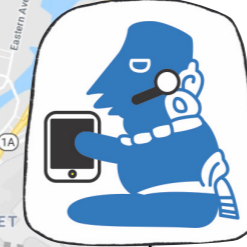
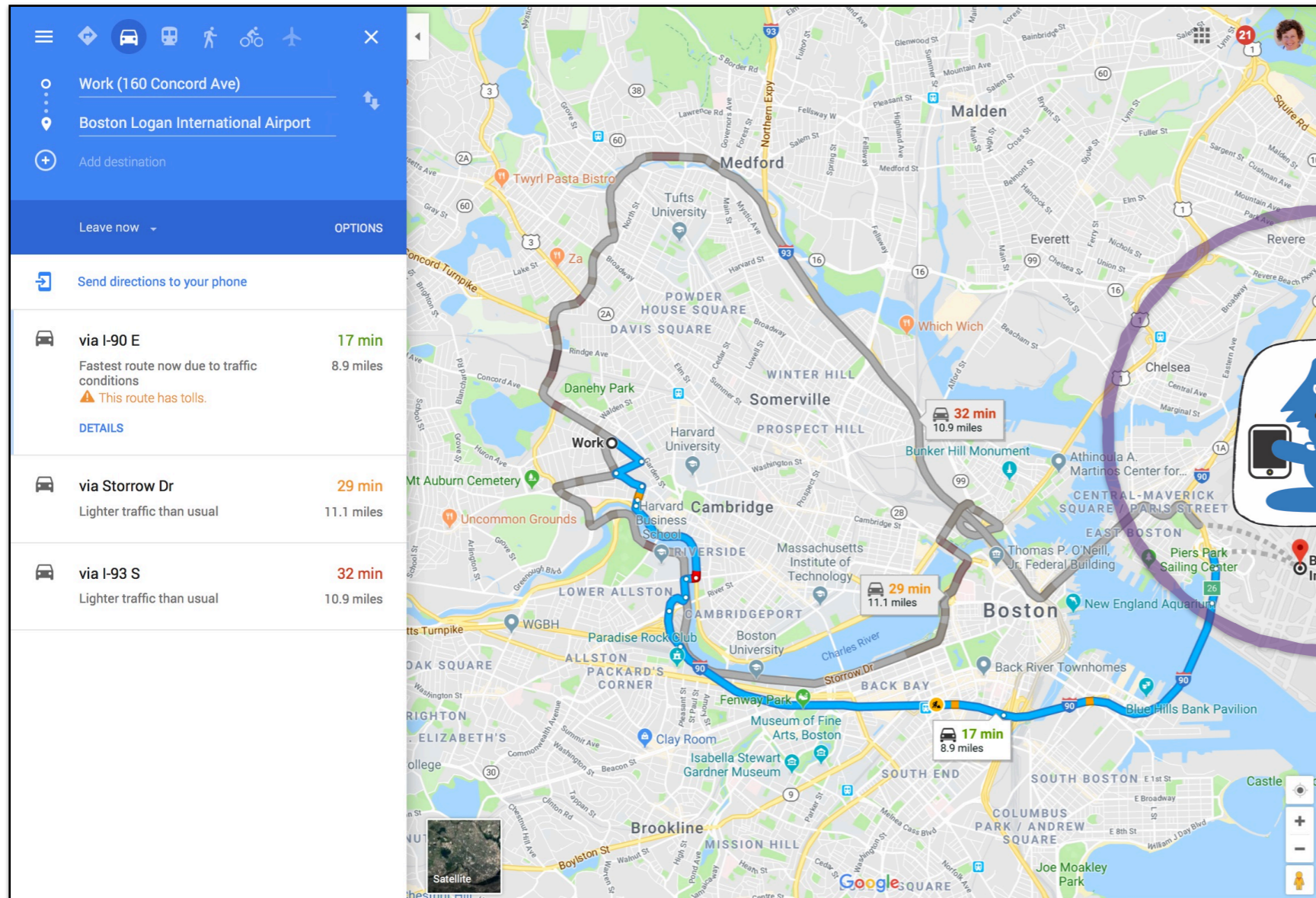












“Most companies who do live traffic **compare** their predictions against actual time in traffic to tune their algorithms and data sources. The likely result of this is that the companies who have access to the best usage data ... are likely to end up with the best predictions in the medium to long term.”

PREDICTIONX: THE PAST & PRESENT OF THE FUTURE



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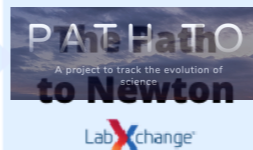


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Coming Soon

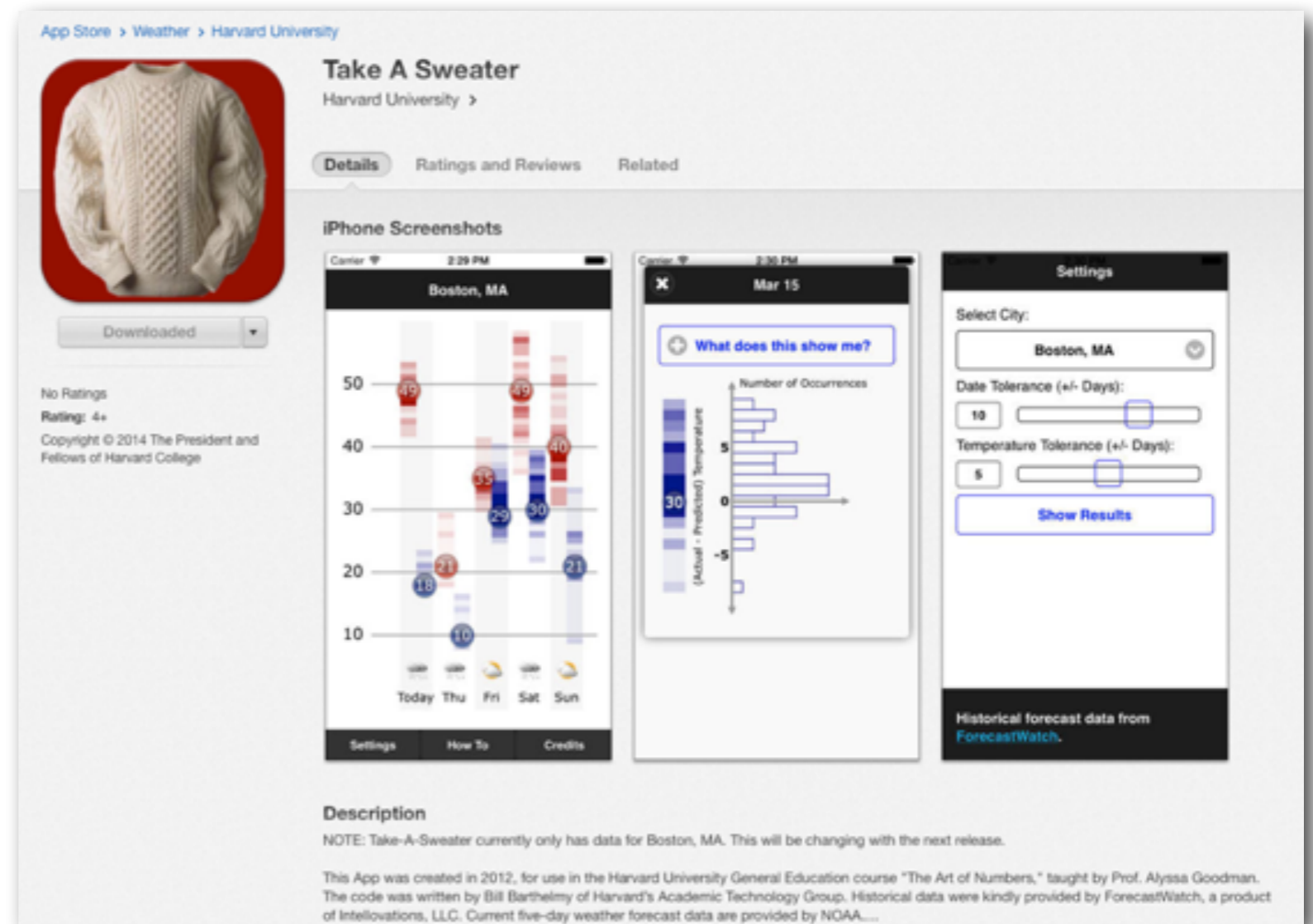
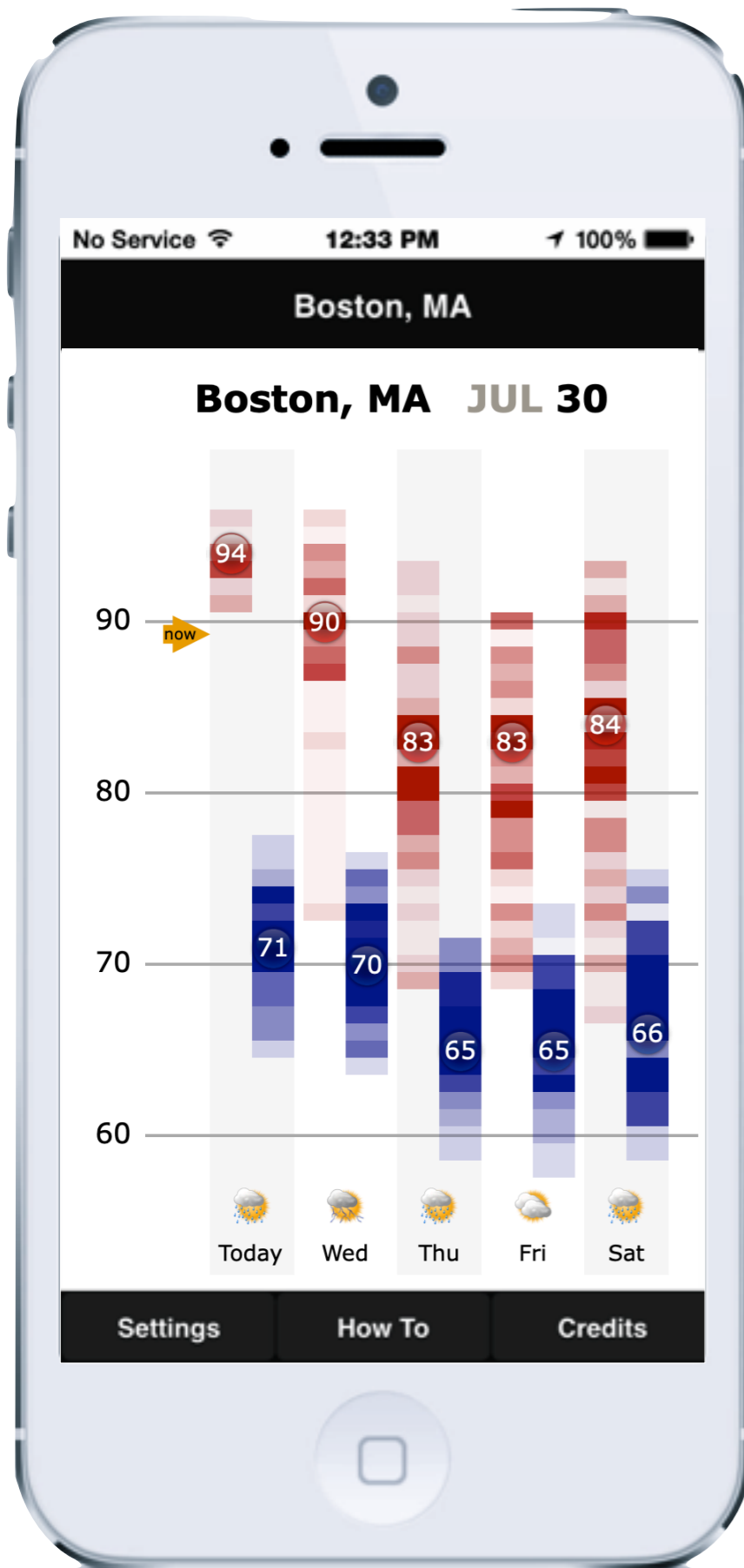
Interactive Resource

video(s)

available on edX

available on LabXchange

"Take A Sweater"



App Store > Weather > Harvard University

Take A Sweater

Harvard University >

Details Ratings and Reviews Related

iPhone Screenshots

Center 2:29 PM Boston, MA

Center 2:30 PM Mar 15

Settings

Select City: Boston, MA

Date Tolerance (+/- Days): 10

Temperature Tolerance (+/- Days): 5

Show Results

Historical forecast data from ForecastWatch.

Description

NOTE: Take-A-Sweater currently only has data for Boston, MA. This will be changing with the next release.

This App was created in 2012, for use in the Harvard University General Education course "The Art of Numbers," taught by Prof. Alyssa Goodman. The code was written by Bill Barthelmy of Harvard's Academic Technology Group. Historical data were kindly provided by ForecastWatch, a product of Intellovations, LLC. Current five-day weather forecast data are provided by NOAA....

takeasweater.com

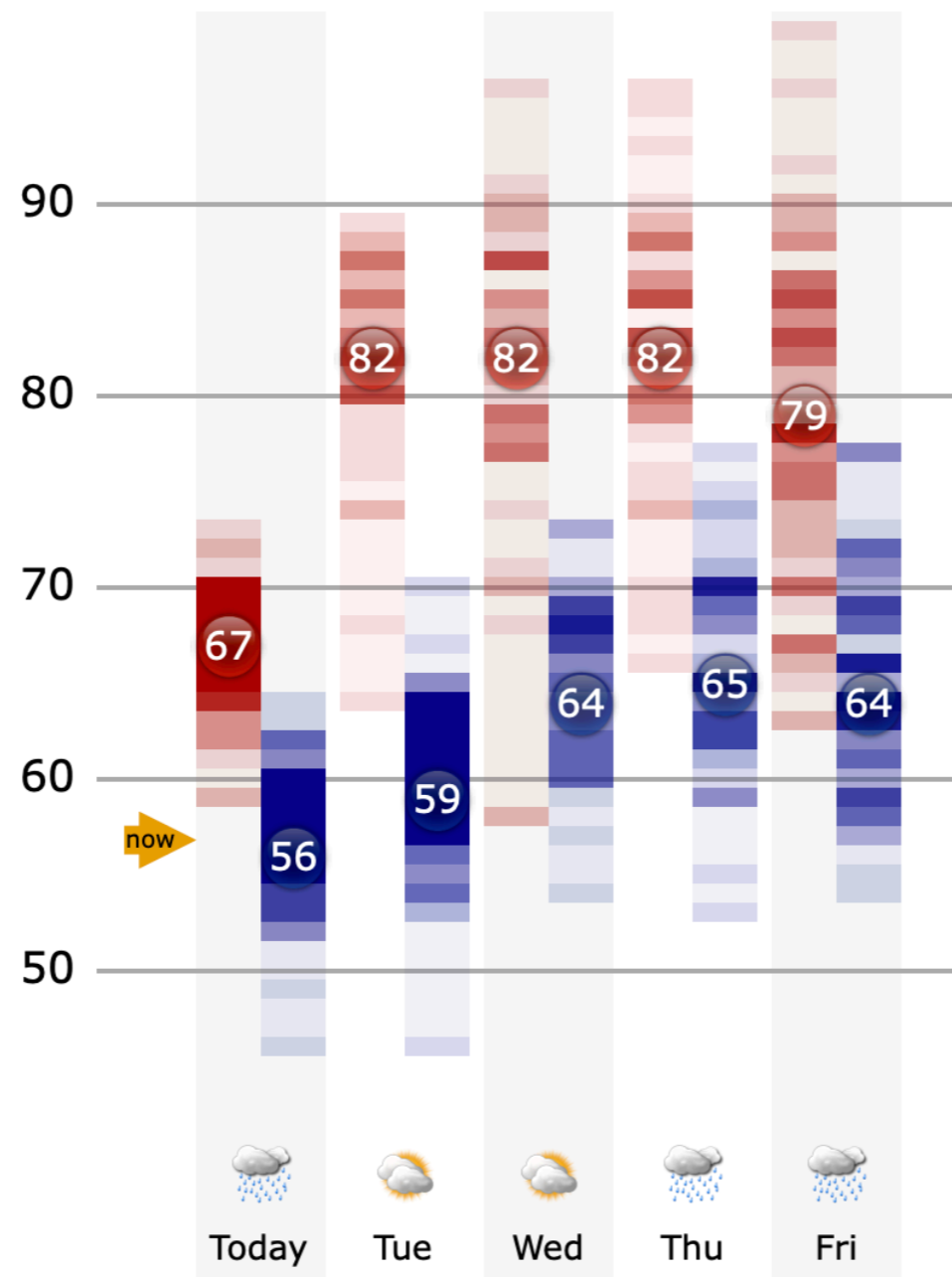
with thanks to Eric **Floehr** of Forecast Watch and Bill **Barthelmy** of HUIT Academic Technology at FAS



takeasweater.com

Forecasting Uncertainty

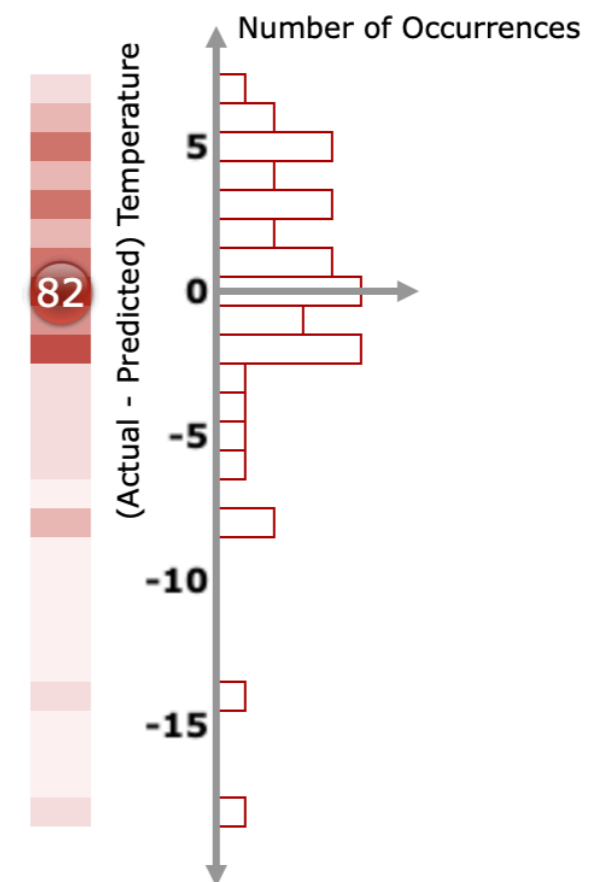
Boston, MA MAY 25



Histogram MAY 26

What does this show me?

The graph below shows a sample "distribution" of how far off temperature predictions have been in the past. Perfect predictions give zero as a difference value. The shaded bars just summarize the graph: the darker the shaded bar, the more predictions fell in that difference zone.

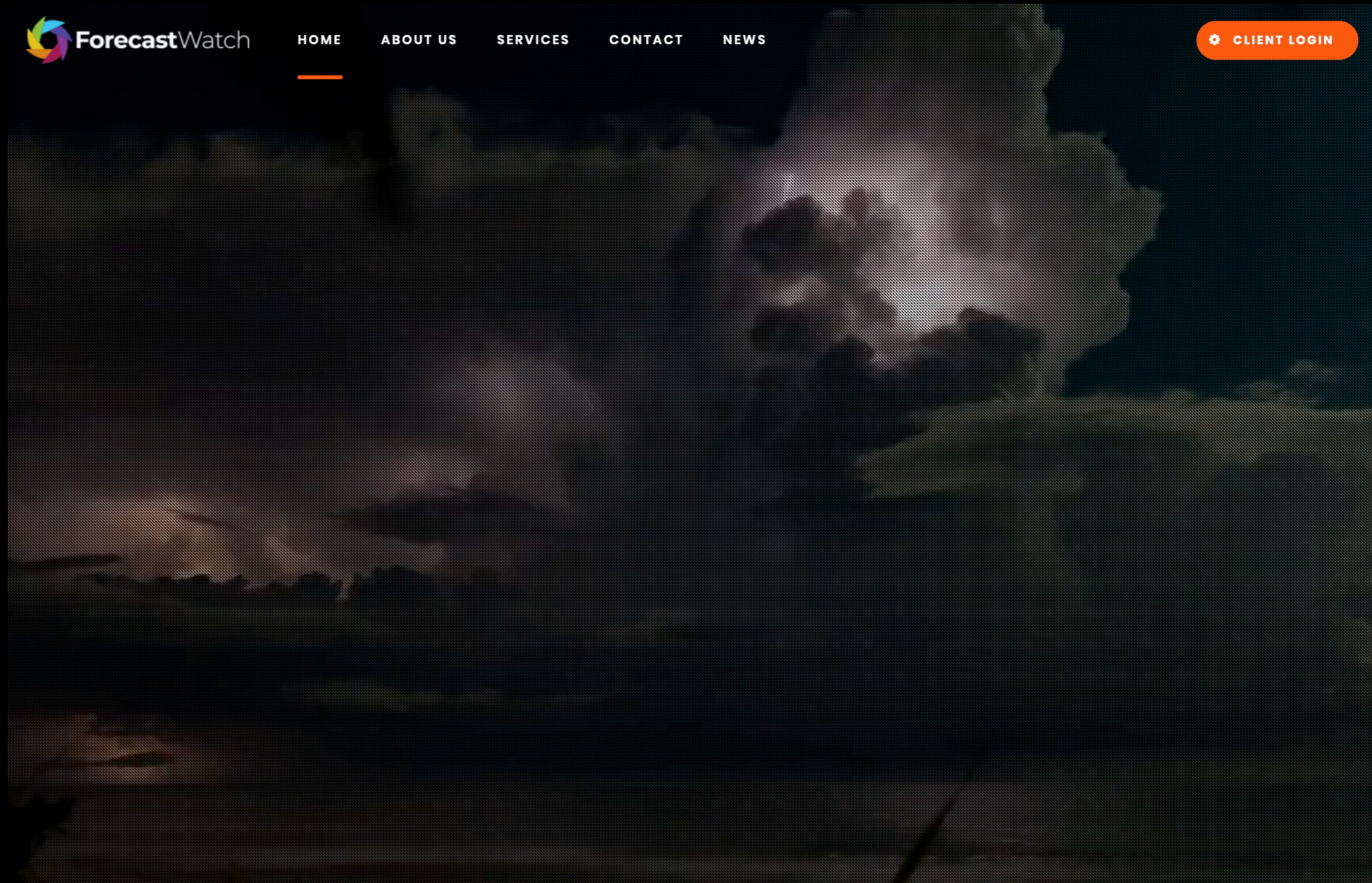


[demo]



The Cost of Uncertainty

forecastwatch.com



with thanks to Eric **Floehr** of Forecast Watch and Bill **Barthelmy** of HUIT Academic Technology at FAS



COVID made this all the more relevant.
Uncertainty & risk are not the same.

The Cost of
Uncertainty
depends on
the cost of
being wrong.

Beheading (ancient oracles)
People die (pandemics)
World Ends (climate change)

The Prediction Project

The Past and Present of the Future



f t i o s Search...

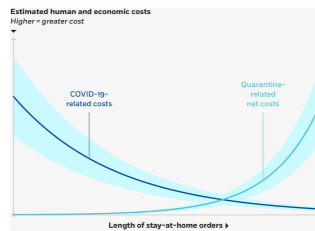
HOME ABOUT MATERIALS COURSES TALKS WRITINGS PRESS FORUM

Writings

This section highlights writings by Professor Goodman on contemporary topics related to uncertainty and prediction. While these pieces are not official Prediction Project material, they contain major conceptual ideas from the Prediction Project's courses applied to major real life questions. These articles reflect Professor Goodman's personal views, not official Harvard policy.

Data Driven Dilemmas Posed by COVID-19

In this essay, Alyssa discusses the **complex tradeoffs** involved with decision making in an age of pandemic. Scientists face ethical dilemmas when choosing to view this crisis in a rational or emotional way.

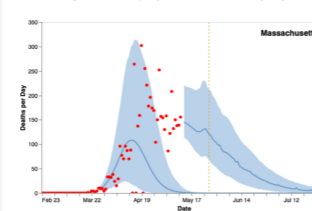


Read More

Uncertainty about Uncertainty

This commentary piece examines predictions of uncertainty in IHME COVID-19 models. She sheds light on the tendency of these important models to **underestimate** uncertainty in deaths per day estimates.

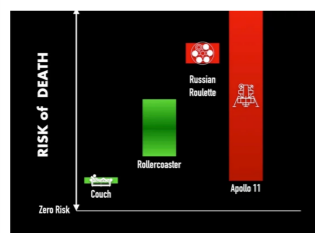
COVID-19: Reported Deaths (Red) and IHME Predictions (Blue)



Read More

Uncertain Risks

We know how to express **risk** and **uncertainty** with numbers, but people don't always take practical actions based on those numbers. **The COVID crisis brings this contrast into sharp focus.**



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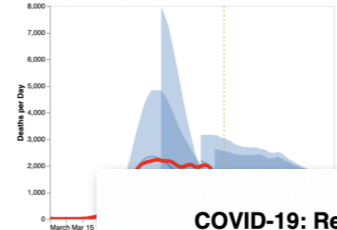


Social Impact

IHME Model Uncertainty, Visualized over Time

The [Institute for Health Metrics and Evaluation \(IHME\)](#) creates, maintains, updates, and publishes an open-source statistical [model](#) of the impact of the COVID-19 pandemic, based on open-data resources. As a public service, [glue solutions, inc.](#) here offers an online tool for visualizing the evolution of the IHME models over time.

Comparison of Reported COVID19 Deaths Versus IHME Predictions



COVID-19: Reported Deaths (Red) and IHME Predictions (Blue)

IHME Models representative offered below

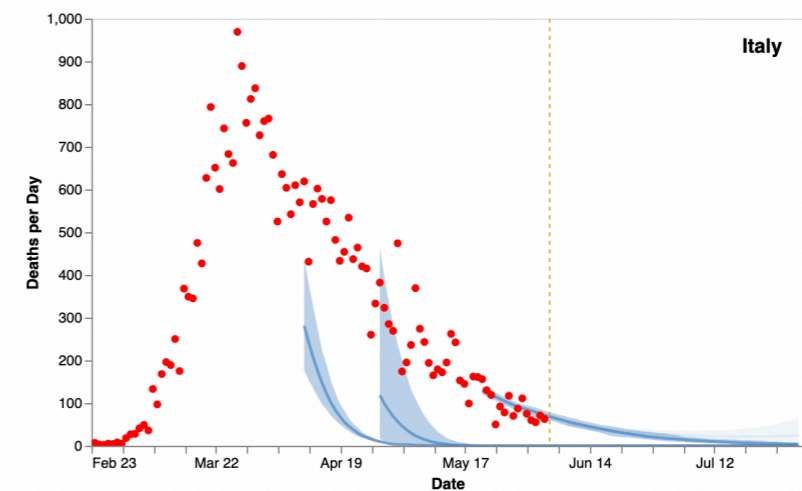
What's this range of mode

How should I uncertainty b possible outc added, region

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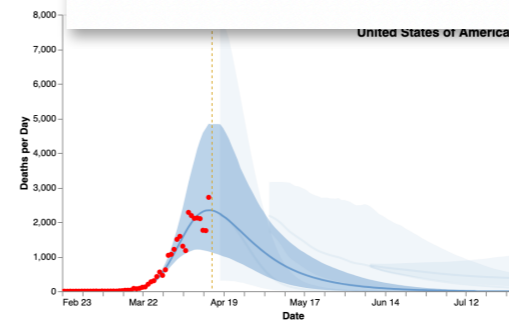
This content i How can I sha world what it

At present, th may work bet



Location: Italy

Time: [Slider]



Location: United States of America

Time: [Slider]

States, for 4 representative dates

Mobile-optimized visualization

March 11, 2020 was definitely the most surreal day of my life teaching at Harvard, so far.

Prediction: Day 7

opening remarks on COVID-19 & plans for the rest of GenEd1119

quick review of outdoor Navigation Exercise



questions about “Prediction in Space & Time” re:Navigation, *and Epidemiology*

John Snow & Cholera (edX highlights & more)

Student research/discussion re:COVID-19 using survey at tinyurl.com/gened1112covid19

Modeling the spread of epidemics, and uncertainty

Bookkeeping SIR Models SEIR Models Agent-based models AI models

Prediction and decision in the face of uncertainty: COVID-19 and Harvard (discussions)

Logistics post-Spring-Break

Special Guest: geneticist **Dr. Immaculata DeVivo**, Professor in the Department of Epidemiology at the Harvard T.H. Chan School of Public Health and at Harvard Medical School



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Welcome to HarvardX's PredictionX!

Mini-Course: John Snow and the Cholera Outbreak of 1854

Support



John Snow & Cholera (edX highlights & more)



PredictionX: John Snow and the Cholera Outbreak of 1854



Snow and Cholera



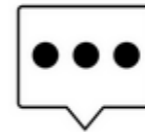
Expert Conversations



The Map



Timeline



Extra Material

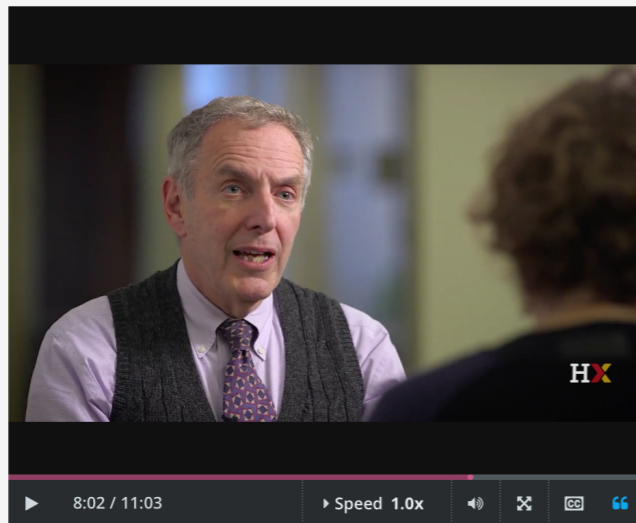


Assessments



PredictionX

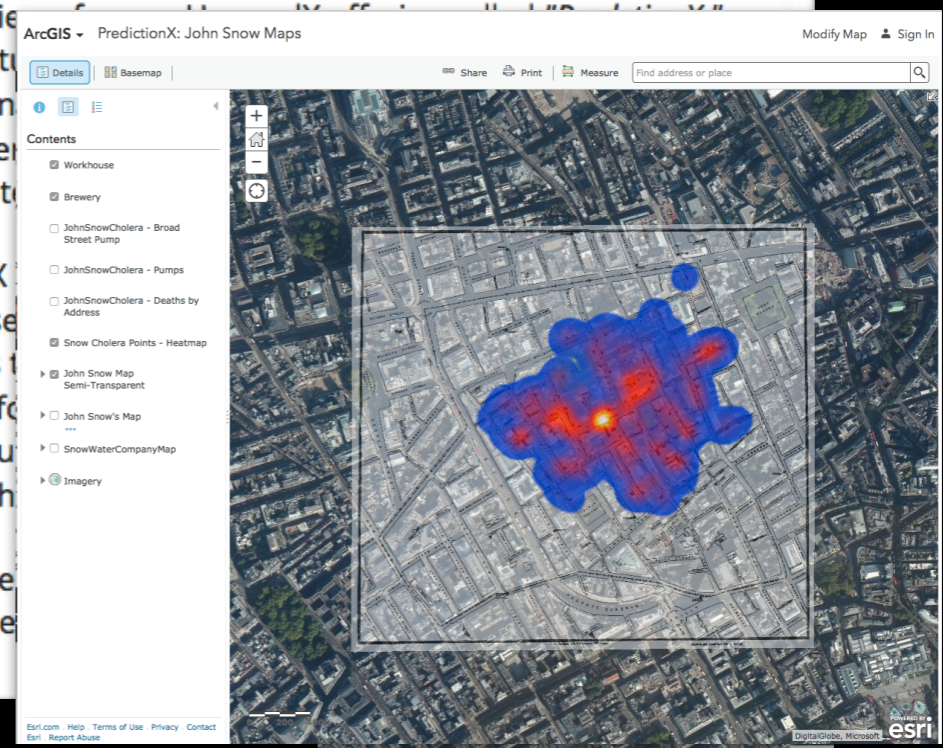
A Conversation with Experts



Video
[Download video file](#)

Transcripts
[Download SubRip \(.srt\) file](#)
[Download Text \(.txt\) file](#)

JOHN SNOW SOCIETY mag.
ROSALIND: Yes.
So he had, if you like, he'd got the data.
And this was just another way of demonstrating it.
It wasn't how he solved the outbreak.
DON: When I talk to my students about this, I always ask them, **so did John Snow perform a case control study,** which is fundamental in epidemiology.
It's the greatest tool for working up outbreaks that we have.
In a case control study, you study the exposure of the cases, in this case, water pumps, and the exposure of the controls: the people who were



featuring Don Goldmann, AG & Rosalind Stanwell-Smith

John Snow & Cholera (maps)



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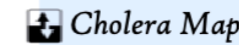
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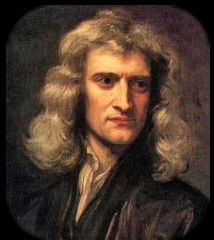
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edX available on edX

LabXchange available on LabXchange

"When Knowledge Conquered Fear"

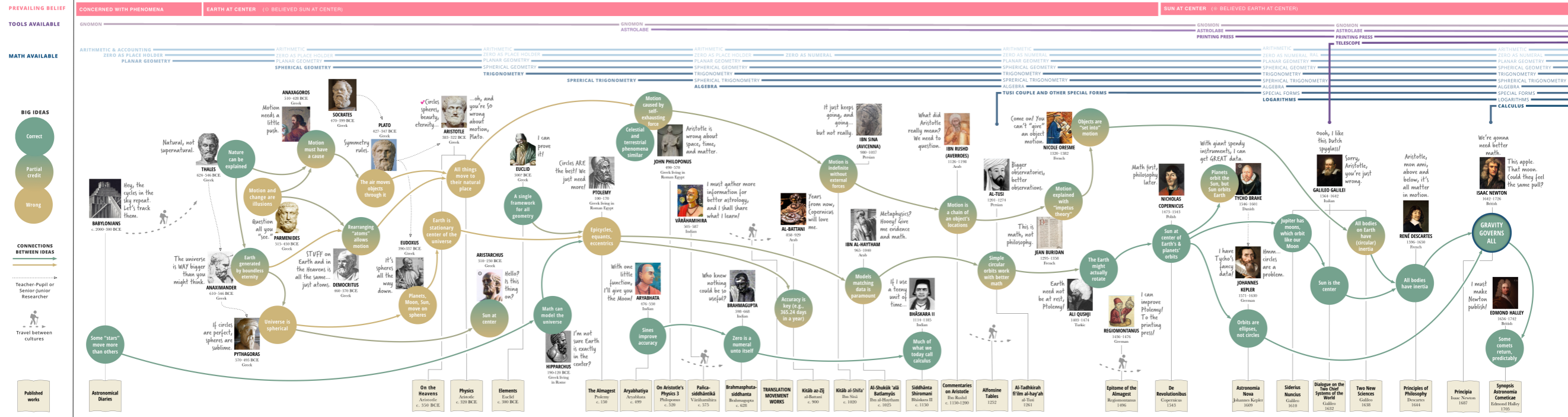


"When Knowledge Conquered Fear" is the third episode of the American documentary television series *Cosmos: A Spacetime Odyssey*. It premiered on March 23, 2014 on Fox, and premiered on March 24, 2014 on National Geographic Channel. [Wikipedia]. [IMDB link](#)
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The Path to Newton

The Path to Newton



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demo: path-to.org

or



The Path to Newton

PREVAILING BELIEF

CONCERNED WITH PHENOMENA

EARTH AT CENTER (☉ BELIEVED SUN AT CENTER)

TOOLS AVAILABLE

GNOMON

GNOMON
ASTRONOMY

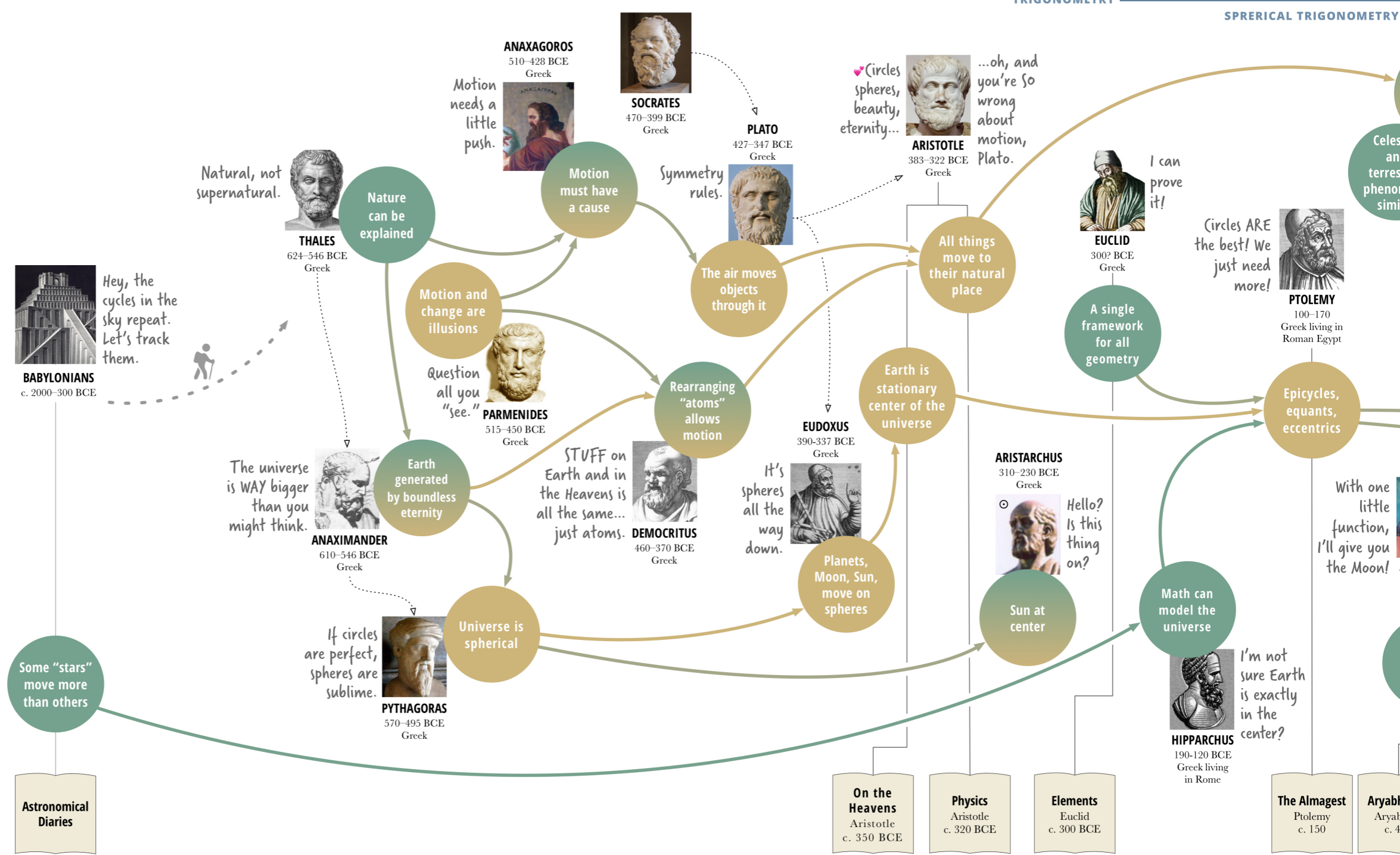
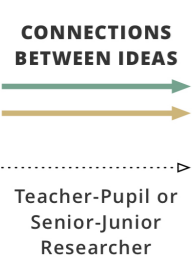
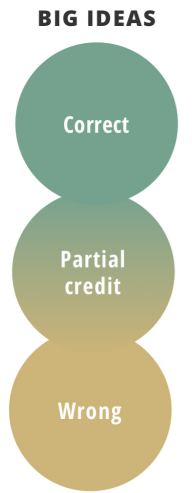
MATH AVAILABLE

ARITHMETIC & ACCOUNTING
ZERO AS PLACE HOLDER
PLANAR GEOMETRY

ARITHMETIC
ZERO AS PLACE HOLDER
PLANAR GEOMETRY
SPHERICAL GEOMETRY

ARITHMETIC
ZERO AS PLACE HOLDER
PLANAR GEOMETRY
SPHERICAL GEOMETRY
TRIGONOMETRY

SPHERICAL TRIGONOMETRY



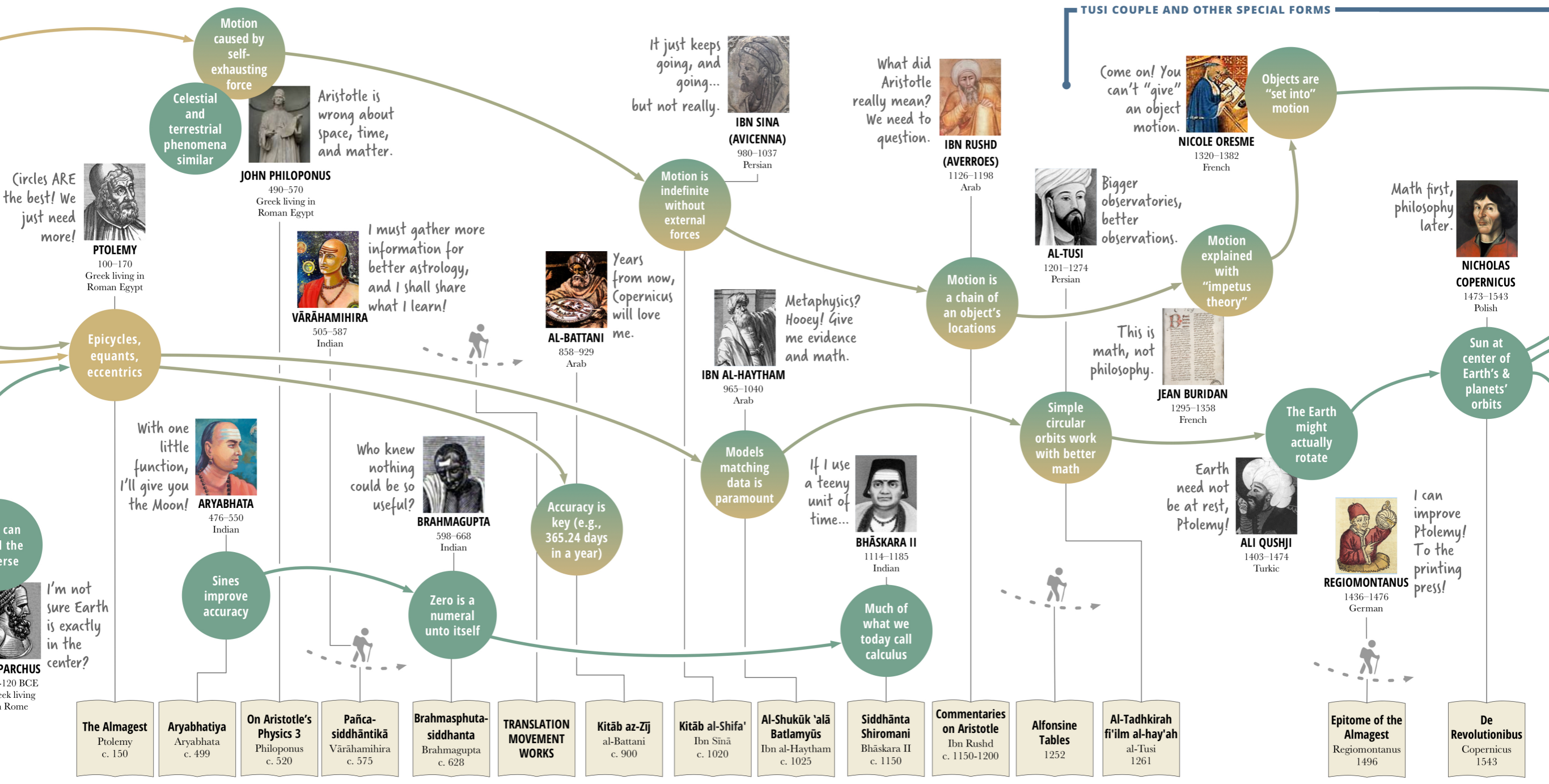
GNOMON
ASTROLABE

ARITHMETIC
ZERO AS PLACE HOLDER
PLANAR GEOMETRY
SPHERICAL GEOMETRY
TRIGONOMETRY
SPHERICAL TRIGONOMETRY
ALGEBRA

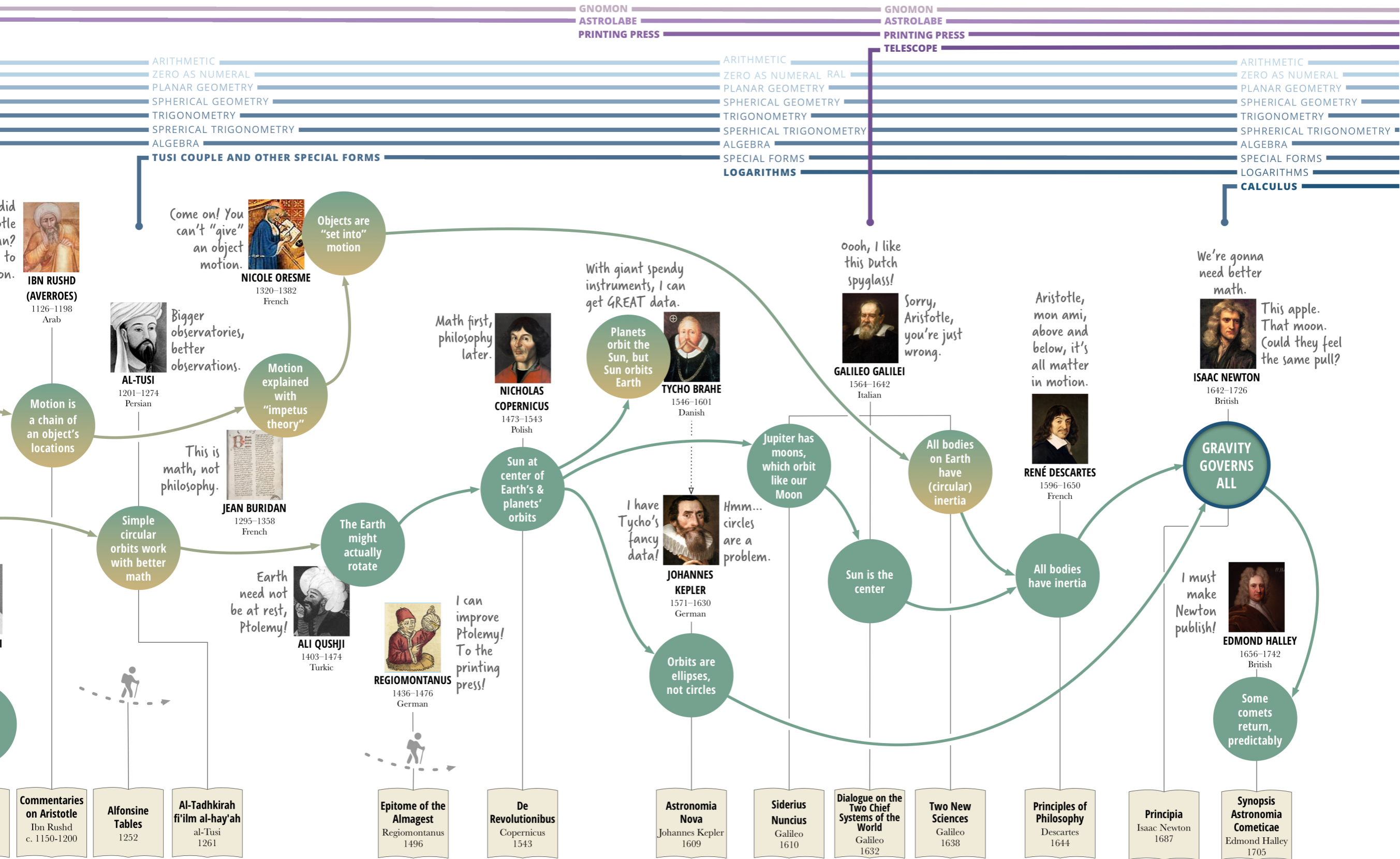
ARITHMETIC
ZERO AS NUMERAL
PLANAR GEOMETRY
SPHERICAL GEOMETRY
TRIGONOMETRY
SPHERICAL TRIGONOMETRY
ALGEBRA

SPRERICAL TRIGONOMETRY

TUSI COUPLE AND OTHER SPECIAL FORMS



SUN AT CENTER (⊕ BELIEVED EARTH AT CENTER)



Library catalog > Pathway

Favorite Share

The Path to Newton on LabXchange

1 Favorite • 23 Views • 1 Clone

An experience where the interactive Path to Newton website is enriched with other web resources from The Prediction Project and Crash Course videos.

Uploaded February 10, 2022

Subject
Physics

Language
English

Background Knowledge
None

License
Attribution-NonCommercial (CC BY-NC 4.0)



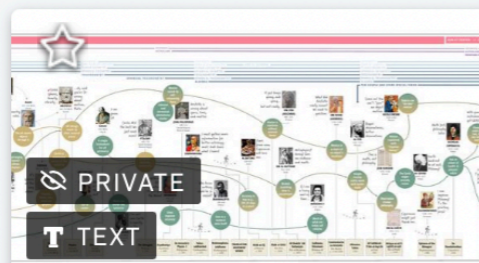
This content is from [The Prediction Project](#).

View website

View Profile

Start pathway

1



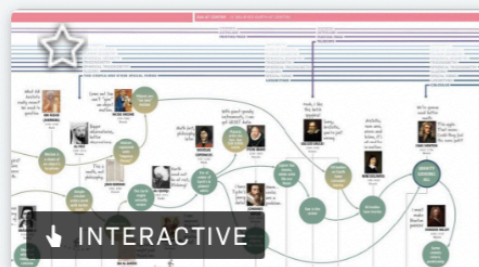
Welcome!

Alyssa Goodman

Thanks for visiting the Path to Newton here on LabXchange.

14 Views • 2 Remixes

2



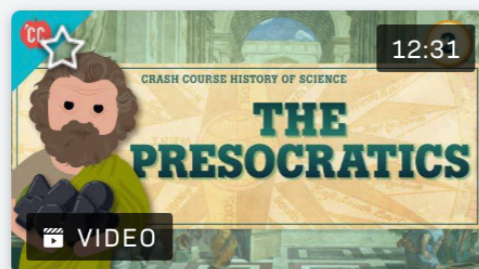
The Path to Newton (an online Interactive Exploration)

The Prediction Project

This interactive timeline explores the philosophical and mathematical conceptions of the Universe and of how and why objects move on Earth, in...

6 Favorites • 350 Views • 4 Remixes

3



The Presocratics: Crash Course History of Science #2

CrashCourse

Just when did humans start thinking they COULD explain the physical world? Who did that, when, and why? ... Let's just say it was an obsession with so...

2 Views • 2 Remixes



Plato and Aristotle: Crash Course History of Science #3

CrashCourse

PREDICTIONX: THE PAST & PRESENT OF THE FUTURE



ESSENTIALS

Predictive Systems Framework



→ Predictions

Understanding Uncertainty



Study Design

Timelines

Why predict?



Omens, Oracles & Prophecies

Mesopotamian Haruspicy	Egyptian Priests	Yoruba Ifa
Roman Augury	Tarot	Casting Lots
Chinese Oracle Bones	The Diviner's Guide	Greek Astronomy
Oracle of Delphi	Turkish Tasseography	Astrology
Aztec Rituals	Maya Spacetime	Comets of Doom

cross-cultural conversations



Harvard College Program in General Education
Explore. Expand. Engage.

THE RISE OF THEORY

Ancient Mesopotamia, Egypt, Greece & Rome
Islamic Science



Indian Mathematics
European Renaissance

The Royal Society

Lost without Longitude (Navigation)

Help, I'm Lost!
Tools of the Navigator



MODERN PREDICTION

Health

- ▶ Epidemiology
- ▶ Personal Genomics
- ▶ Population Genetics

Wealth

- ▶ Climate & Wealth
- ▶ Behavioral Economics

The Future of the Future

- ▶ AI, Derek's Day
- ▶ Philosophy
- ▶ Uncertainty

Earth

- ▶ Climate & Energy
- ▶ Climate Policy
- ▶ Tent Tarot
- ▶ Earthquakes

Space

- ▶ Futures of our Universe
- ▶ SETI

Coming Soon

Interactive Resource

video(s)

available on edX

available on LabXchange



The "Padua" Rainbow

Phenomenon

Observation*

Data

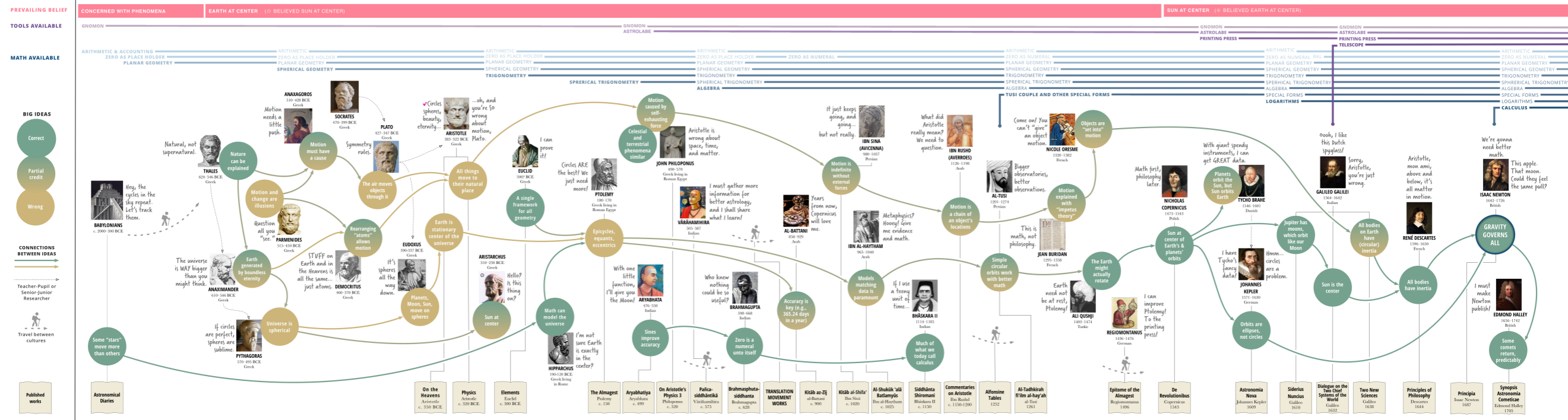
Rule

Theory

Explanation

Prediction

The Path to Newton



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or, Experiment



Mendel



Darwin

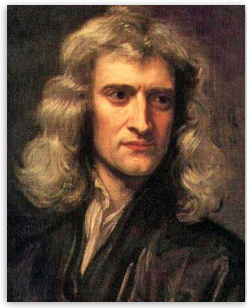


BIOLOGY

PHYSICS



Kepler



Newton





Mendel 1865



Darwin 1859

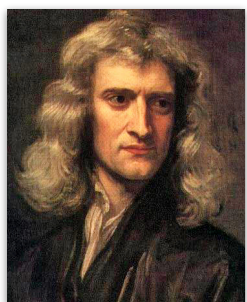


NO FULLY PREDICTIVE GENERAL THEORY

FULLY PREDICTIVE GENERAL THOERY



Kepler 1609



Newton 1687



THE FUTURE OF THE FUTURE

20th century



21st century?



is one form of MODERN PREDICTION

PREDICTIONX: THE PAST & PRESENT OF THE FUTURE



ESSENTIALS

Predictive Systems Framework

Phenomena → Predictions



Understanding Uncertainty

Study Design

Timelines

Why predict?



Omens, Oracles & Prophecies

Mesopotamian Haruspicy

Roman Augury

Chinese Oracle Bones

Oracle of Delphi

Aztec Rituals

Egyptian Priests

Tarot

The Diviner's Guide

Turkish Tasseography

Maya Spacetime

Yoruba Ifa

Casting Lots

Greek Astronomy

Astrology

Comets of Doom

cross-cultural conversations



Harvard College Program in General Education
Explore. Expand. Engage.

THE RISE OF THEORY

Ancient Mesopotamia, Egypt, Greece & Rome

Islamic Science

PATHO
A project to track the evolution of science

LabXchange

Indian Mathematics
European Renaissance

The Royal Society

Lost without Longitude (Navigation)

Help, I'm Lost!

Tools of the Navigator



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Health

- ▶ Epidemiology
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- ▶ Earthquakes

Space

- ▶ Futures of our Universe
- ▶ SETI

Coming Soon

Interactive Resource

video(s)

available on edX






available on LabXchange



Modern Prediction

Prediction is everywhere in the modern world, making up essential aspects of almost every part of our lives. From checking the weather on your phone, knowing when you will arrive to work, to longer term predictions of the success of your stock portfolio and your personal health goals. This section of the course examines five areas of modern prediction: Earth, Health, Wealth, Space, and the Future of the Future -- which looks at the driving forces currently changing our own conceptions of prediction, including artificial intelligence and machine learning -- to give learners a picture of the state of modern predictive methodologies. Select which modern form of prediction you want to study first by **clicking on an image of the topic you want to study** using the interactive menu below.

This site contains our prediction videos uploaded on YouTube; to enjoy them in their full format with video annotations and useful links, check out our [Modern Prediction cluster on LabXchange](#).

 EARTH Study the complex modeling that has defined humanity's comprehension of climate change and the future of our planet in Earth.	 HEALTH Discover the incredible modern advancements in global health prediction -- using technology to make humanity healthier from mobile health to genomics, and possibly altering what it means to be human.	 SPACE Learn about modern astronomical prediction, with cutting edge simulations now defining the field of astronomy and contributing to a monumental change in our understanding of the universe.	 WEALTH Understand the rapidly changing modern state of wealth prediction, pulling on innovative fields such as behavioral economics to comprehend the inherent difficulty of predicting markets.	 FUTURE OF THE FUTURE How will prediction change as technology further develops? How will artificial intelligence influence our ability to understand uncertainty? These questions and others are touched on by philosophers and scientists in the Future of the Future.
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Corporations and Climate with Rebecca Henderson:

Alyssa speaks with Harvard University Professor Rebecca Henderson about organizational rigidity as an essential barrier to overcome in order to mitigate climate change. ([LabXchange version](#))



Climate Policy with Gina McCarthy:

Alyssa speaks with former head of the EPA Gina McCarthy about the future of climate and the role of prediction in policymaking. ([LabXchange Version](#))



The Future of Energy with Dan Kammen:

Alyssa speaks with UC Berkeley's Professor of Energy Dan Kammen about climate change and the future of energy on Earth. ([LabXchange Version](#))



Predicting Health, and Earthquakes with Susan Murphy and Brendan Meade:

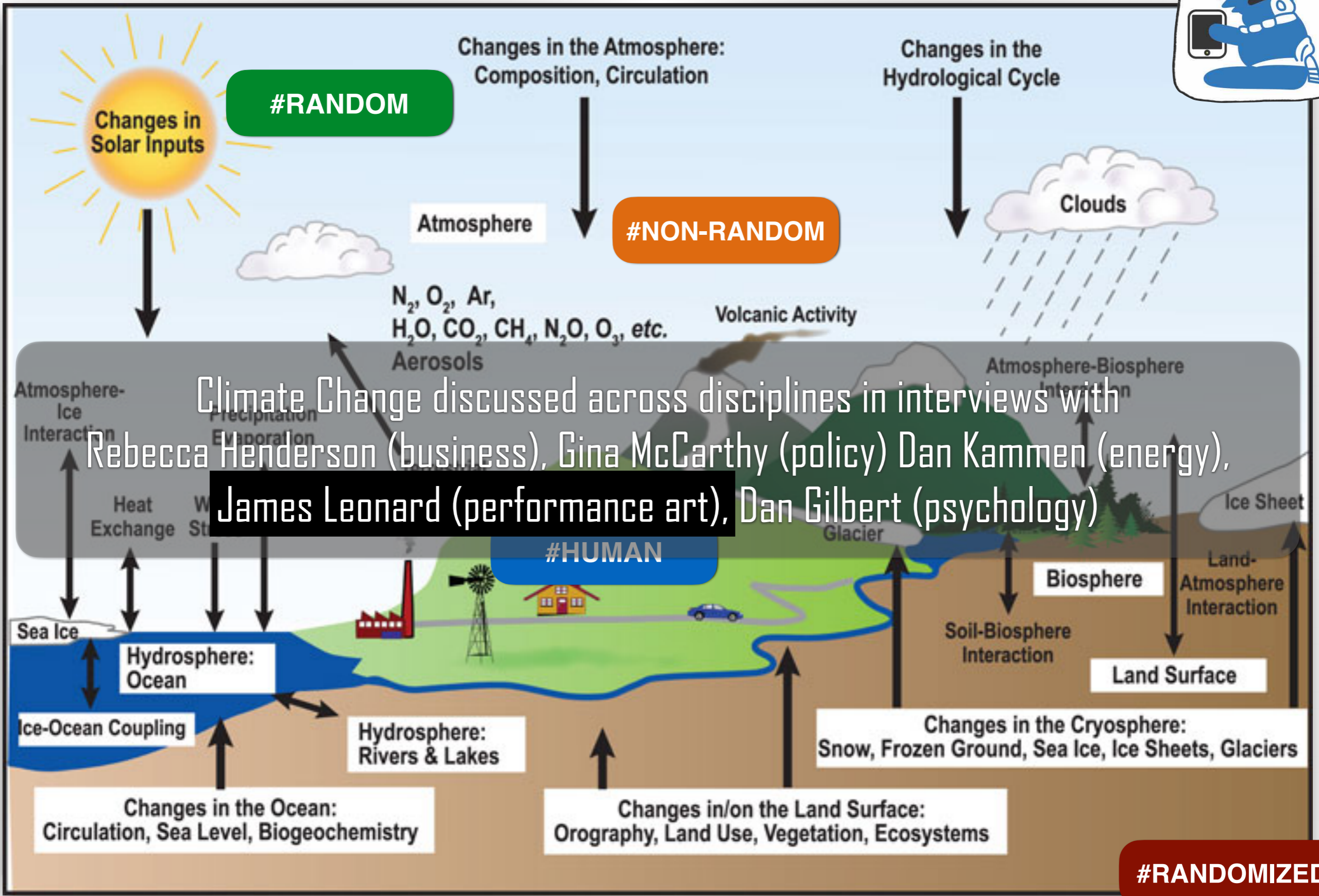
Alyssa speaks with earthquake predictions expert Prof. Brendan Meade and mobile health researcher and statistician Prof. Susan Murphy. This interview looks at the power of technology in guiding humanity's future health outcomes in a variety of ways. ([LabXchange Version](#))



The Future of Climate Prediction by Michael Foley:

Read this essay by Alyssa's teaching fellow Michael Foley on the use of models in climate science to predict the future of Earth's climate and the outcomes of human-caused climate change:

Climate change predictions have taken on an increasingly important role in national and international decision making given that the current economic and social course would lead to catastrophic warming. Given that many sectors of society contribute to climate change and the whole world will experience its impacts, such predictions must consider the domains of both physical laws and human interactions. Addressing #health, #wealth, and #earth in the shadow of climate change is a daunting task, and responses to climate change effects and predictions have ranged from aggressive mitigation to proactive or reactive adaptation.



Do we really *want* to know?

How well *can* we know?

Do we *already* know?

Do we really *want* to know?

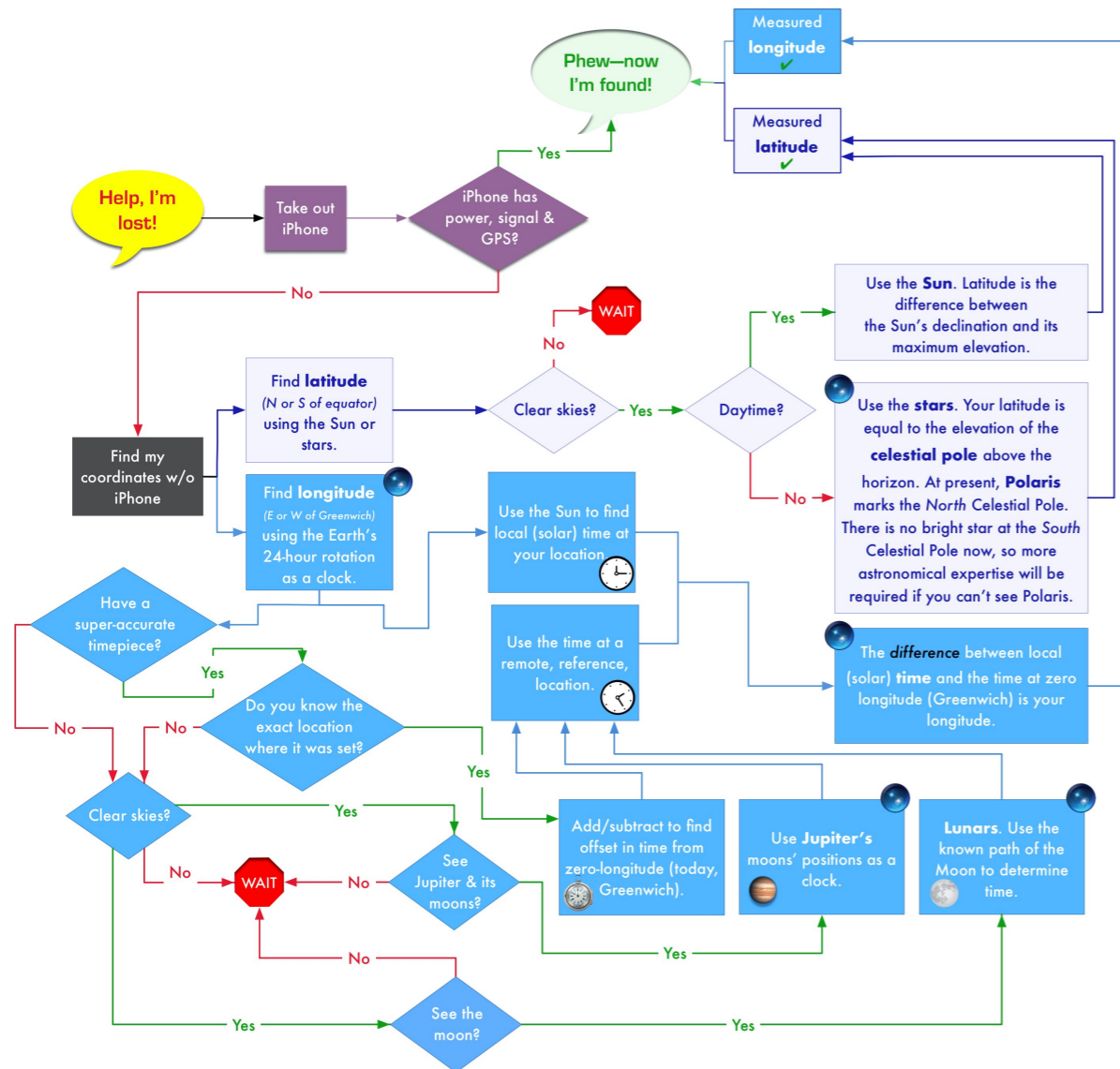
How well *can* we know?

Do we *already* know?




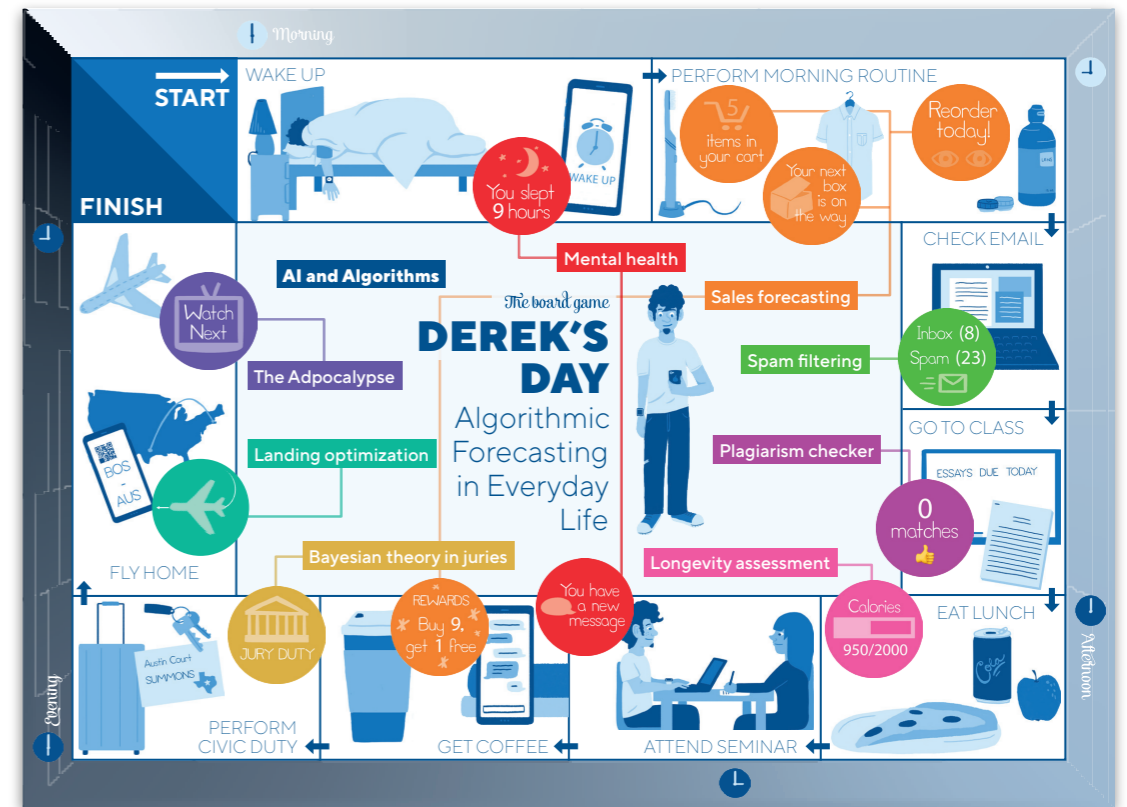
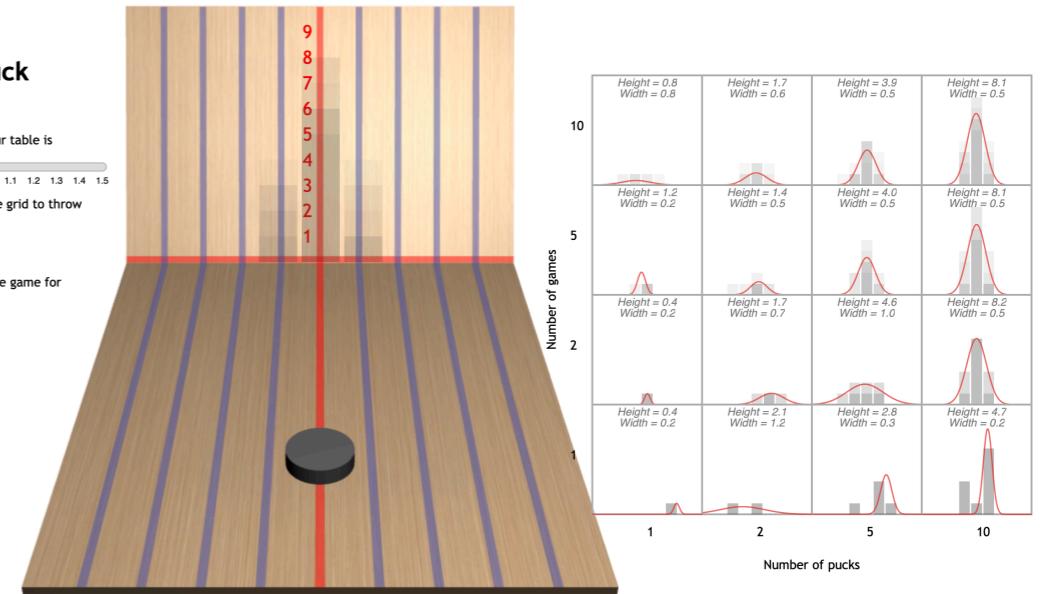


PREDICTIONX



Slide-the-puck

1. Decide how rough your table is

2. Click anywhere on the grid to throw the puck
3. Click [here](#) to finish the game for you



Learner's GUIDE to Lost Without Longitude

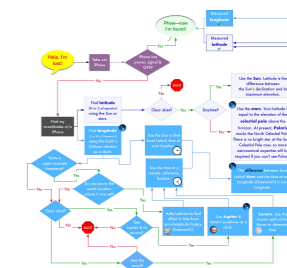
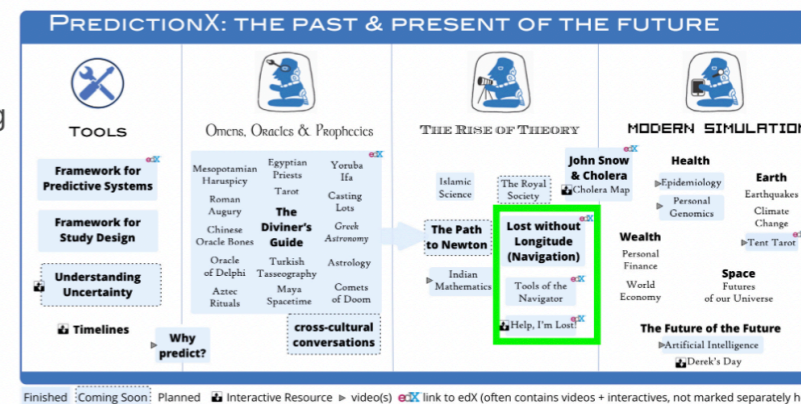
Overview: The [Prediction project](#) is an ongoing study of how humanity has predicted the future, from antiquity to the present. *Lost without Longitude* is a module within the Prediction project that focuses on the connection between prediction and navigation and why longitude was, for millennia, so difficult to measure. The module is a piece of the larger edX offering known as "[PredictionX](#)," which includes content like [PredictionX: Diviner's Guide](#) and [PredictionX: John Snow and the Cholera Outbreak of 1854](#).

Structure: In *Lost Without Longitude*, we combine text, infographics, interviews with experts, and videos made using [WorldWide Telescope](#) to explore the tools and techniques navigators have used throughout history, with a particular focus on the importance (and difficulty) of measuring longitude. By studying the following pages, watching interviews with experts, and experiencing digital tours of the solar system, you will learn how to use the sky, time, and a number of special instruments so that you can find your way no matter where you are.

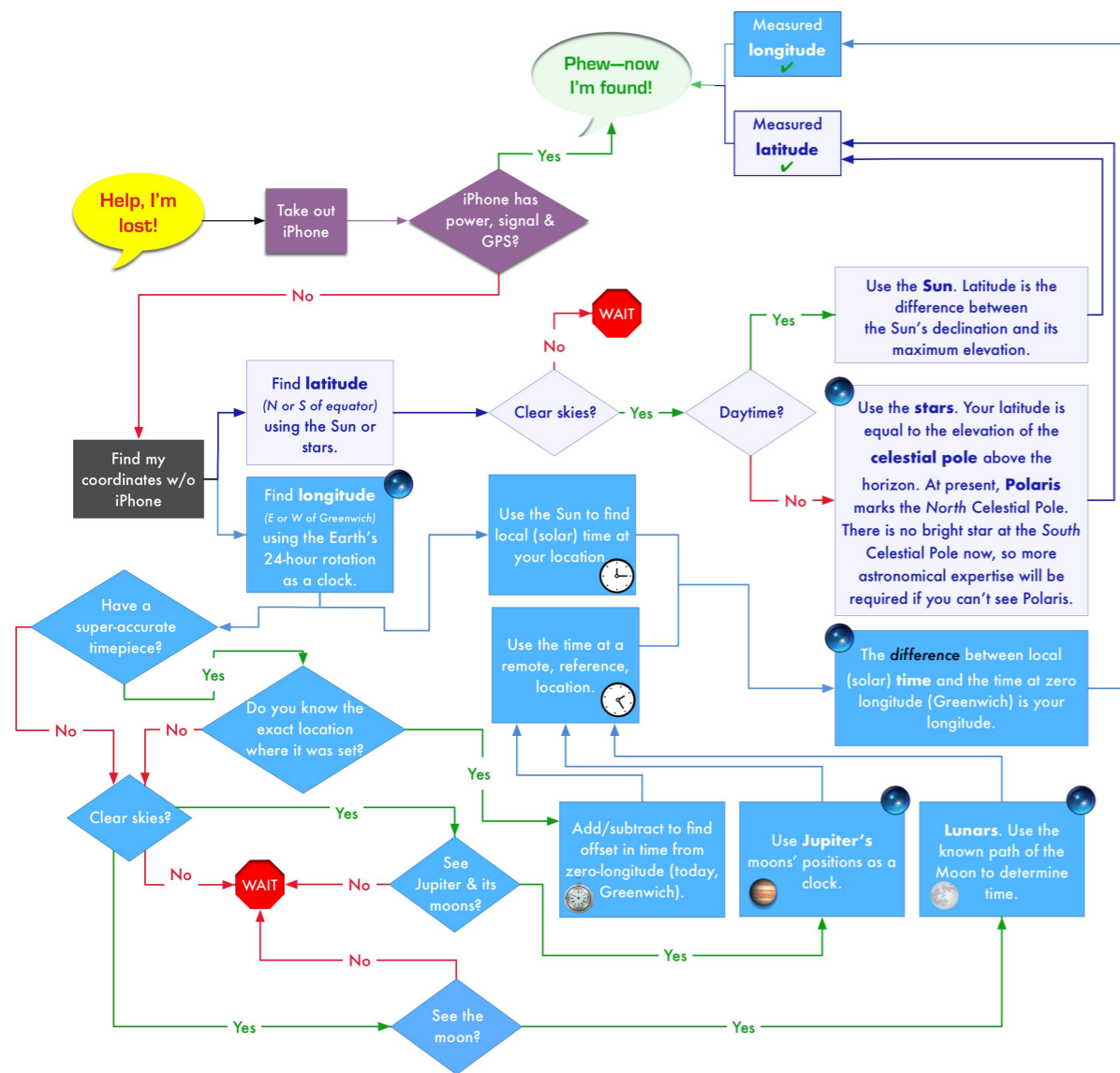
Lost Without Longitude offers a ten question final exam. If you get 8 or more questions right, you can earn a certificate. (Even if you do not want a certificate, the exam is a good place to test your knowledge on the key aspects of the course).

If you have any questions or thoughts on the course, please feel free to post in [the discussion forum](#).

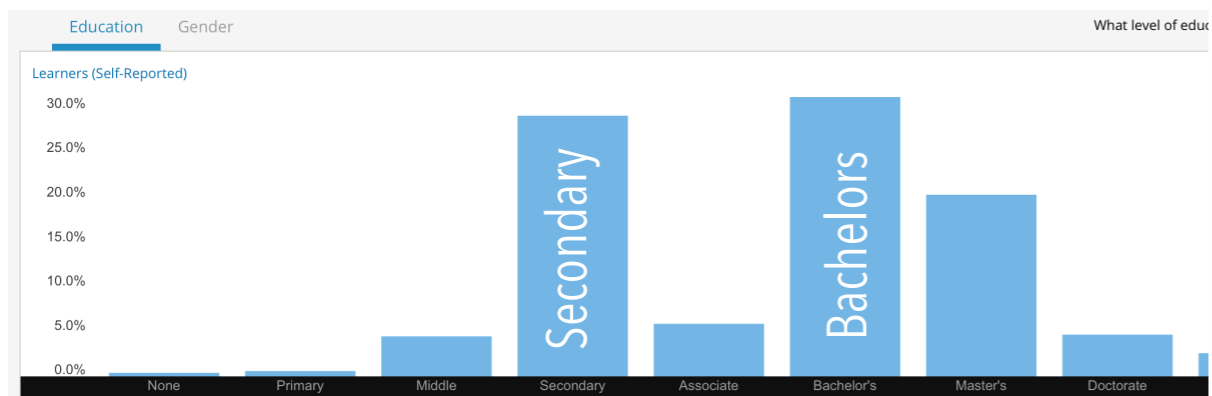
How to use the material: On this "guide" page, we offer you quick and easy links to all the course materials. Essentially, you can think of this guide as the "homepage" of a web site, and you're welcome to use it in lieu of the standard edX navigation tools if you prefer. We suggest going through the material in the order it's presented in numerical order below, but you can also skip around as you like.



Lost without Longitude



Education Level, June 2022 (N=22,000)



GUIDE

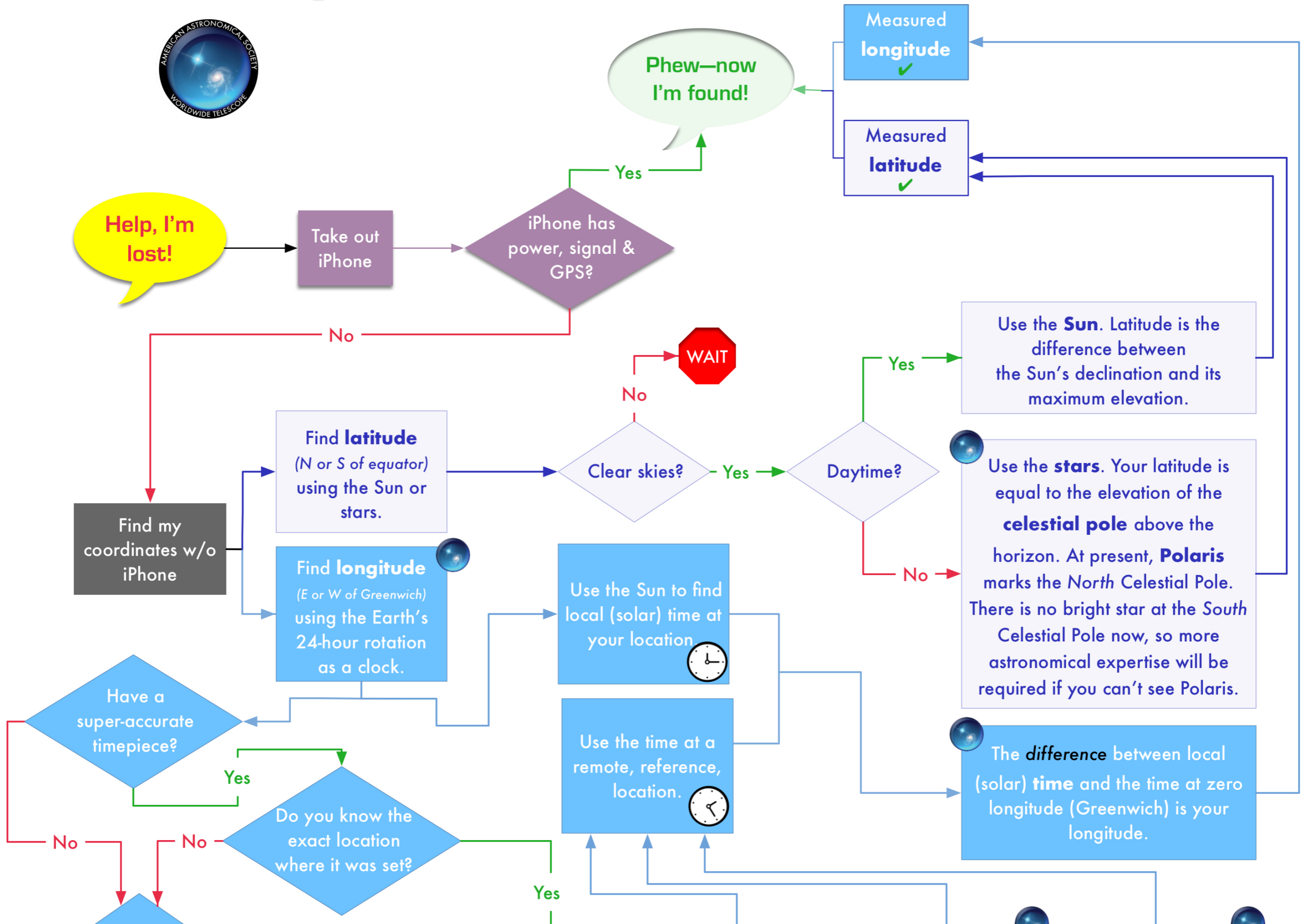
- GUIDE Page
- What is Navigation?
- Latitude and Longitude
- Navigation as Prediction
- The Longitude Prize and GPS
- Help, I'm Lost!
- Finding Your Way at Sea

STAFF DEBUG INFO

Help, I'm lost! (at sea)

- Help, I'm Lost! (8:46)
- When GPS Stops Working (0:56)
- Navigation as Prediction (2:14)
- Calculating Latitude (2:04)
- The Prime Meridian (4:39)
- The Economics of Longitude (1:56)
- Lunars and Eclipses (1:36)
- Lunars Are Hard to Predict! (3:00)
- Lunars and John Flamsteed (3:17)
- The Astronomer and The Watchmaker (2:40)
- Longitude and a Royal Observatory (5:02)
- Astronomers, Lunars, and Why We Need Clocks (5:08)
- Using Landmarks in Maine (1:39)
- The John Harrison Story (58:37)
- Latitude and Longitude (1:46)
- Earth as a Clock (0:48)
- The Celestial Sphere (2:10)
- Jupiter's Moons (2:02)
- Lunars Overview (2:06)
- Why Lunars Are Hard (2:02)
- The Longitude Prize and Global Trade (4:15)
- Astronomy, The Queen of Methods (6:30)
- The Longitude Act: State-Funded Science (3:05)
- 2014 Longitude Prize (3:11)

Lost without Longitude



Earth as a Clock



The Celestial Sphere



Jupiter's Moons



Latitude & Longitude



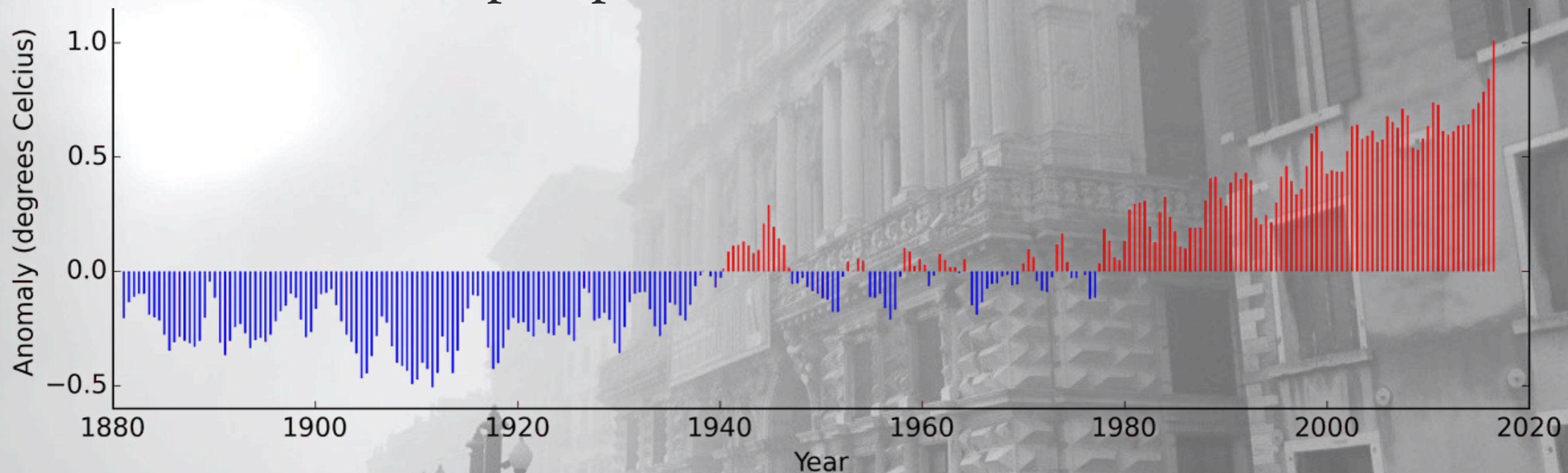
Lunars on the Sky



Why Lunars are Hard



We need more people to think more about the future.



SPINOFFS

THE TIMELINE CONSORTIUM & STANDARD (TSF)

PATH-TO FOUNDATION

2000 BC 1500 1000 500 1 501 1001 1501 2001

Type: Discovery

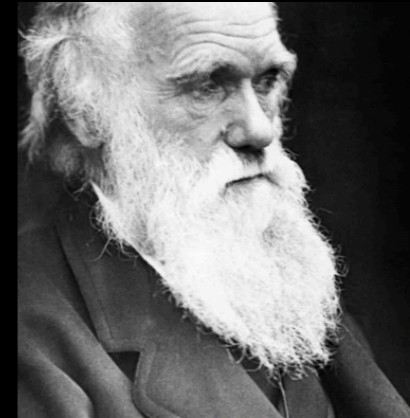
- Some "stars" move more than others**
~2000 BC - ~300 BC (1501 - 1701 years)
@ Babylonians
Hey, the cycles in the sky repeat. Let's track them.
- Nature can be explained**
~624 BC - ~546 BC (59 - 79 years)
@ Thales
Natural, not supernatural.

Type: Published Work

- Astronomical Diaries**
~2000 BC - ~300 BC (1501 - 1701 years)
Some "stars" move more than o @ Babylonians
- On the Heavens**
~355 BC - ~345 BC (1 year - 11 years)
Earth is stationary center of @ Aristotle
- Physics**
~325 BC - ~315 BC (1 year - 11 years)
All things move to their natur @ Aristotle
- Elements**
~305 BC - ~295 BC (1 year - 11 years)
A single framework for all of g @ Euclid
- The Almagest**
~145 - ~155 (1 year - 11 years)
Epicycles, equants, eccentrics @ Euclid

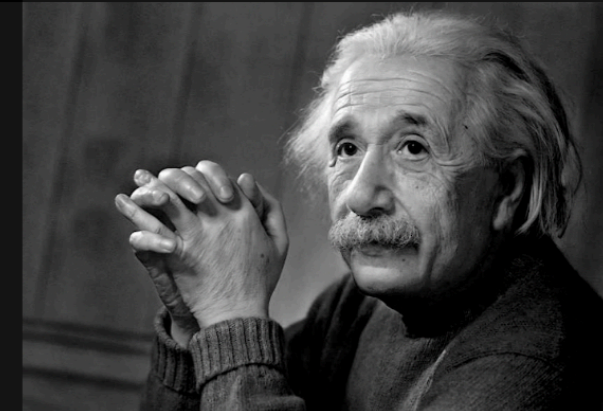
5000 BC 5001 Years 100%

The TIMELINE CONSORTIUM



Path to Darwin

Explore the intuition of evolution and human origins till Darwin



Path to Einstein

Starting from Newton, continue with the journey discovering the human knowledge about physics and the space

+Path-to Modern Genetics



The Prediction Project

The Past and Present of the Future



HOME

ABOUT

PREDICTION TOPICS

COURSES

COMMENTARY

CREDITS

Search Site

OPPORTUNITIES FOR EXPANSION/COLLABORATION: MORE MODULES, BOOKS, DOCUMENTARIES...

Prediction Essentials

Take a look at the essential elements of the course, including the framework for predictive systems.



Omens & Oracles

Gain insight into prediction as a human venture by studying the most ancient forms of prediction in Omens and Oracles.



Rise of Theory

Learn how humanity moved from mystical divination practices to genuine, scientific theories to explain natural phenomena.



Modern Prediction

Discover the cutting edge predictive methods and modeling from preminent experts across many fields.



How it all fits together

PREDICTIONX: THE PAST & PRESENT OF THE FUTURE



Omens, Oracles & Prophecies

THE RISE OF THEORY

MODERN PREDICTION

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predictionx.org

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EXTRA SLIDES



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MODALITIES



HARVARD UNIVERSITY HARVARD.EDU

The Prediction Project
 Thoughts, Resources, Course, Seminar and Someday a Book

WELCOME PREDICTION TOPICS COURSES TALKS COMMENTARY CREDITS

- Essays
- PREDICTIONX
 - Essentials: Ways to Frame Discussions about Prediction
 - Omens & Oracles
 - Rise of Theory
 - Modern Predictive Systems
 - Sneak Preview: Video Interviews with Experts
 - Agustin Rayo (philosophy)
 - Avi Loeb (astronomy)
 - Ben Shneiderman (artificial intelligence)
 - Brendan Meade (earthquakes) and Susan Murphy (computer science)
 - Daniel Gilbert (psychology)

HOME / PREDICTIONX / PREDICTION TOPICS / MODERN PREDICTIVE SYSTEMS / SNEAK PREVIEW: VIDEO INTERVIEWS WITH EXPERTS /

Daniel Gilbert (psychology and prediction)

Daniel Gilbert is a Professor of Psychology at Harvard University. In this conversation with Professor Goodman, he discusses the ways in which people understand -- or fail to understand -- prediction in their daily lives.



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PLAYLISTS

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iTunes

Aug 31 · 40 mins left

PODCAST EPISODE

Psychology and Prediction with Daniel Gilbert

PredictionX

Episode Description

Daniel Gilbert is a Professor of Psychology at Harvard University. In this conversation with Professor Goodman, he discusses the ways in which people understand -- or fail to understand -- prediction in their daily lives.

Dan Gilbert
 Professor of Psychology
 Harvard University

Transcript

0:01 Hi, I'm Dan Gilbert in the psychology department of Harvard University.
 0:04 And one of the things that I have studied for pretty much the last three decades is
 0:08 how people make predictions about what will make them happy,
 0:11 how happy it'll make them, and how long that happiness will last.
 0:15 And as you might expect, they don't always do a good job of it,
 0:18 which gives me a job to do. 12:35
 0:20 >> Welcome, Dan

PREDICTIONX

Prediction & Psychology

with Daniel Gilbert

SPECIAL GUEST

2:44

Would You Rather 1 Million or 1 Billion Dollars? - Daniel...

predictionofficial · Following
 Harvard University

predictionofficial Daniel Gilbert is a Professor of Psychology at Harvard University. In this interview with Professor Alyssa Goodman, he discusses the ways in which people understand -- or fail to understand -- prediction in their daily lives.

Watch the full interview at PredictionX.org

#dangilbert #harvard #harvarduniversity #psychology #money #financialliteracy #investment

1d

Liked by evageliakouroupi and others

1 DAY AGO

Add a comment... Post