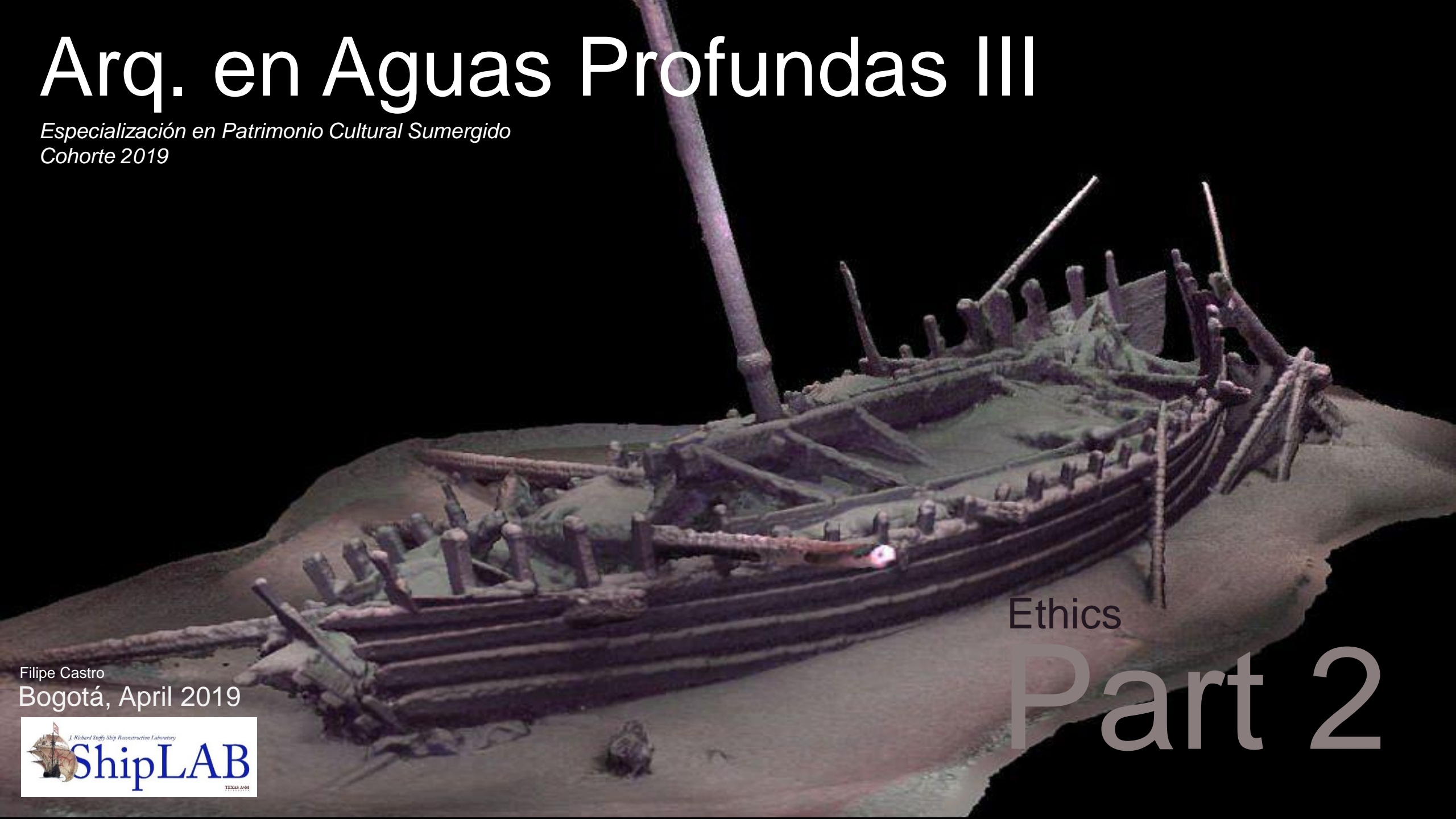


Arq. en Aguas Profundas III

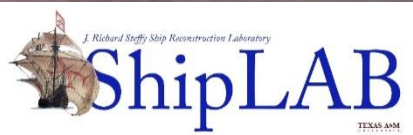
Especialización en Patrimonio Cultural Sumergido
Cohorte 2019



Ethics

Part 2

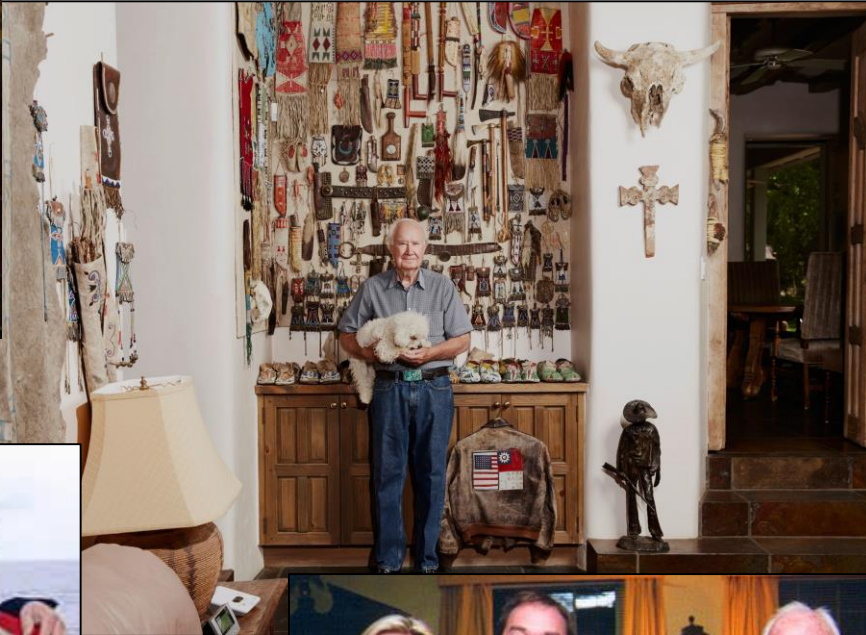
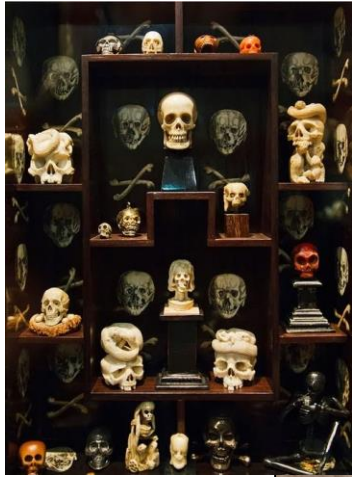
Filipe Castro
Bogotá, April 2019



Treasure hunters cannot afford to let us see what they do the sites they salvage.



Treasure hunting is a hobby of the rich, and the rich rule.



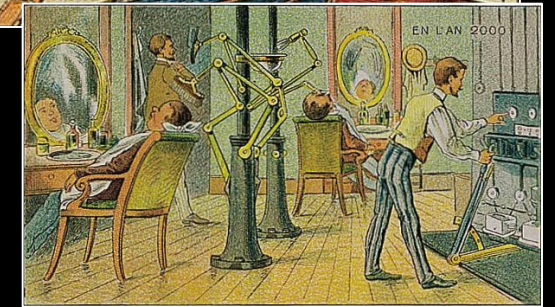
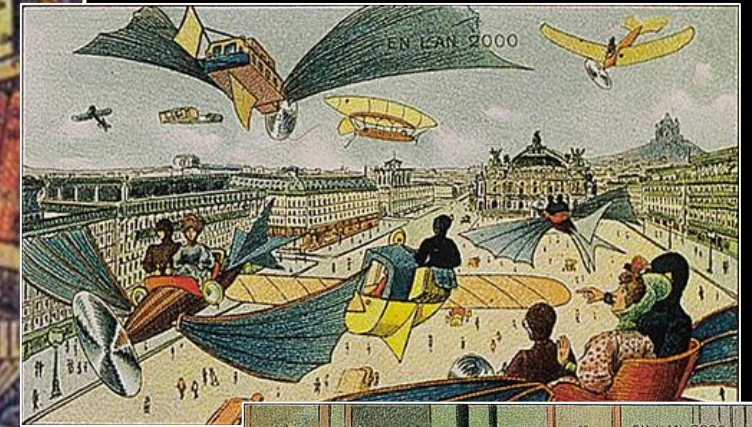
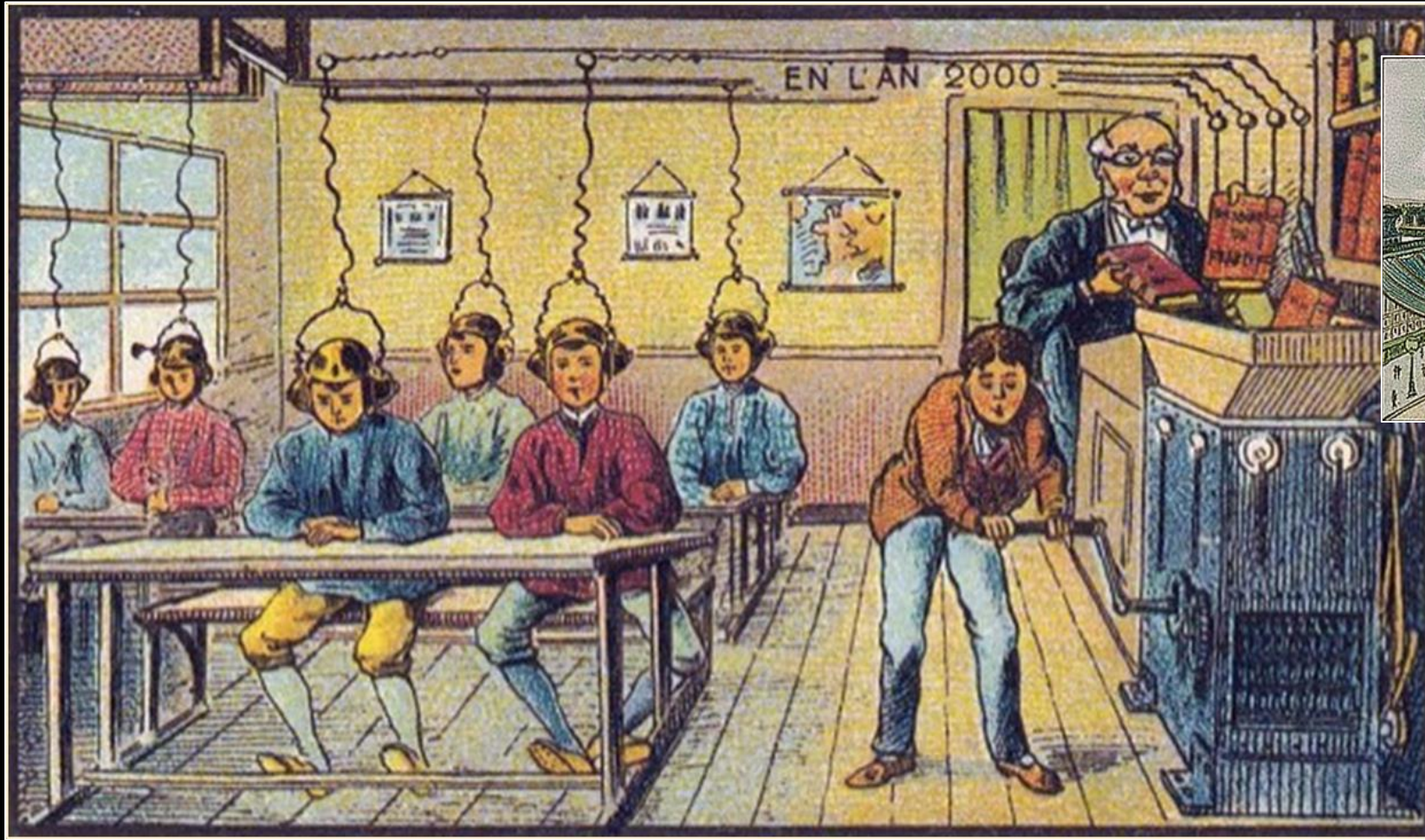
Treasure hunters do it for the power drive and the adventure. Not for the money.

What is going to happen to archaeology?

Will it be shallow and spectacular,
or intellectual and social?



Archaeologists – and especially maritime archaeologists– are very amateurish: they fight for no reason, hide data, gossip, don't finish, don't publish, don't know what is the social value of archaeology...



It is impossible to predict the future, but that should not prevent us from thinking about it. I see two important factors influencing the future of archaeology.



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JANUARY 12, 2016

WERNER HERZOG TALKS VIRTUAL REALITY

BY PATRICK HOUSE



ELEMENTS



"I am convinced that this is not going to be an extension of cinema or 3-D cinema or video games. It is something new, different, and not experienced yet," the filmmaker Werner Herzog said of virtual reality.

PHOTOGRAPH BY SARAH LEE / EYEVINE / REDUX

"Im a skeptic of 3-D, but when I saw the paintings I knew I had to use it," Werner Herzog told Judith Thurman in 2010, after the New York premiere of his documentary "Cave of Forgotten

Dreams." The film examines some of the world's earliest known paintings,

MOST POPULAR

1. Ted Cruz's Iowa Mailers Are More Fraudulent Than Everyone Thinks
BY RYAN LIZZA

2. The End of Twitter
BY JOSHUA TOPOLSKY

3. Cassidy's Count: Polls Point to Victories for Trump and Clinton in Iowa
BY JOHN CASSIDY

4. Richard Dreyfuss, Glenn Beck, Ted Cruz, and Lady Gaga in Iowa
BY RYAN LIZZA

5. The Useless Agony of Going

1. Computer graphics are revolutionizing many aspects of our lives...

The image shows the front cover of the book 'Capital in the Twenty-First Century' by Thomas Piketty. The cover is white with a red border. At the top, there is a small decorative flourish. Below it, the word 'CAPITAL' is printed in large, bold, red capital letters. Underneath 'CAPITAL', the subtitle 'in the Twenty-First Century' is written in a smaller, italicized, black serif font. Another small decorative flourish is positioned below the subtitle. The author's name, 'THOMAS PIKETTY', is printed in large, bold, black capital letters. At the bottom of the cover, in a very small font, it says 'TRANSLATED BY ARTHUR GOLDHAMMER'.

CAPITAL

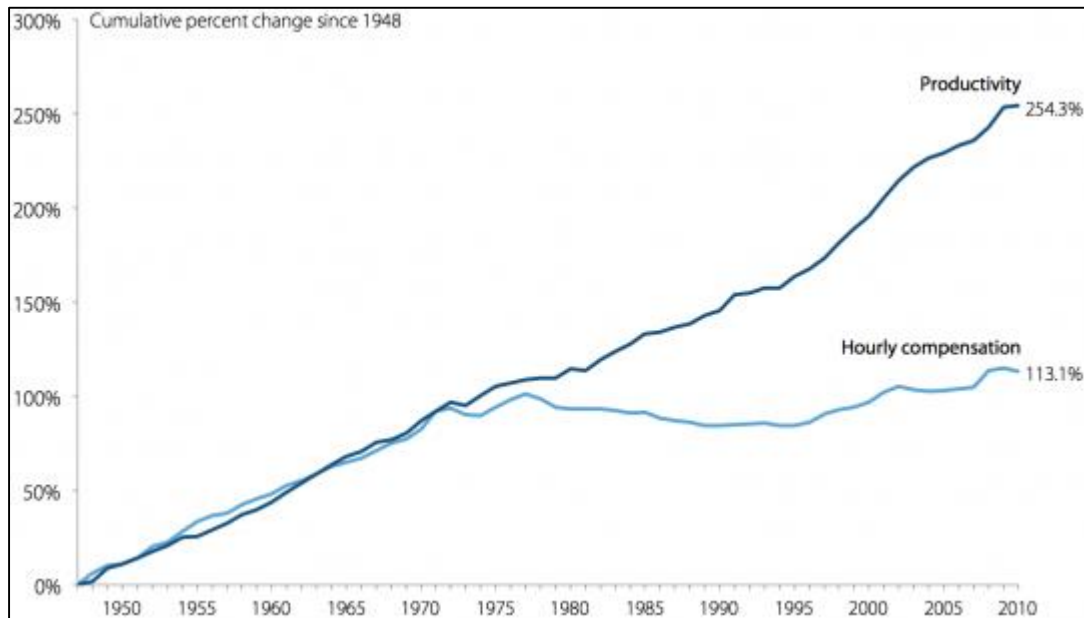
in the Twenty-First Century

THOMAS
PIKETTY

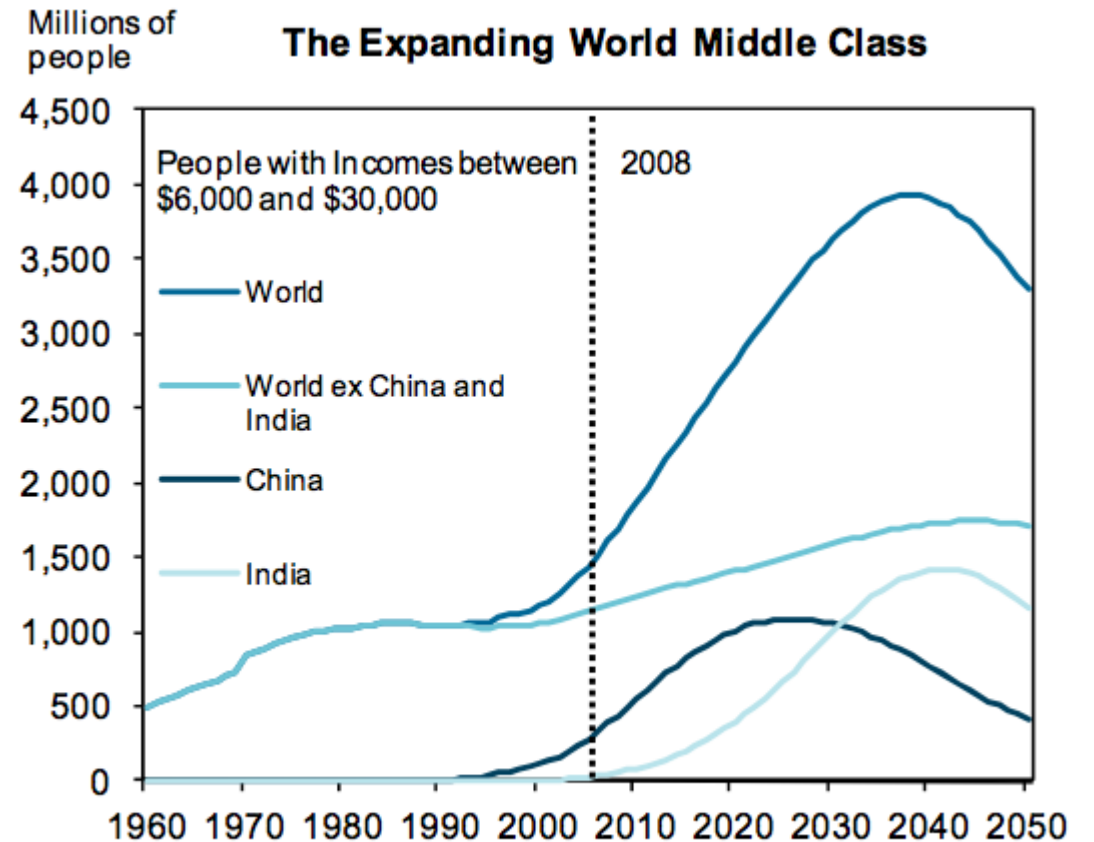
TRANSLATED BY ARTHUR GOLDHAMMER

2. Inequality is destroying middle classes in the West and eroding the power of governments.

Middle classes are being eroded in the west, but they are **growing globally**.

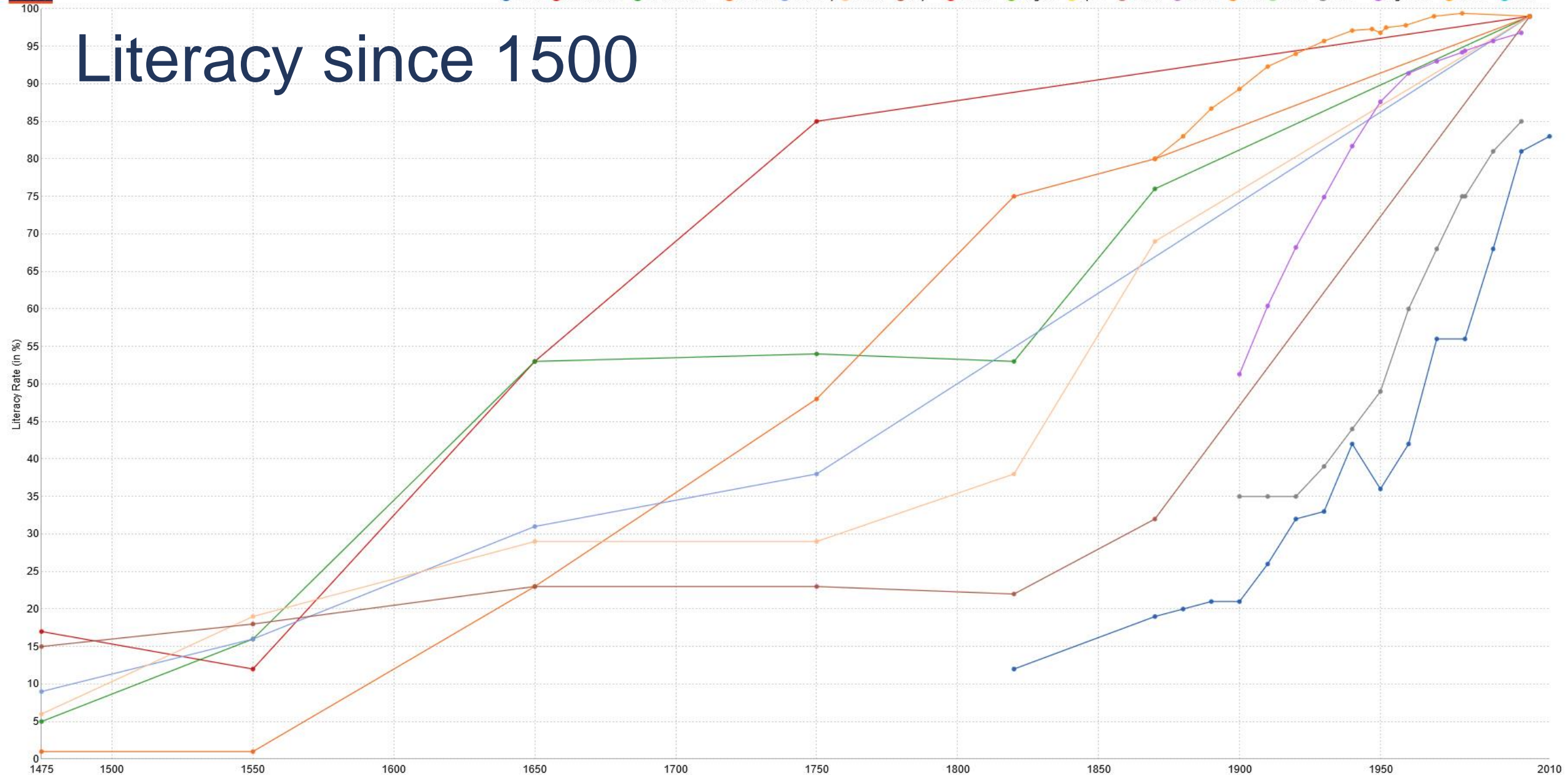


Productivity and Hourly compensation (US)



Source: Goldman Sachs

Literacy since 1500



Since 1945 the world population **doubled**, and the world wealth **quintupled**.

Figure 3.1 World population, 1750–2050

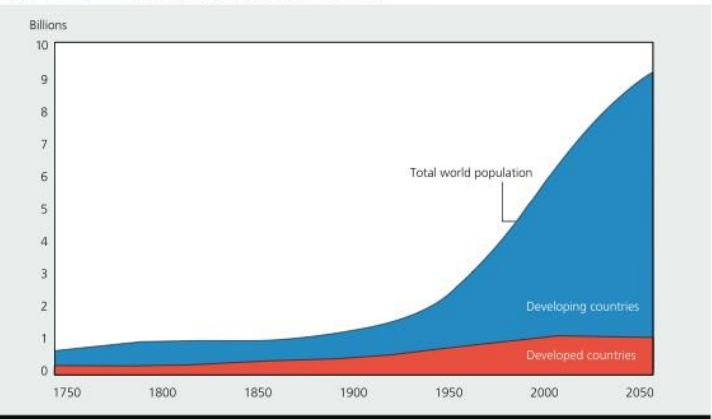
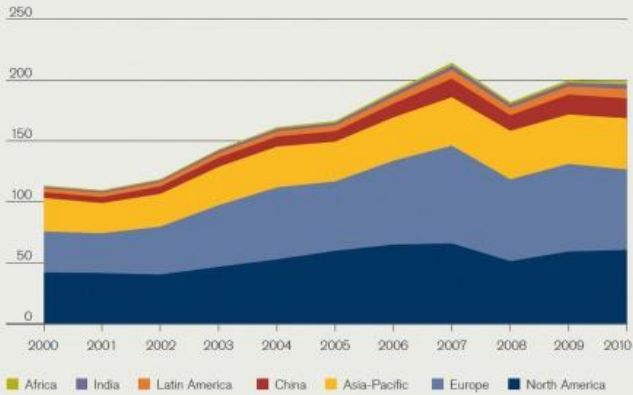
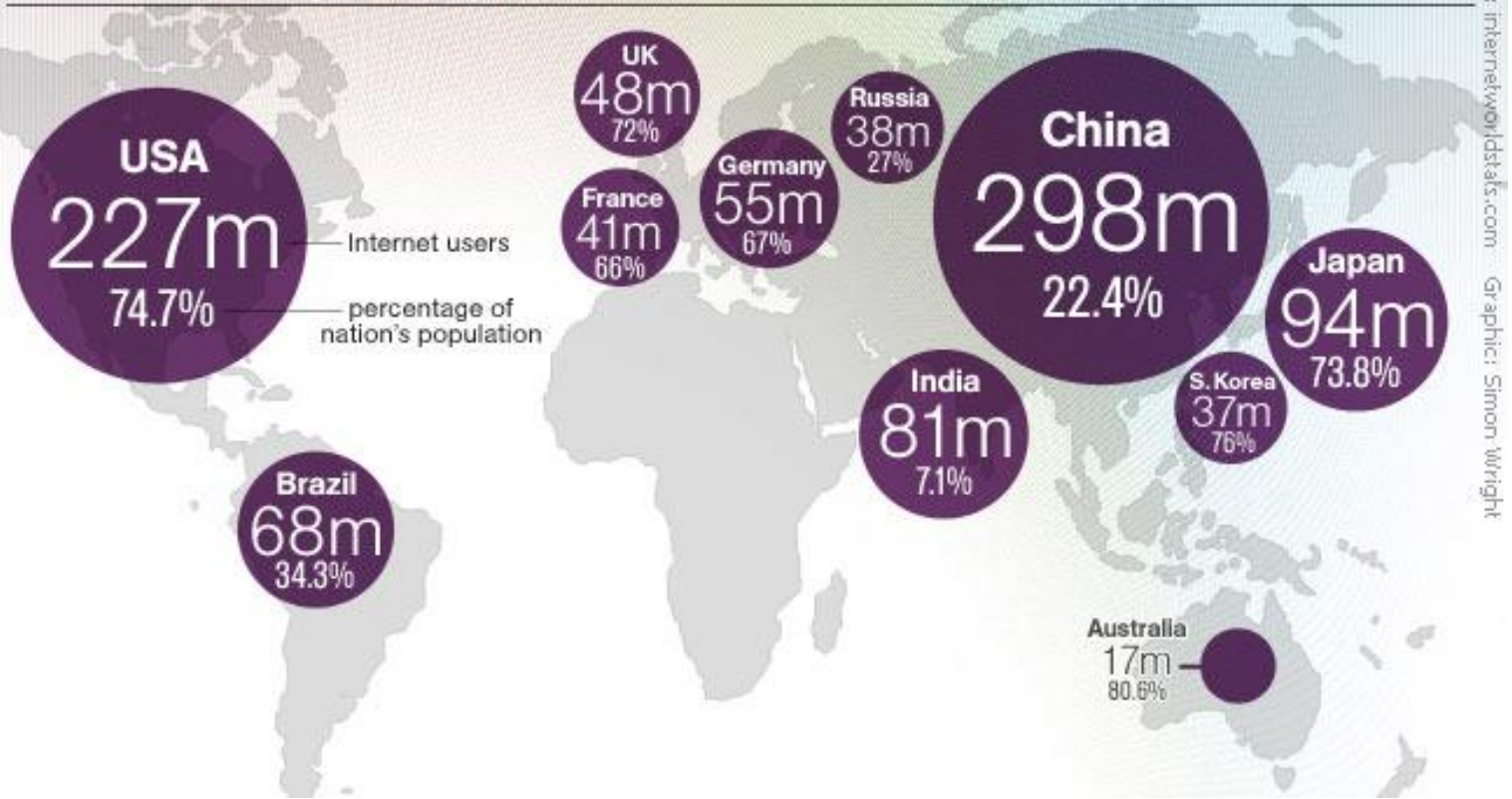


Figure 1 World wealth by region, in USD trillions

World wealth adds up to USD 200 trn, with the Asia-Pacific region and China making up an increasing segment.



Internet users by country



2016: 44% of the world population has internet access.

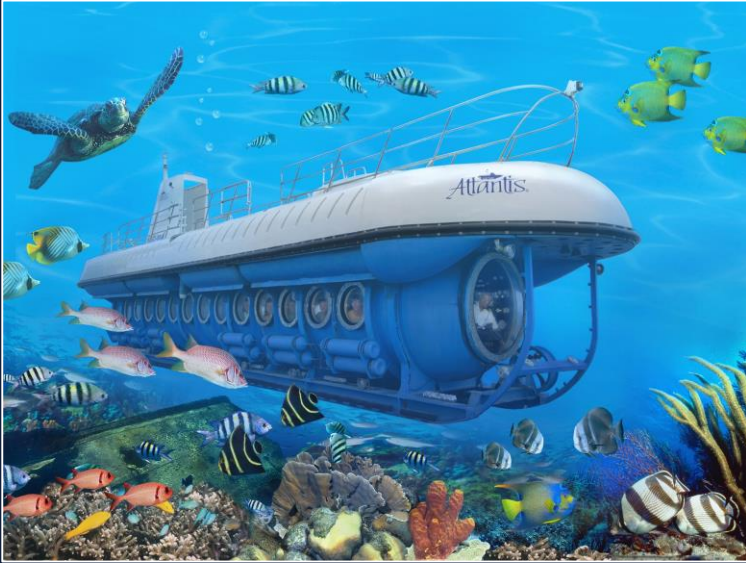


In a few years, most archaeologists will be non-western. How will this change both practices and narratives?

Excavation of the 9th century
Phanom-Surin laced ship (Thailand).



Middle classes worldwide are the **consumers of cultural production**: libraries, museums, concert halls, orchestras, opera houses, literary magazines, books, etc., and technology is creating opportunities everywhere.



In this context, what is the future of (maritime) archaeology?

Explore the 360Abyss v4

The Ultimate VR 360 Video System

NEW Bullet360 system simultaneously operates all cameras underwater

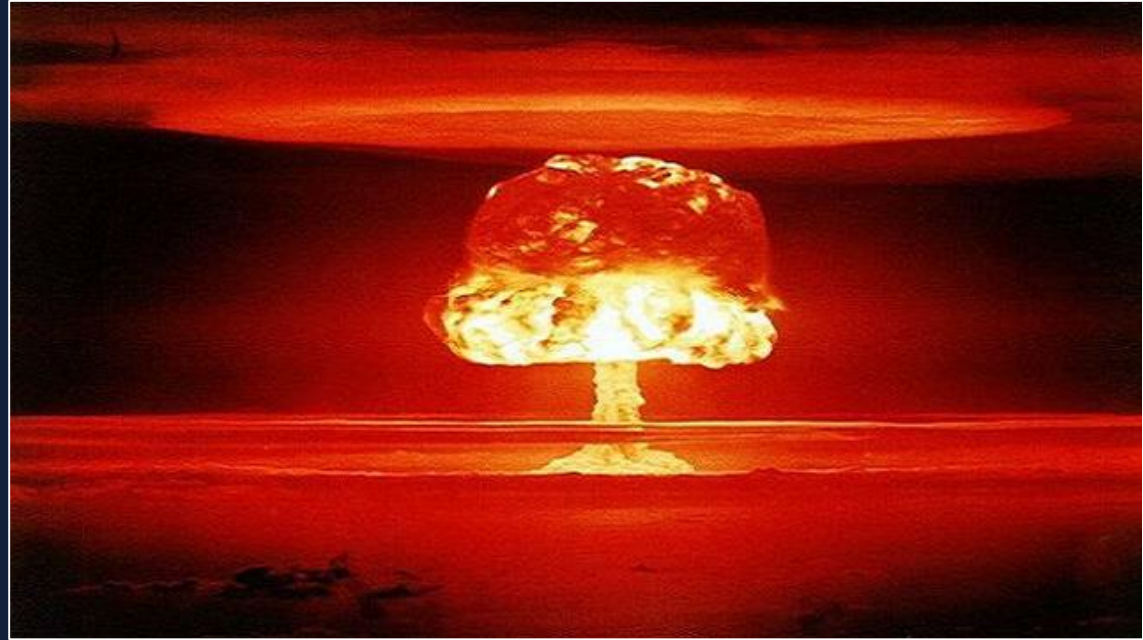
Individual camera compartments
Aircraft-grade crystal clear optics
Standoff mounts w/ 1" ball joints
Neutrally buoyant to 300m
Rated to 1,000 meters
8,000 by 4,000 pixels
Anodized aluminum
55mm add-on filters

Includes Water-Jet Custom-Cut Pelican Case

360Her0s

Computer graphics will make the past more accessible!

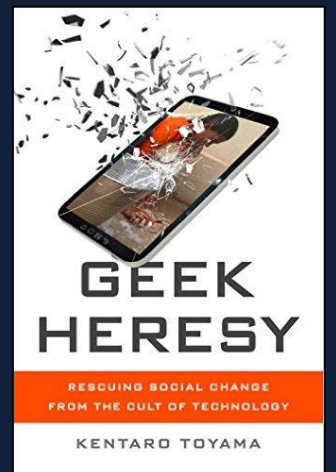




It is policy, not technology, that change the world.

Technology only magnifies human intent and capacity. It can't substitute for them.

Kentaro Toyama



A few applications of existing technology are obvious:

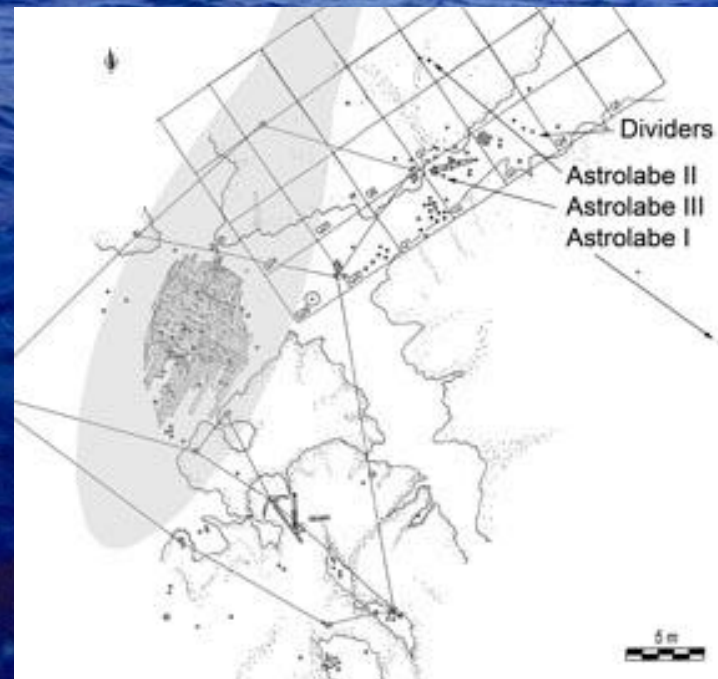
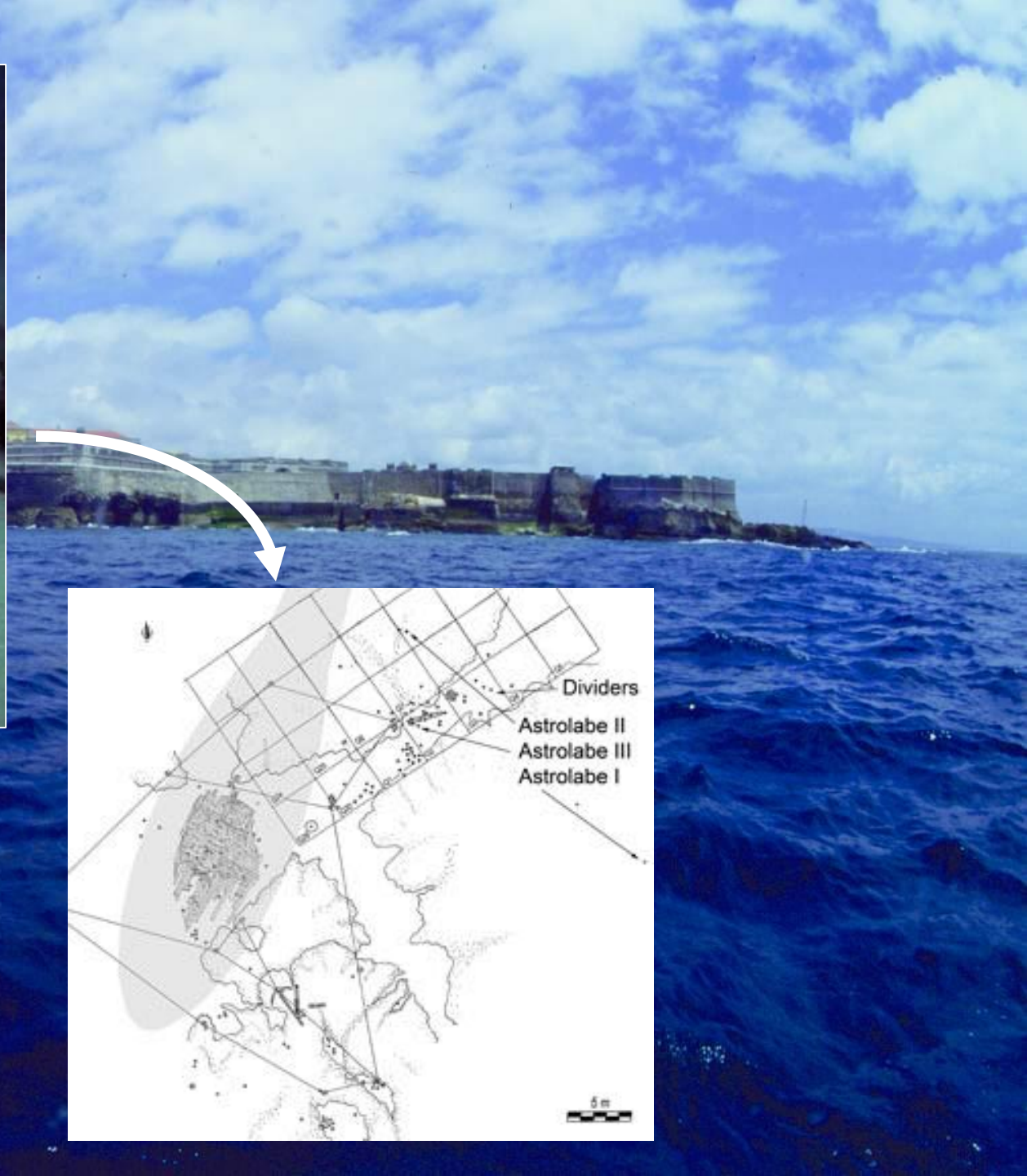
1. To make underwater sites visible;
2. To record them for posterity;
3. To monitor and protect underwater sites;
4. To share knowledge through social networks;
5. To analyze and reconstruct archaeological sites;
6. To simplify 3D recording and non-intrusive surveys;
7. To guide the development of technology towards cheaper, faster, more accurate, and less intrusive surveys!

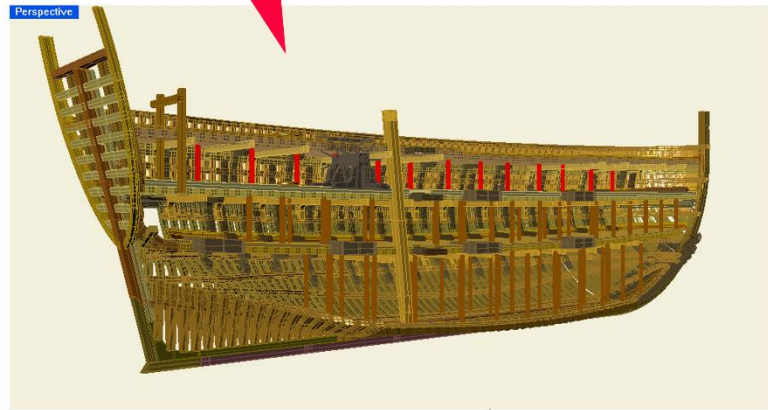
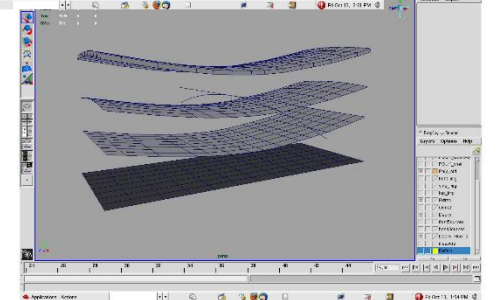
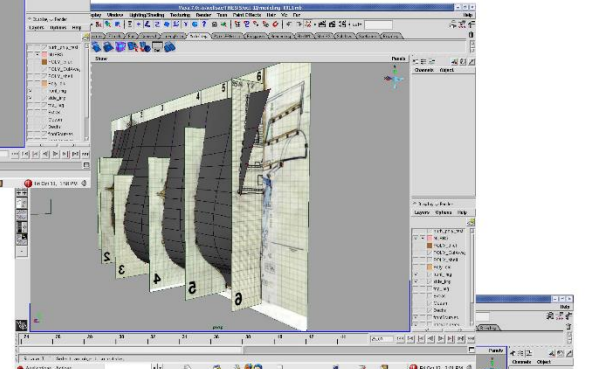
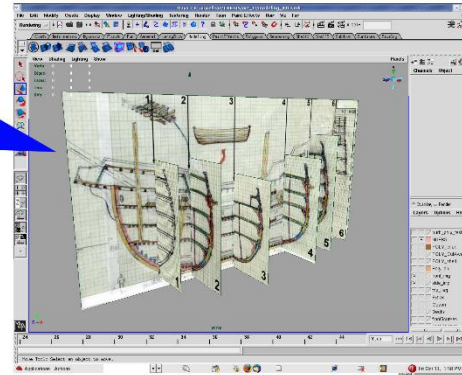
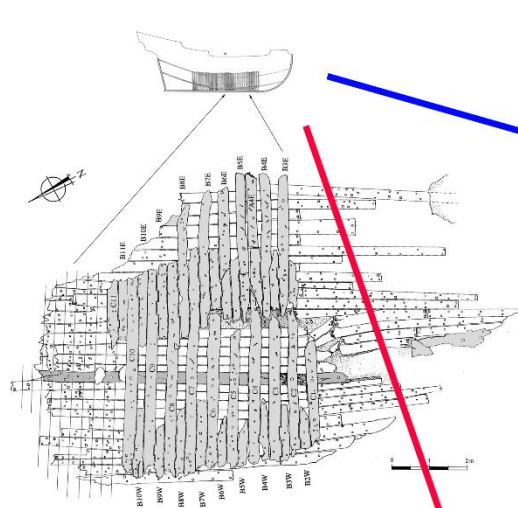
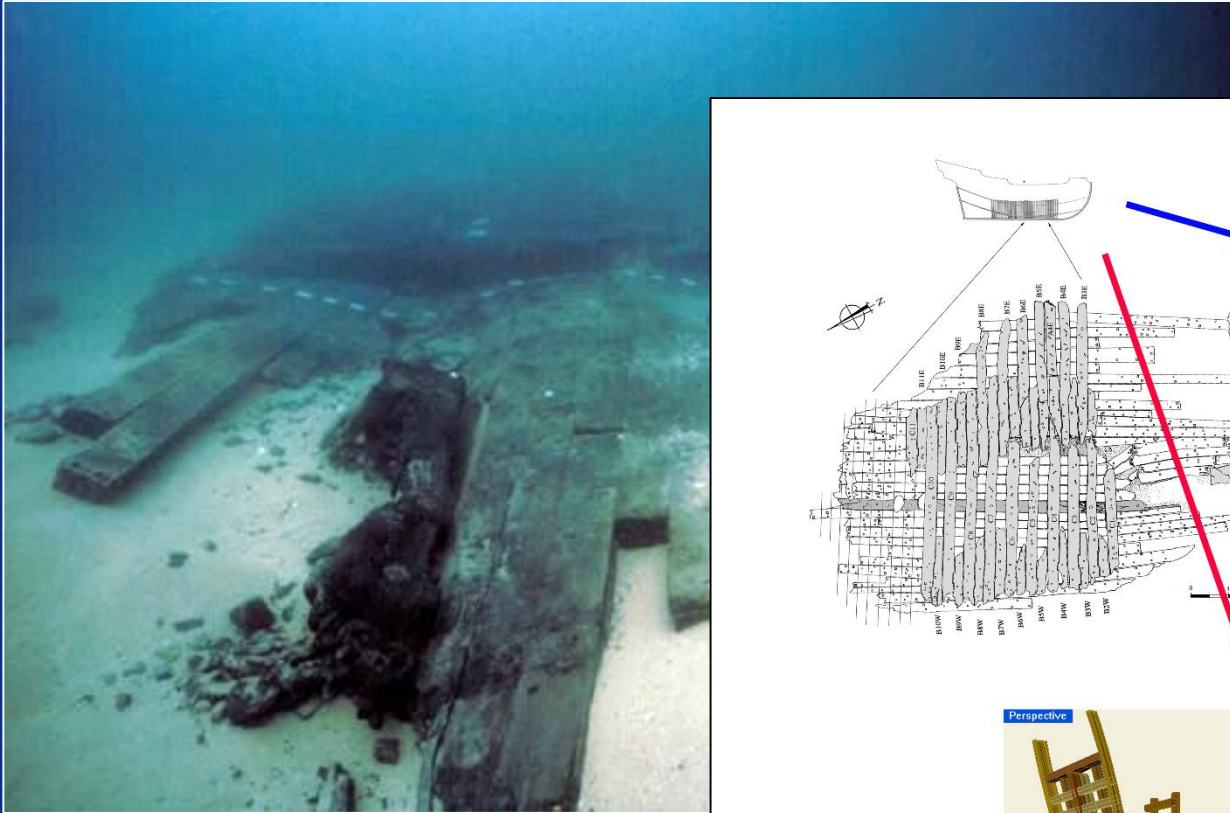
1. The submerged cultural heritage (SCH) is invisible and 3D modeling can **make it visible** (preservation, social importance of archaeology).

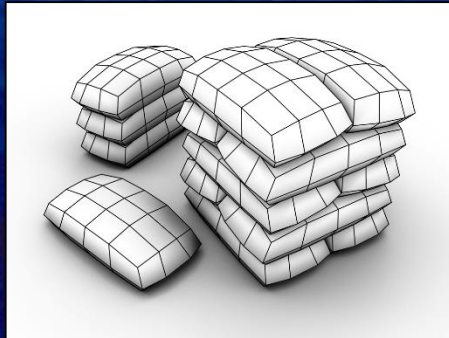
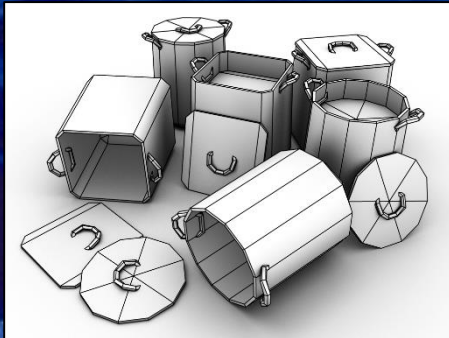
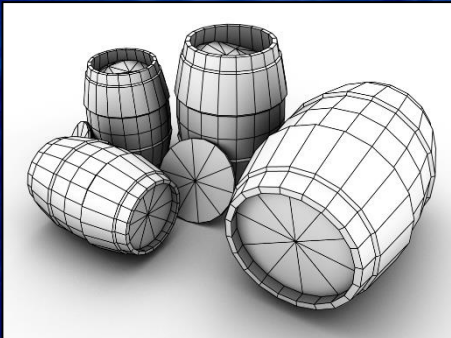
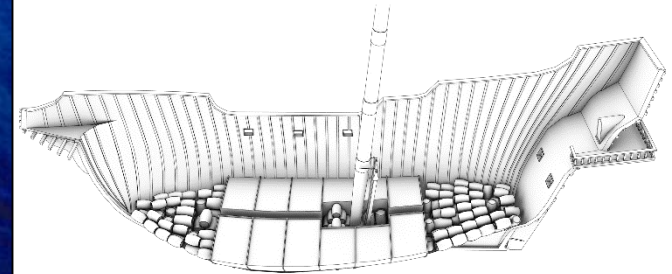
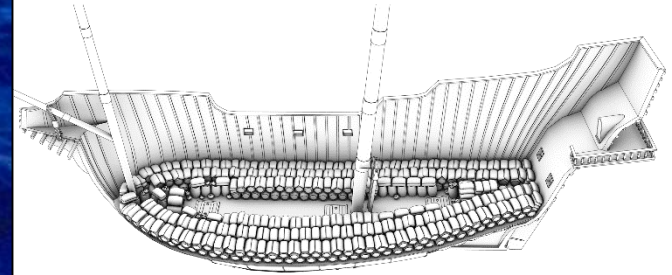
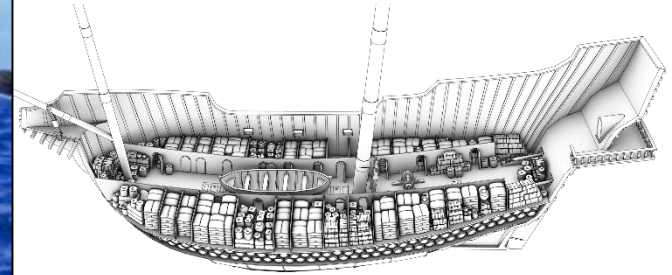
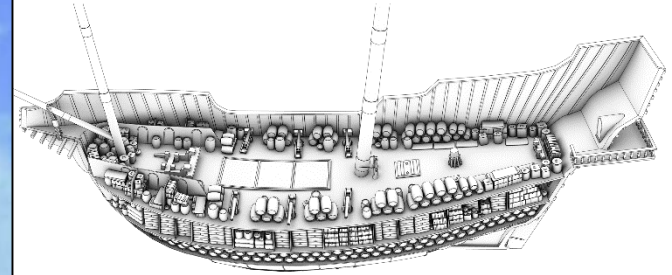
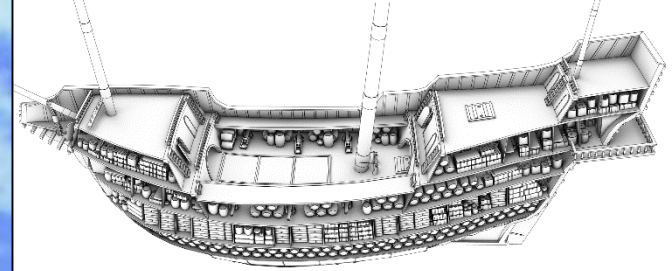
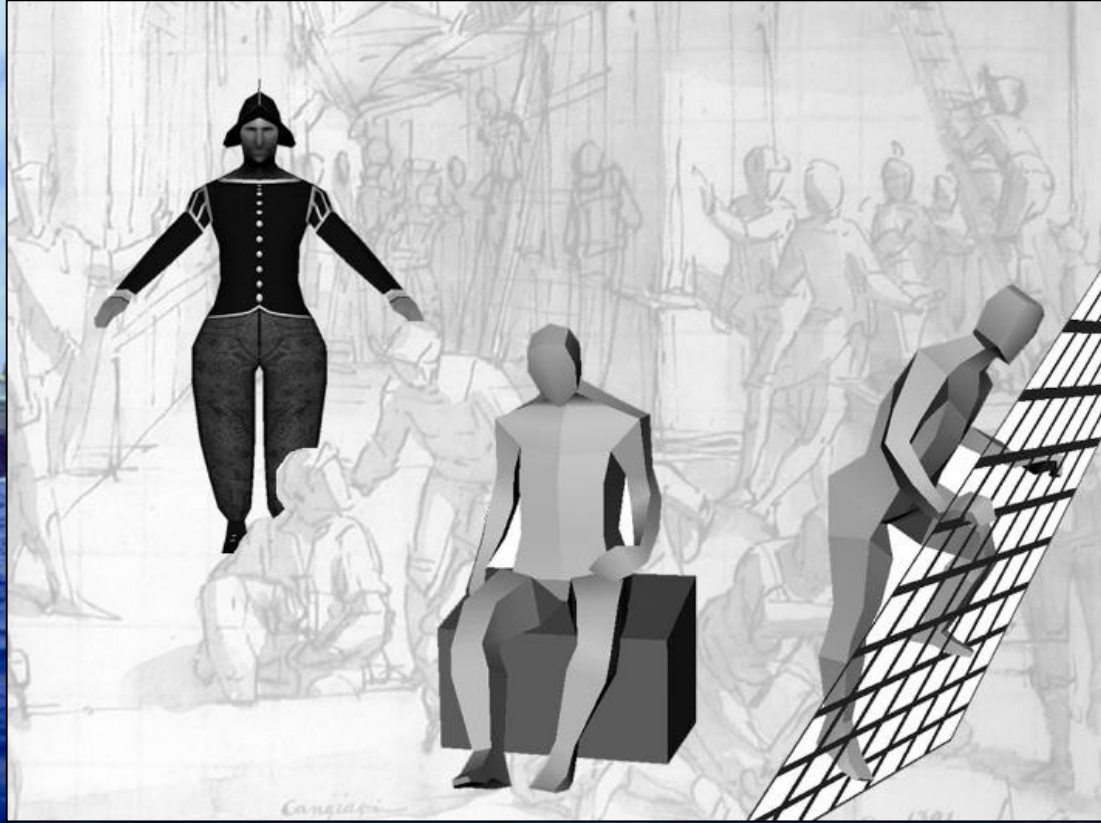
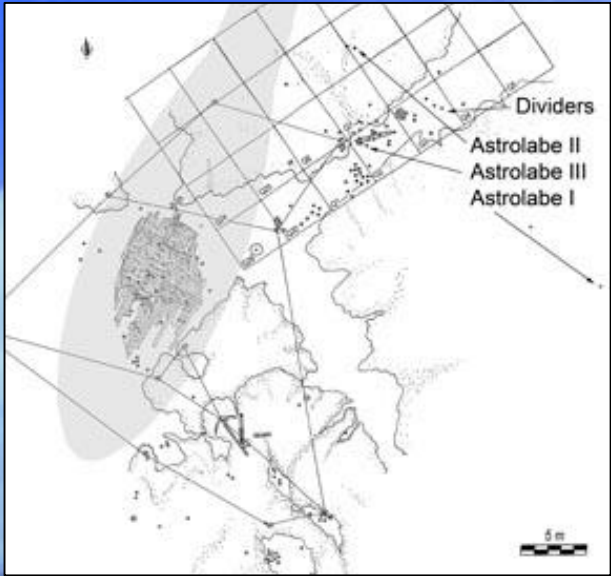




- São Julião da Barra, the site of the 1606 *Nossa Senhora dos Mártires*.

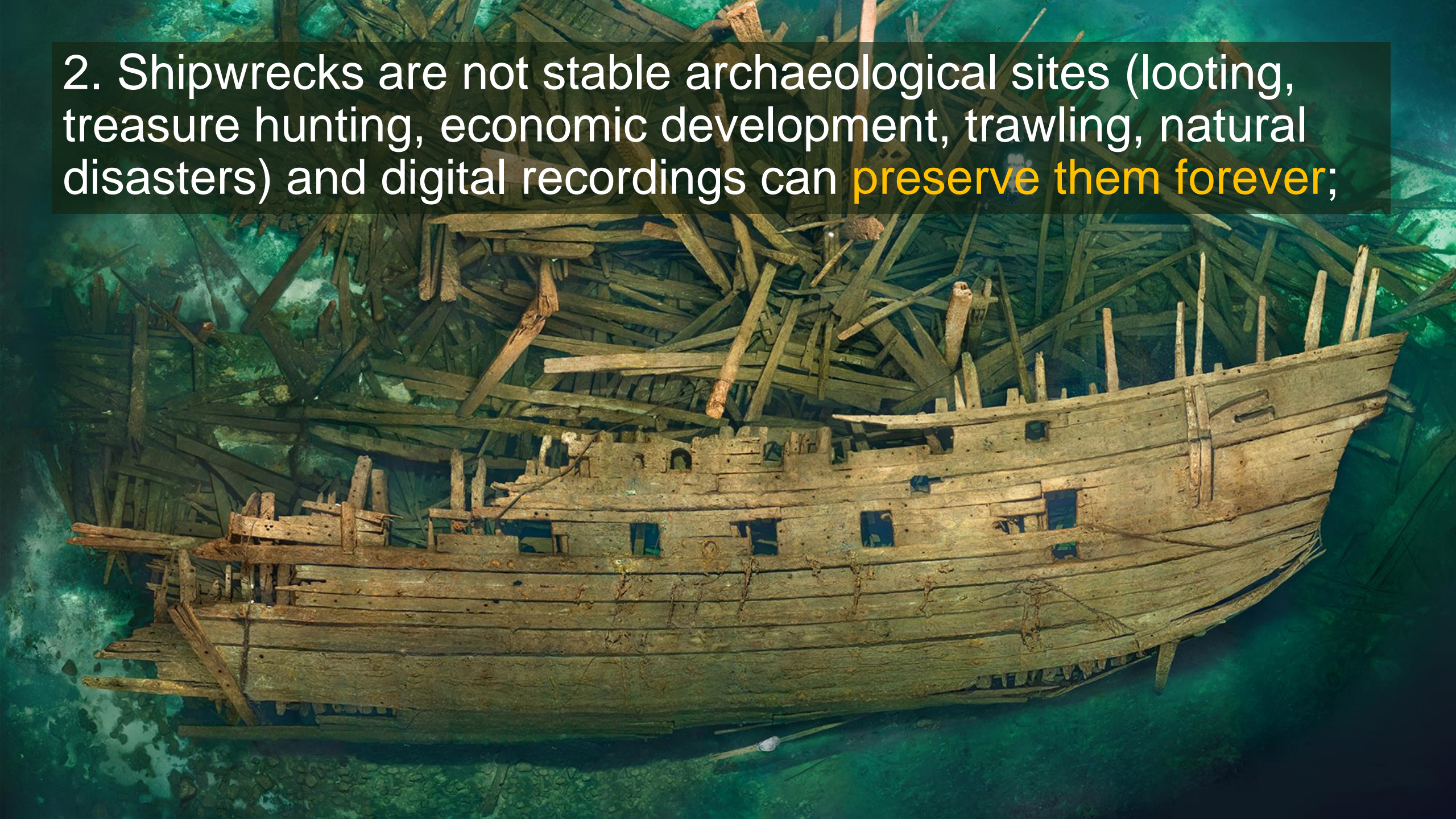




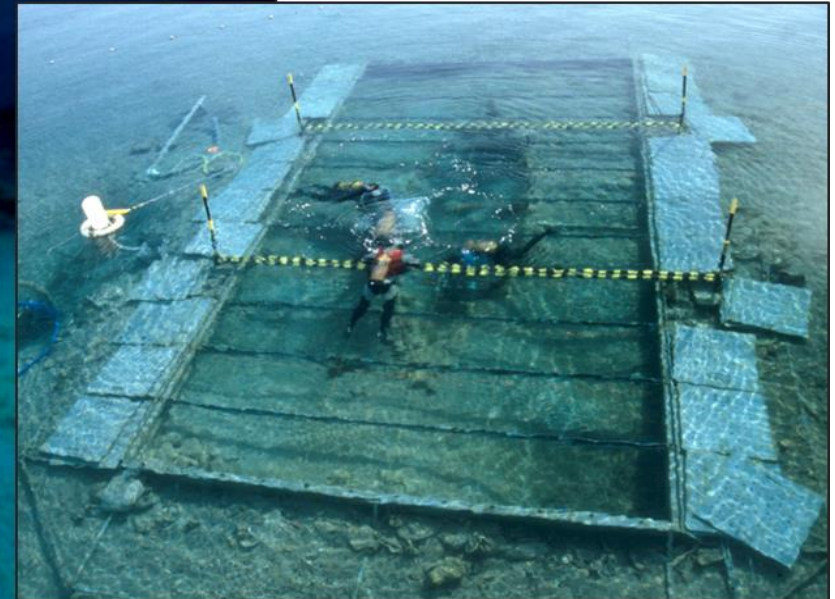
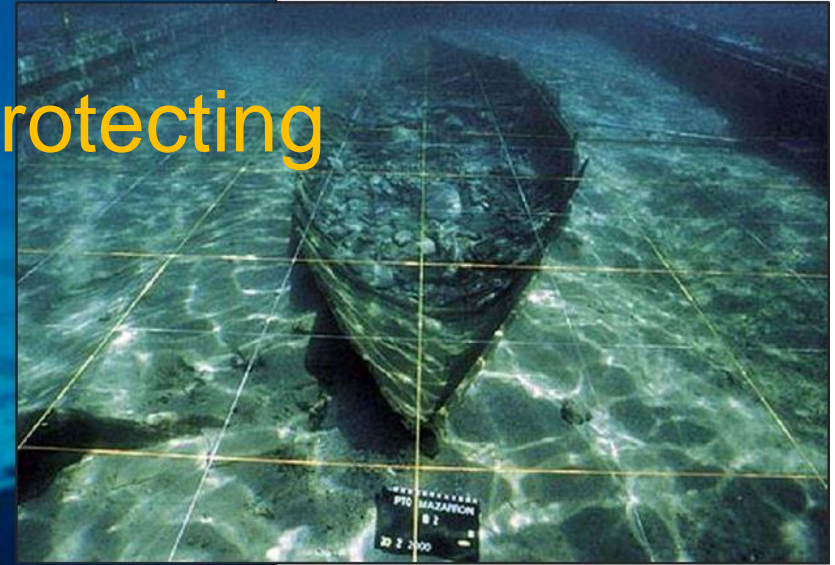
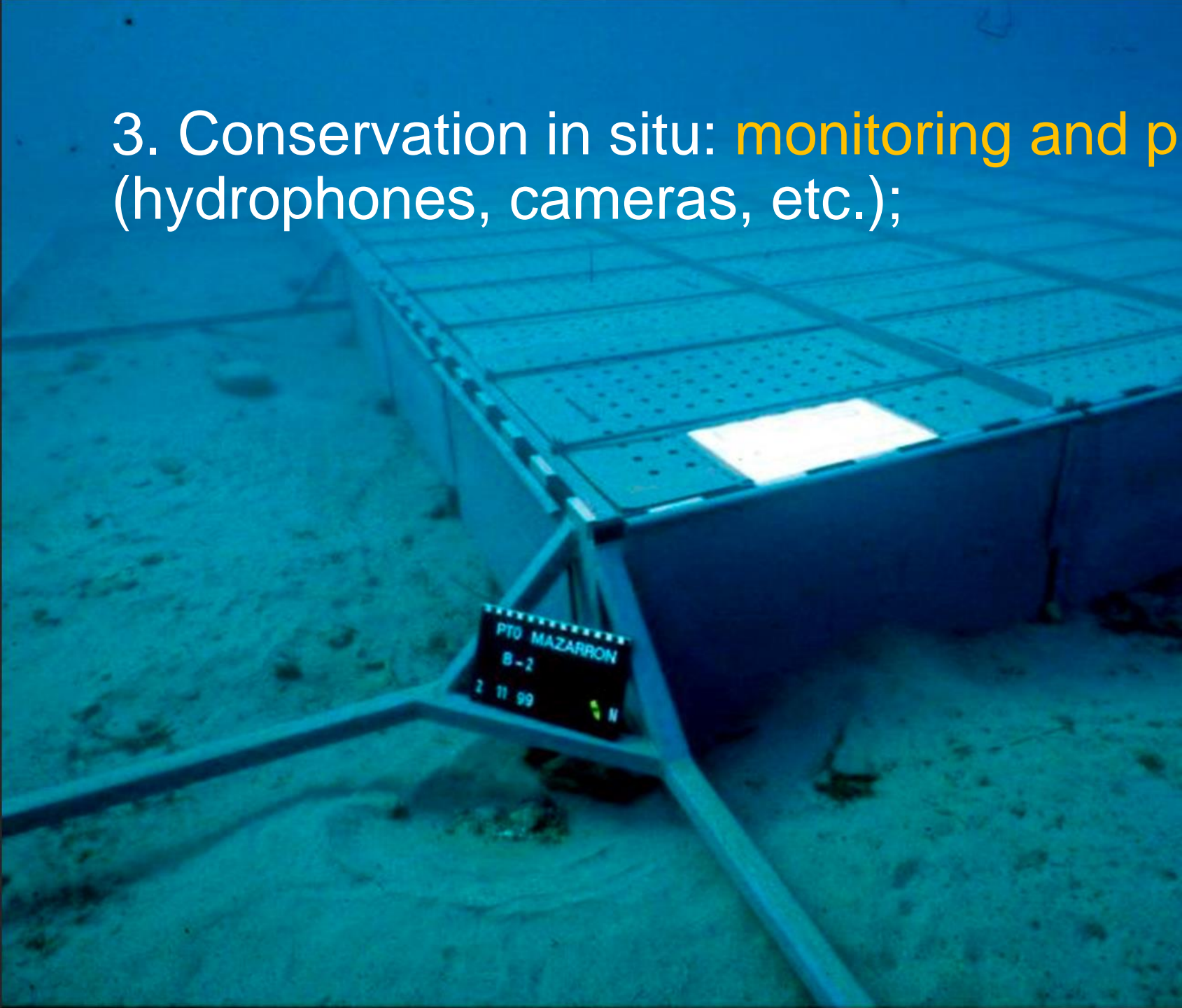




2. Shipwrecks are not stable archaeological sites (looting, treasure hunting, economic development, trawling, natural disasters) and digital recordings can **preserve them forever**;

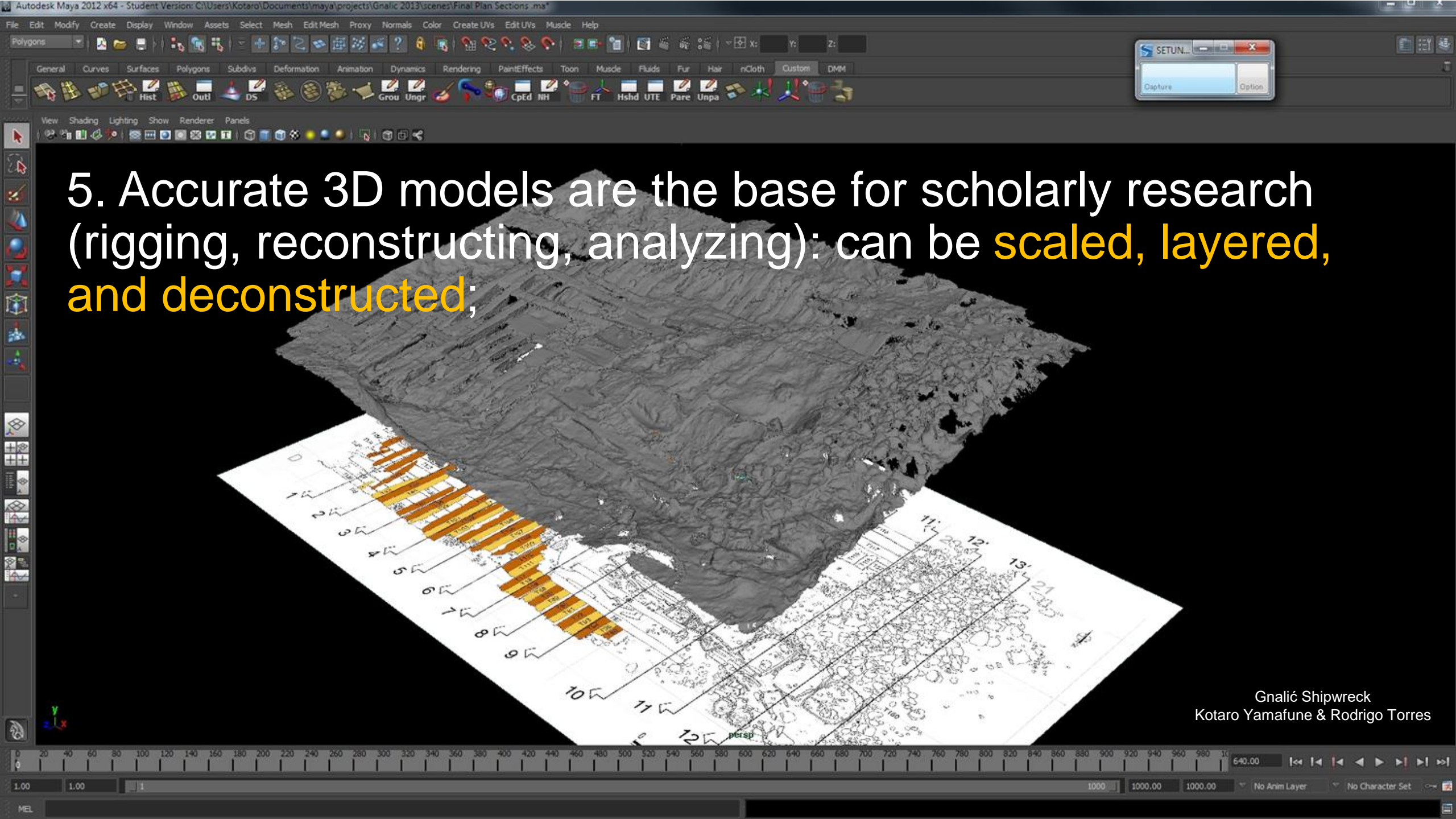


3. Conservation in situ: **monitoring and protecting** (hydrophones, cameras, etc.);





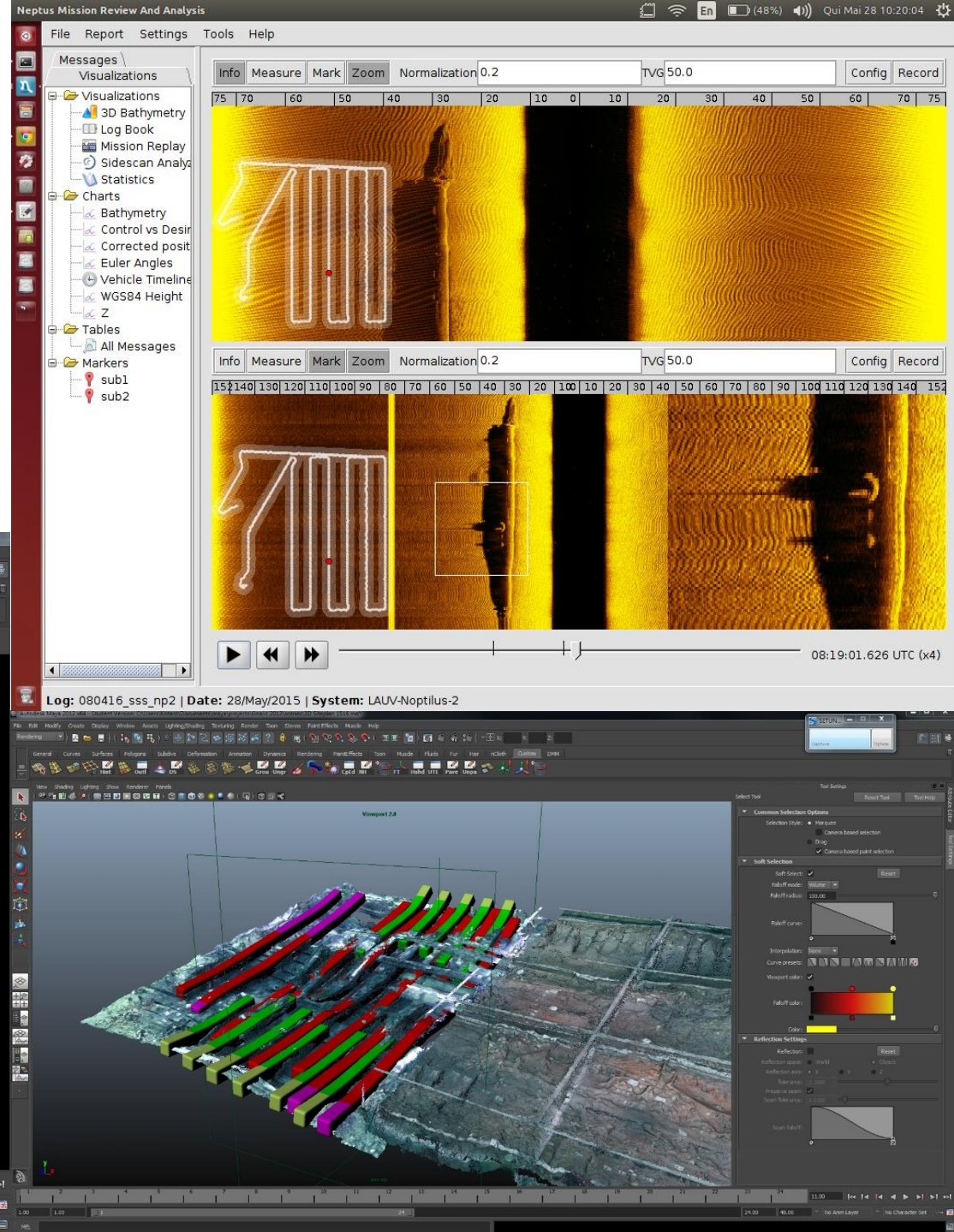
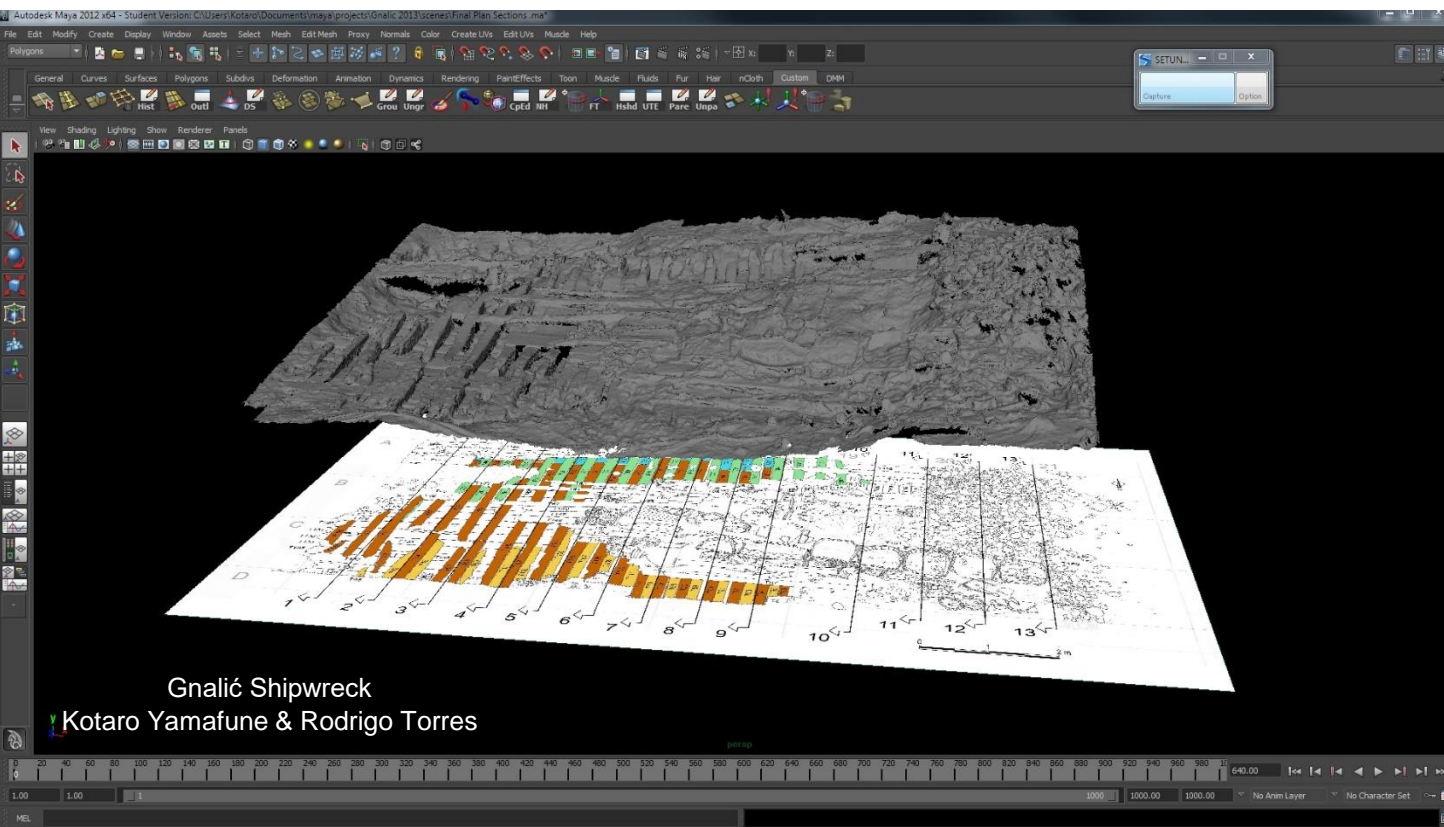
4. Digital archaeological sites can be **shared online** and serve as learning environments (kindergarten to university);



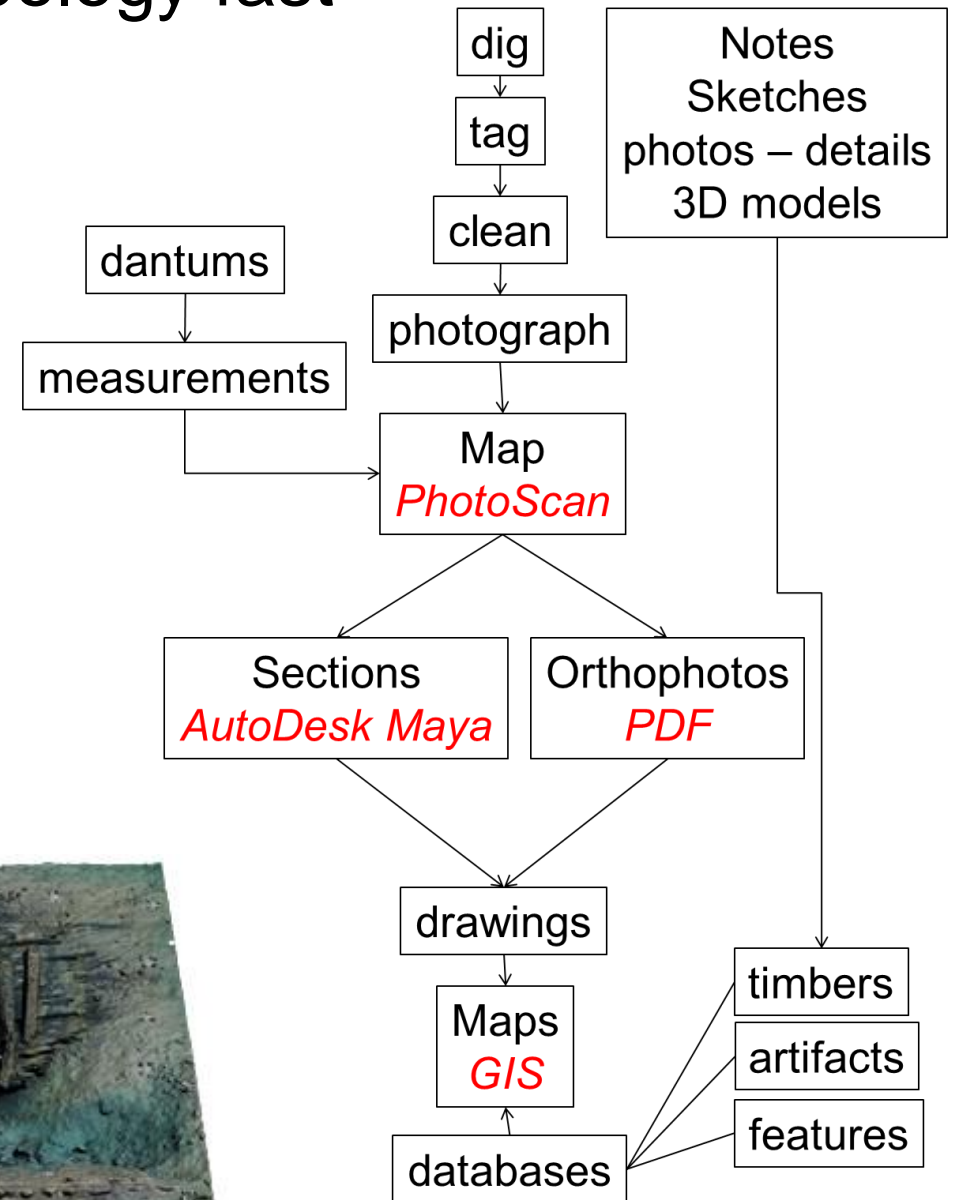
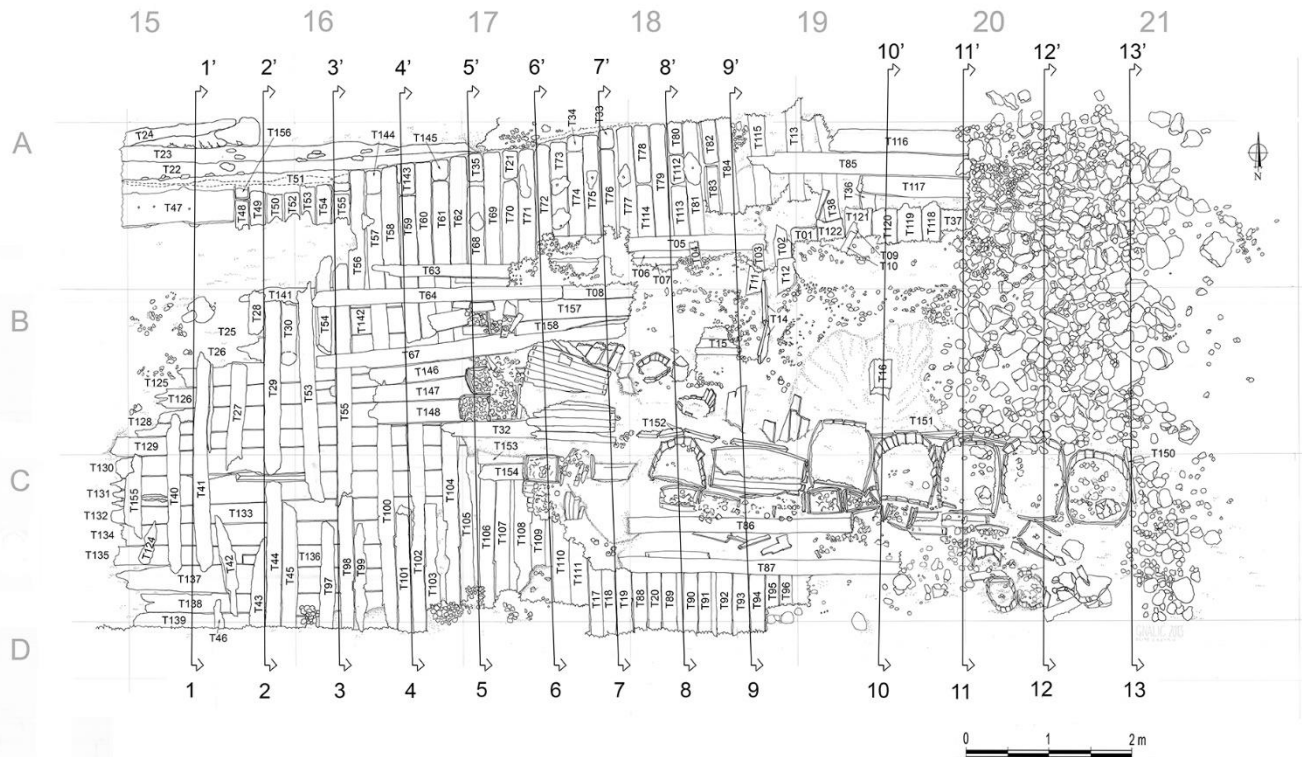
5. Accurate 3D models are the base for scholarly research (rigging, reconstructing, analyzing): can be **scaled, layered, and deconstructed**;

Gnalić Shipwreck
Kotaro Yamafune & Rodrigo Torres

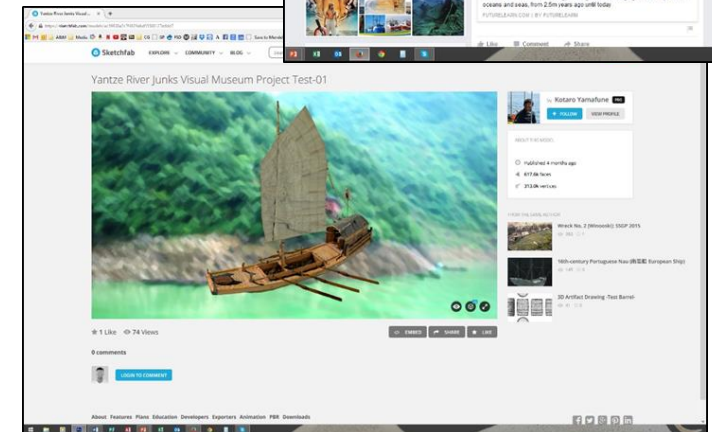
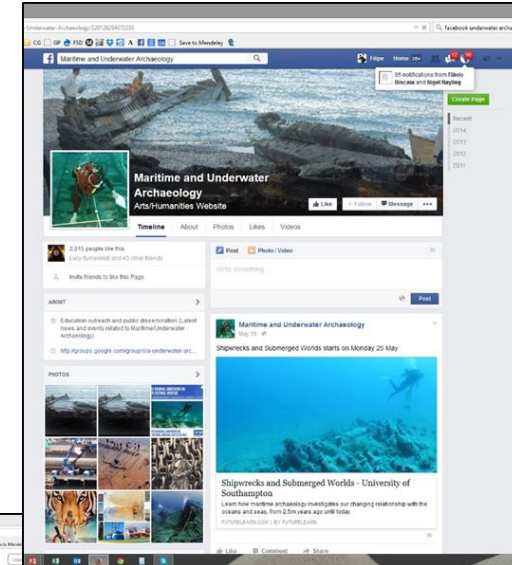
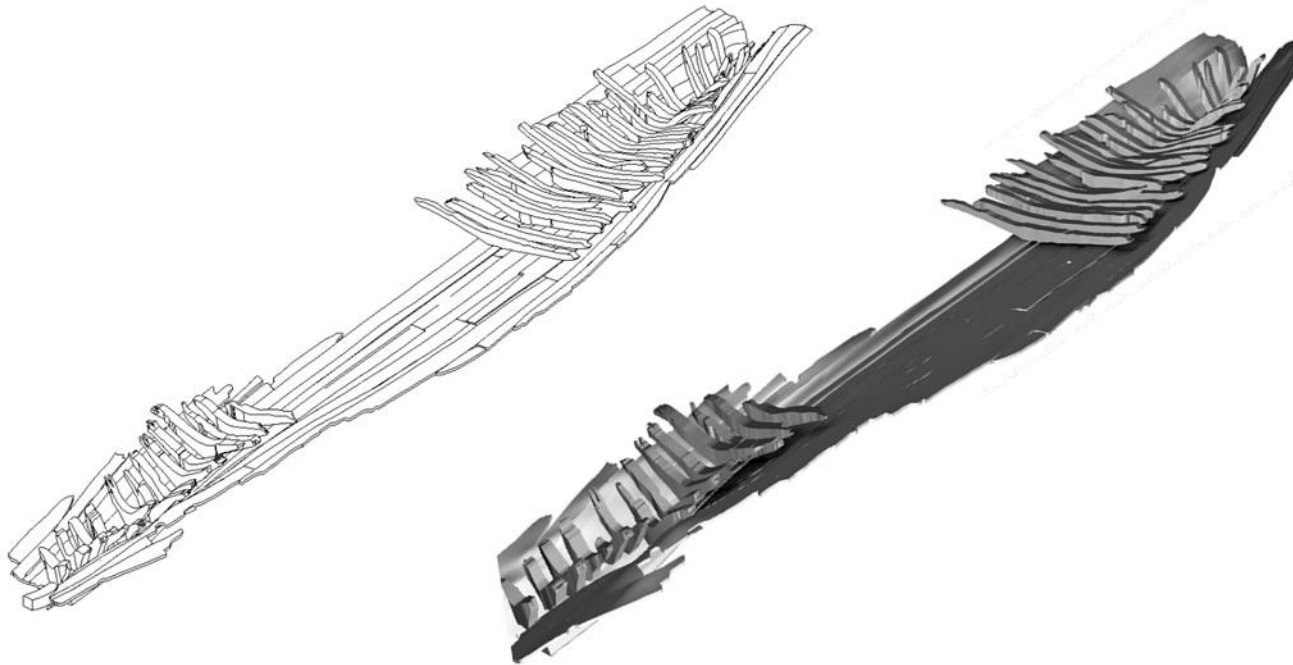
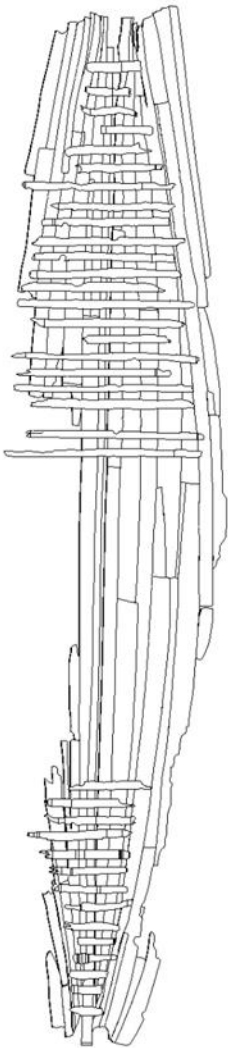
Technology is making
archaeology cheaper
and better, and making
it easier to share data.



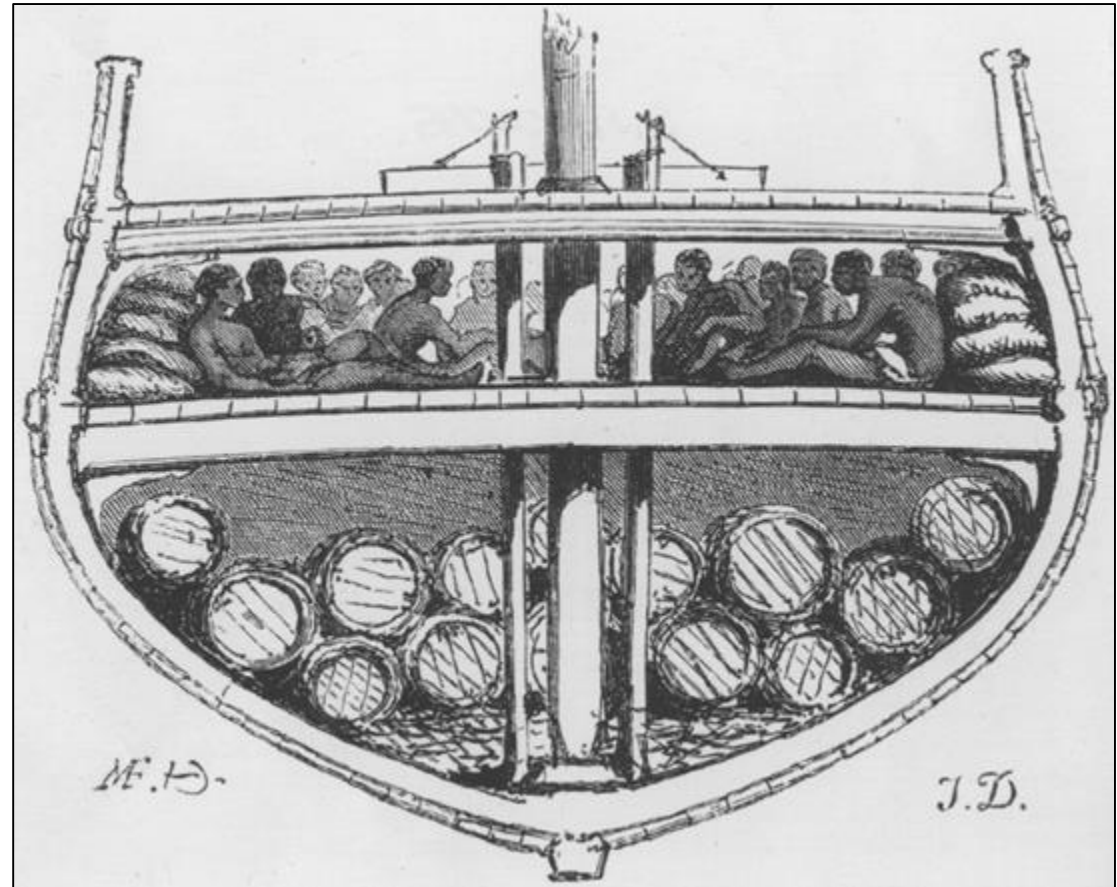
Off-the-shelf software is changing archaeology fast



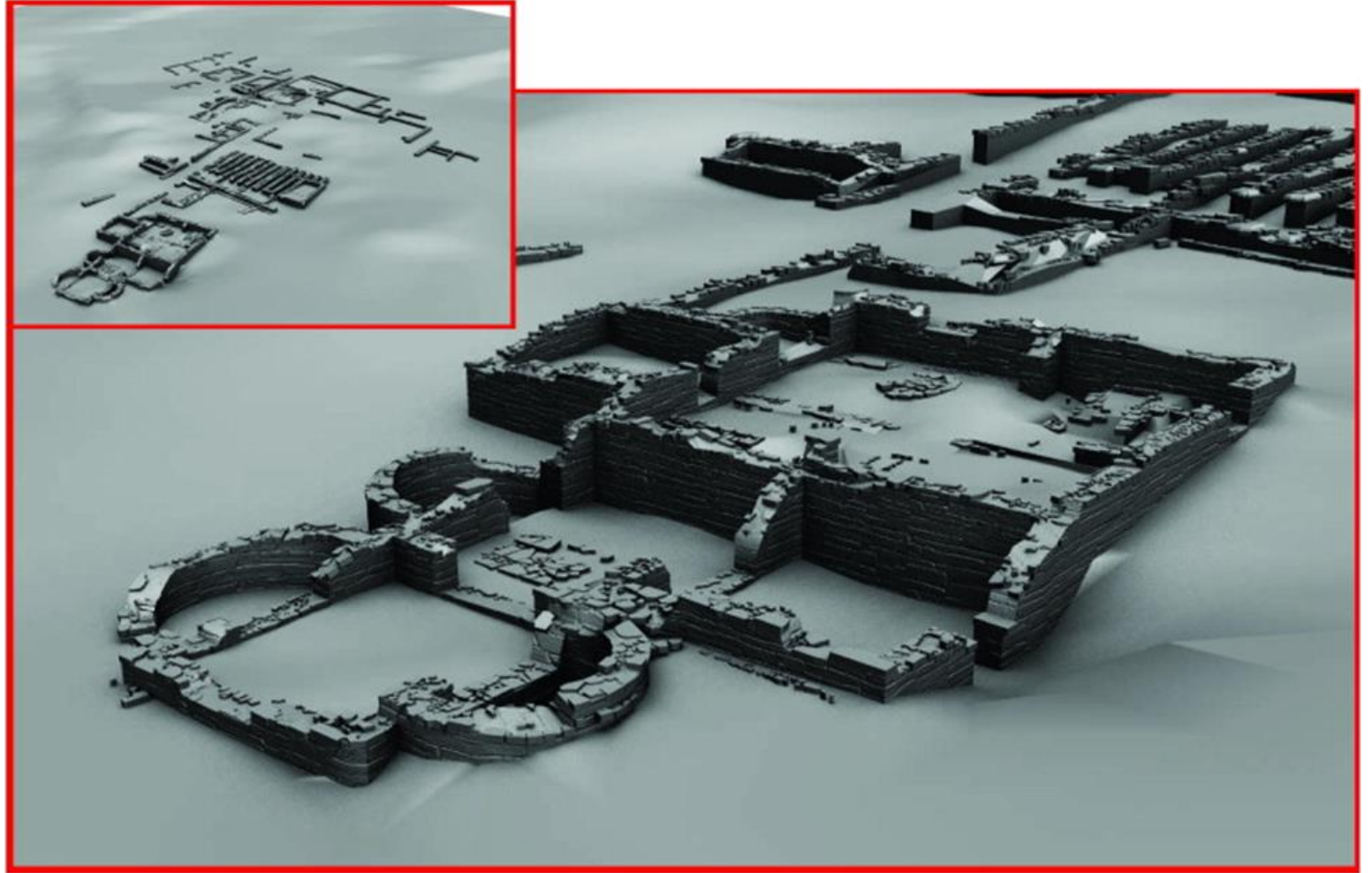
Interactive archaeological models as a basis for **scholarly discussions** (on-line sharing, real time sharing);



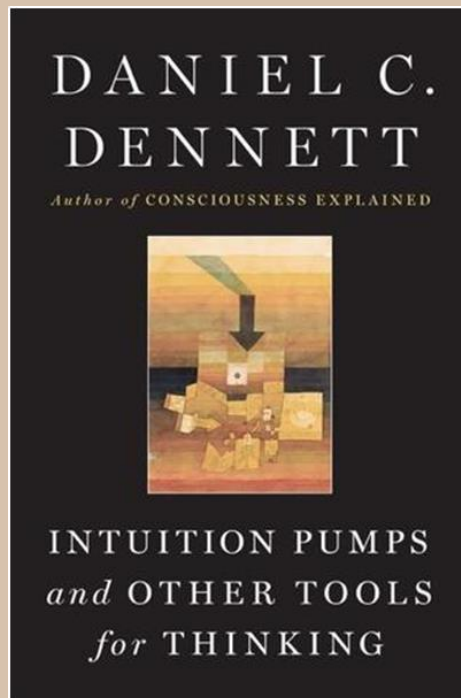
Interactive archaeological models as a basis for **public discussion**, outreach and political discussions of social issues (collective memories, collective amnesias, myth busting);



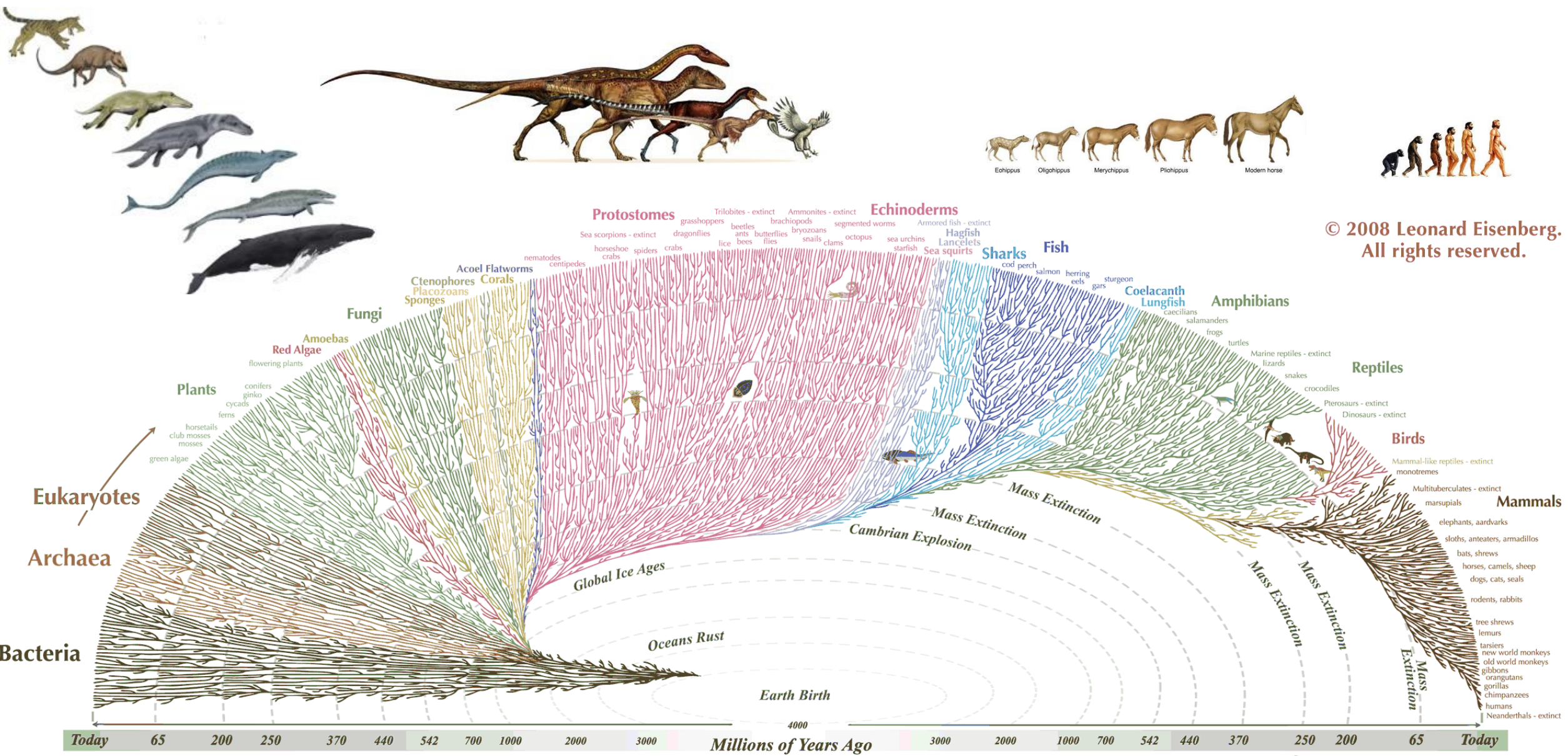
Thinking tools: tridimensional renderings can be layered and decompress the time enclosed within (e.g. animations of changing landscapes, architectures, or site formation processes)



Daniel Dennett suggests that thinking tools (and intuition pumps) are
apps that we upload to our necktops.

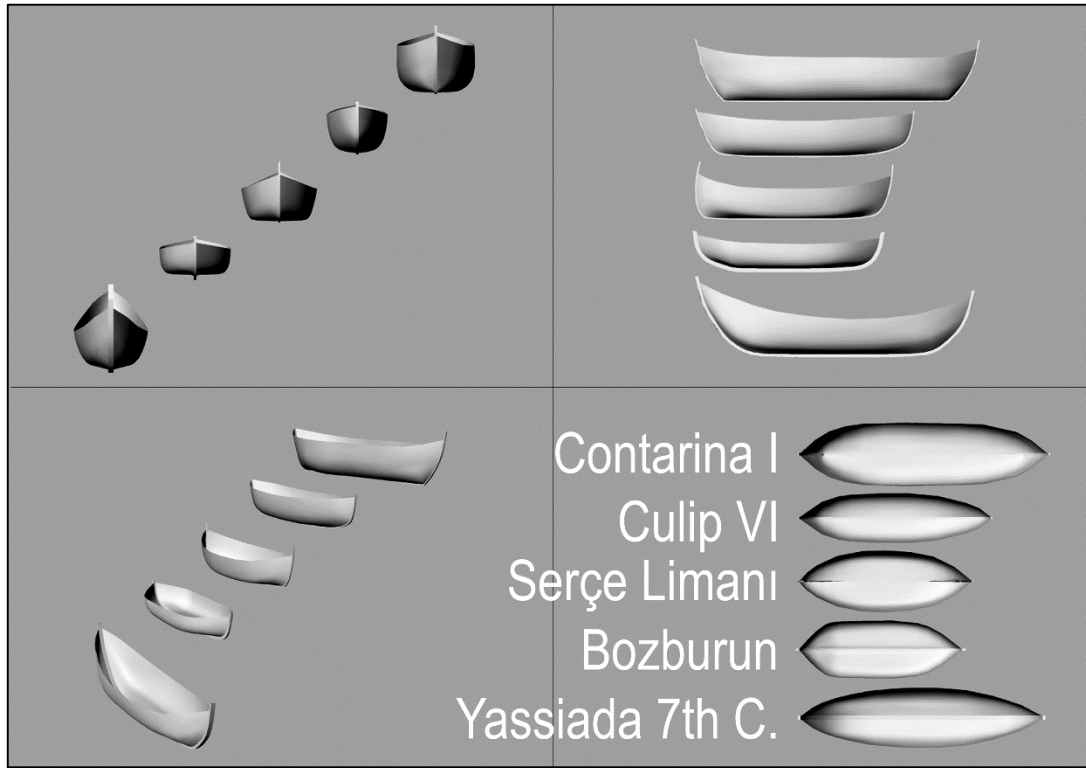


Thinking tools are words, numbers, graphics, images, maps, stories, etc.

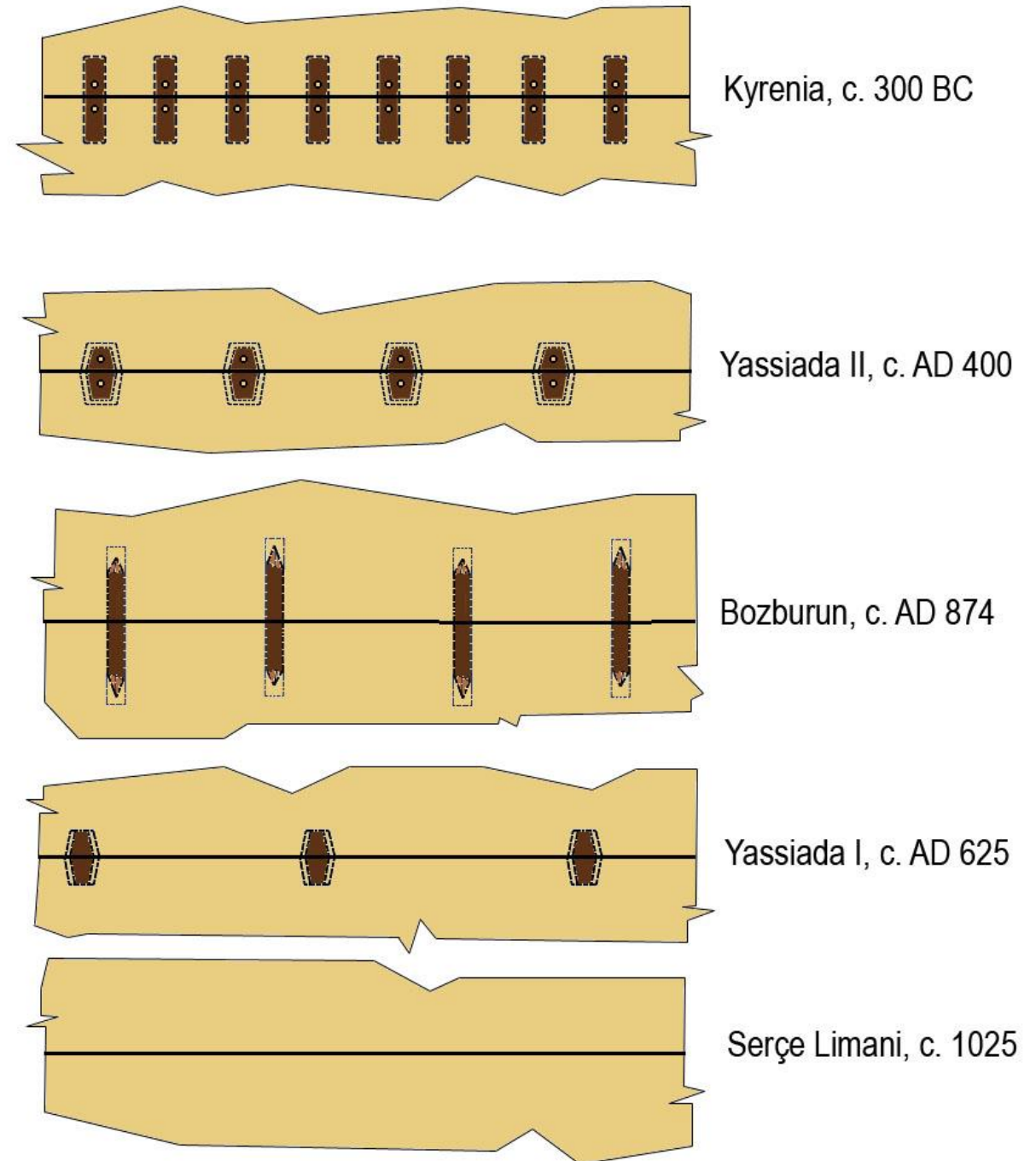


© 2008 Leonard Eisenberg.
All rights reserved.

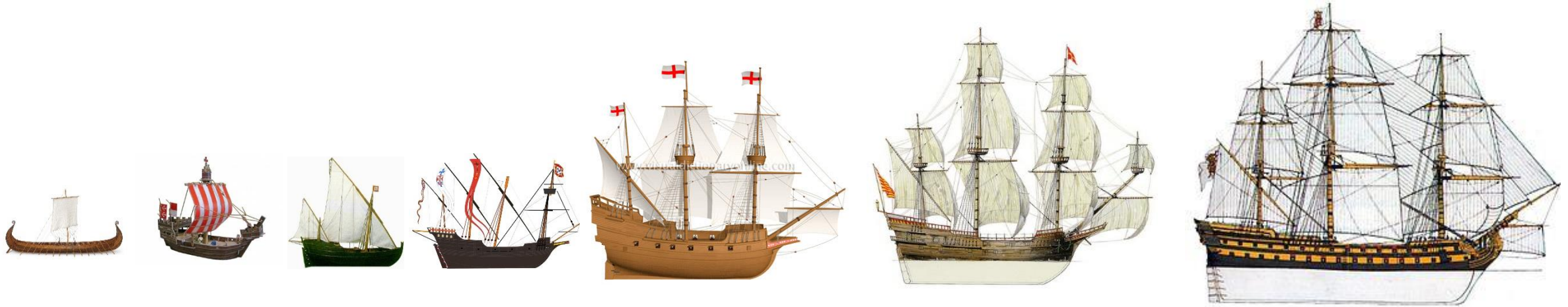
All the major and many of the minor living branches of life are shown on this diagram, but only a few of those that have gone extinct are shown. Example: Dinosaurs - extinct



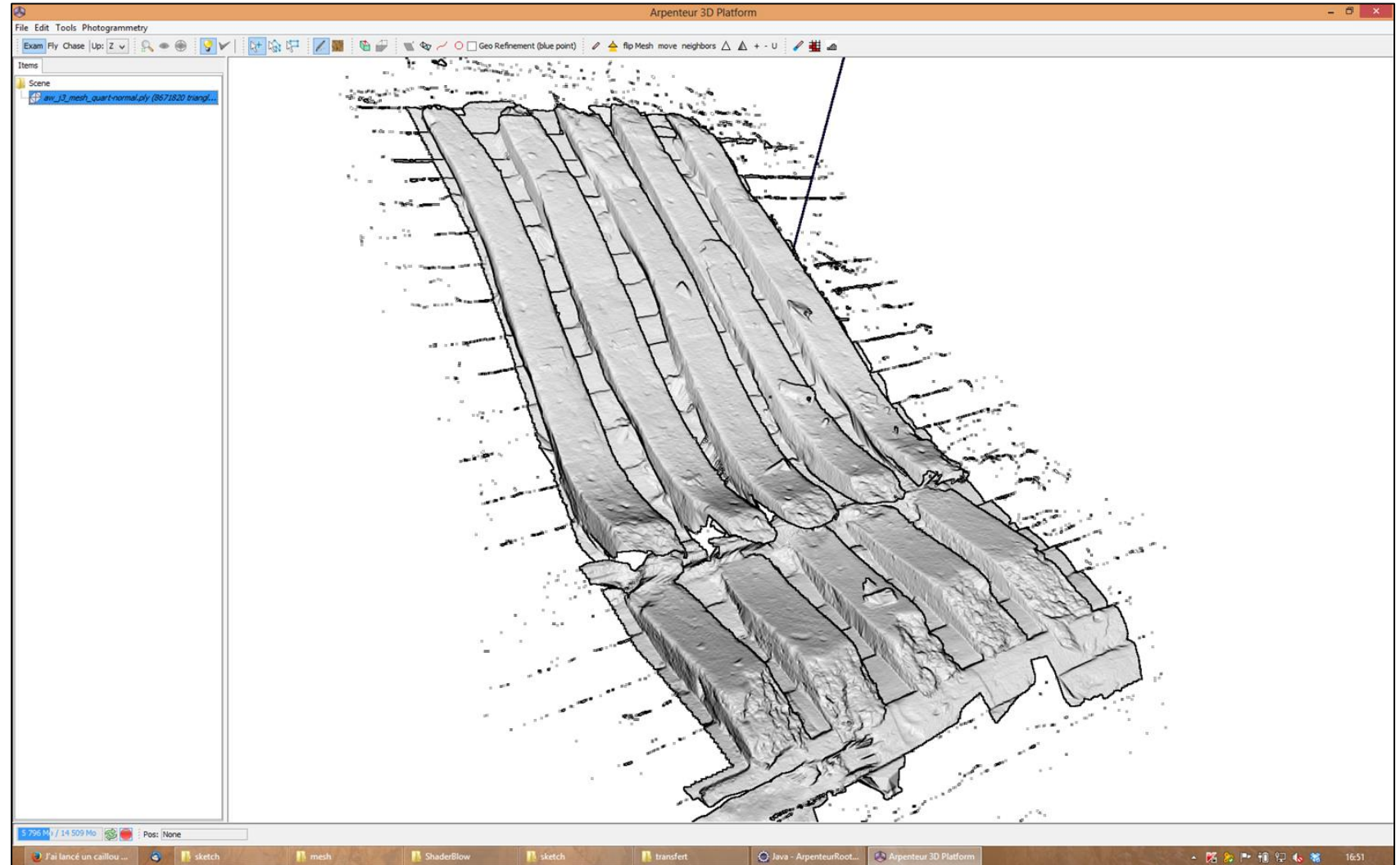
Thinking tools are words,
numbers, graphics, images,
maps, stories, etc.



Thinking tools are words, numbers, graphics, images, maps, stories, etc.



6. Tridimensional recording has evolved in the last decades, but still has space to grow (accuracy, automation, etc.)



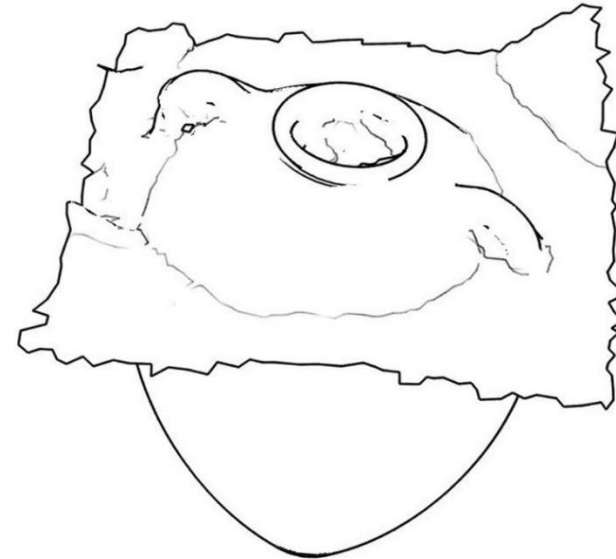
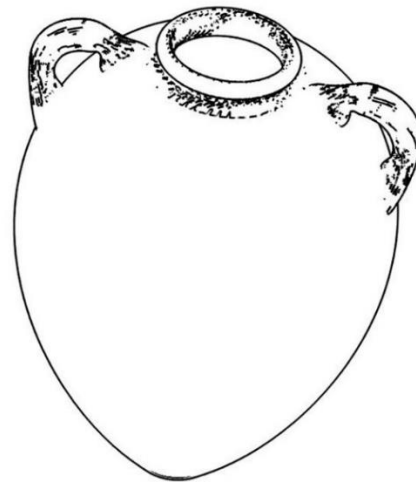
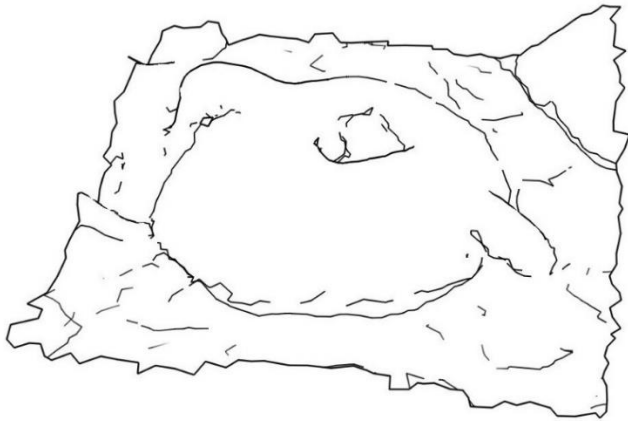
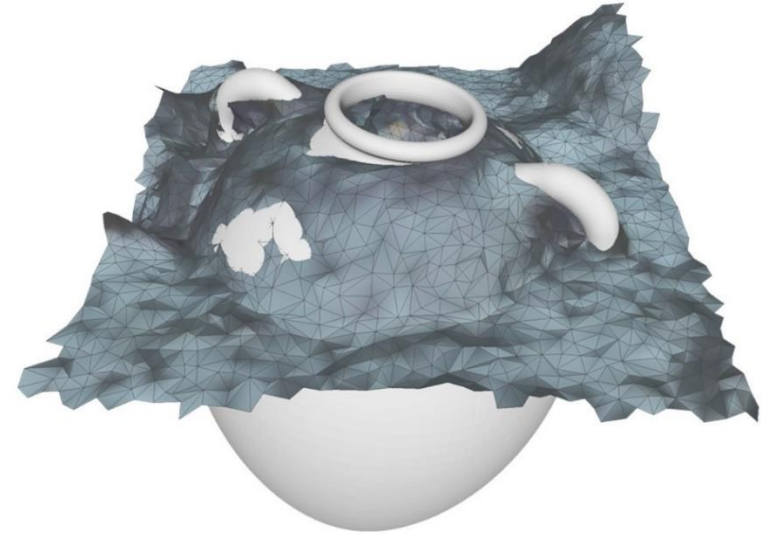
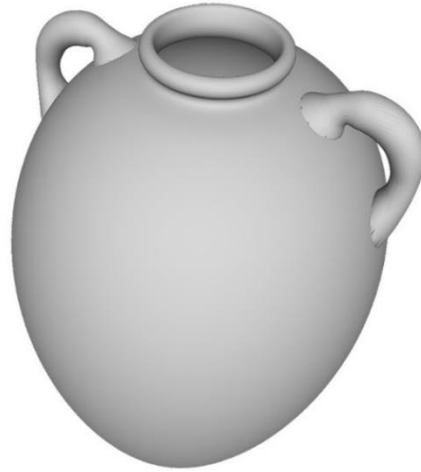
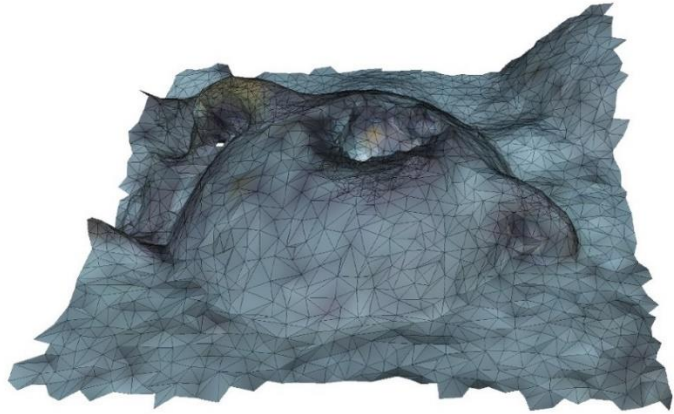
Pierre Drap, CNRS

Computer Science is changing the game.

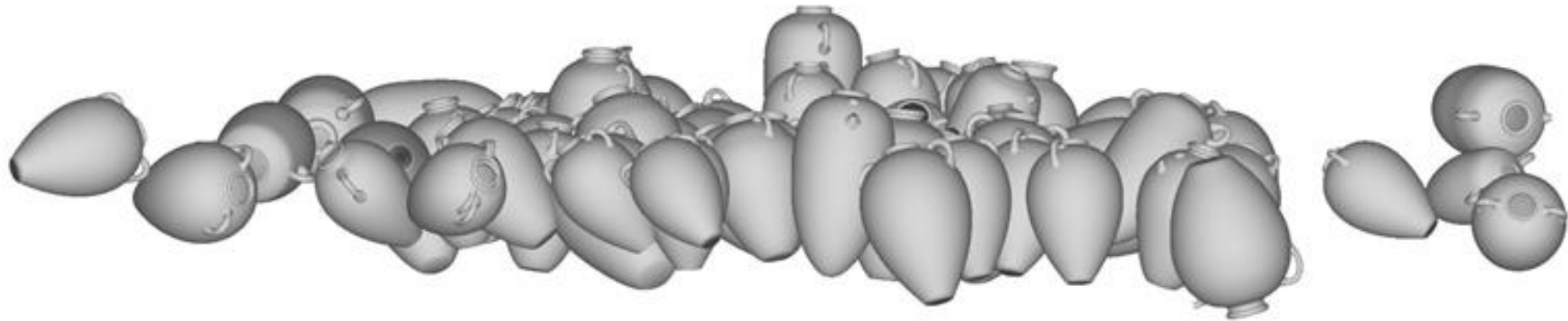
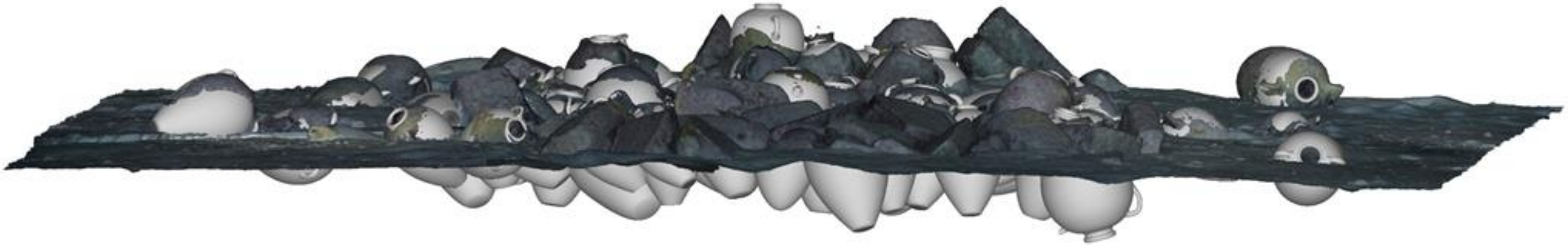
An eloquent example is Pierre Drap's (CNRS) work on the c. 700 BC Xlendi shipwreck, Malta.



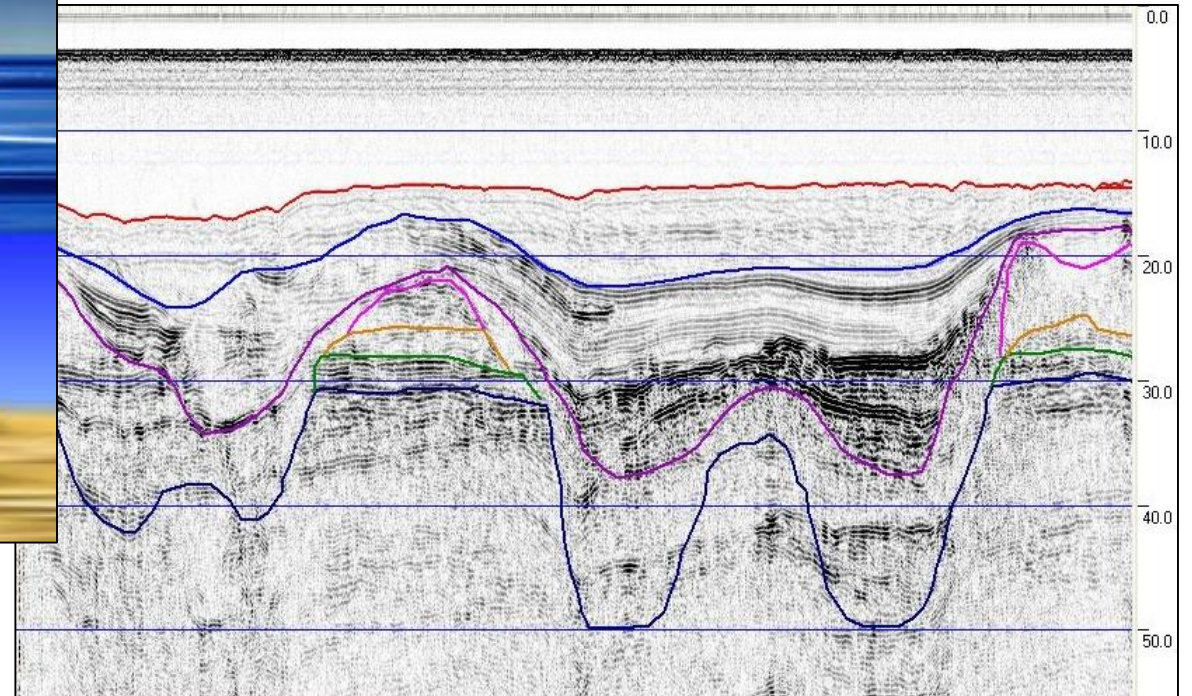
Computer Science: Pierre Drap (CNRS) and the c. 700 BC Xlendi shipwreck, Malta.



Computer Science: Pierre Drap (CNRS) and the c. 700 BC Xlendi shipwreck, Malta.



7. It is plausible to assume that sub-bottom profiling will evolve in the next decades to create the underwater equivalent to CT scanning (creating 3D images that have content, as opposed to meshes of points).

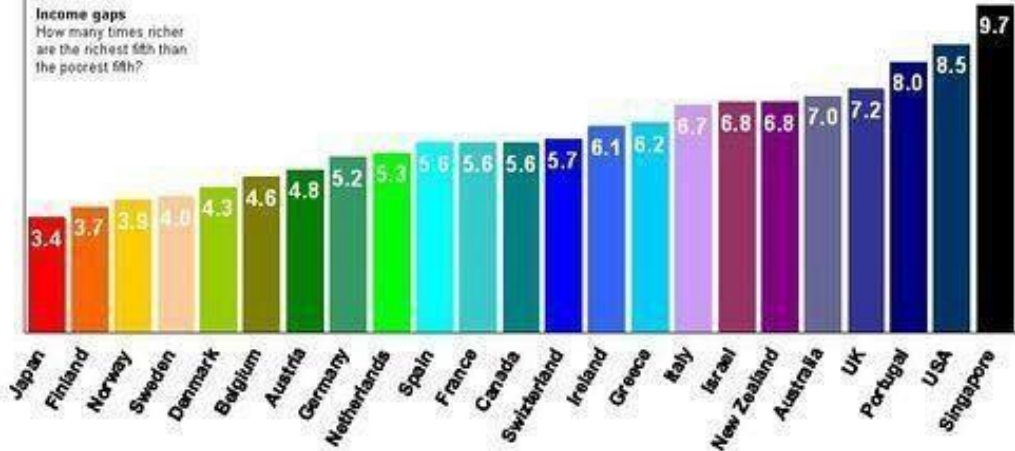


Inequality...

How much richer are the richest 20% in each country than the poorest 20%?

Income gaps

How many times richer are the richest 5th than the poorest 5th?



Wilkinson & Pickett, *The Spirit Level*

www.equalitytrust.org.uk

Equality Trust



...but what is the future and social value of archaeology in a world

where inequality is destroying (the western) middle classes?

Global warming, population growth, and inequality may generate 7,500,000,000 poor people by 2050 (80% of the global population).

Francis Fukuyama

THE END
OF HISTORY
AND
THE
LAST
MAN

The 21st century still risks becoming a century of scarcity and inequality.

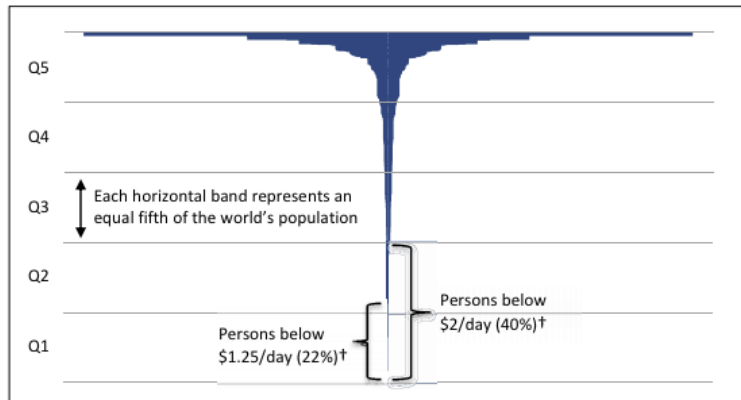


Who will **decide** what gets to be studied and preserved? And who is going to **pay** for it?



In the West there is pressure to **reduce public funding** for research (and cut taxes on the wealthier).

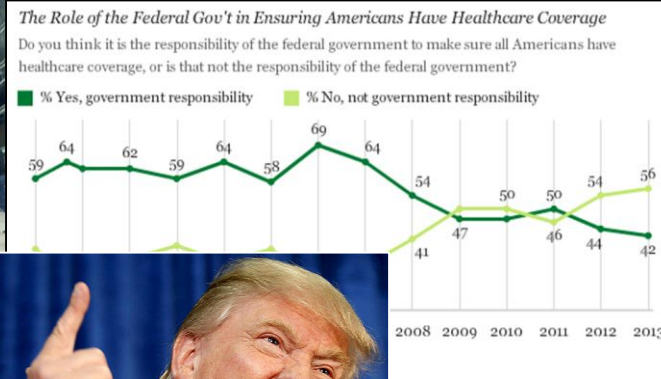
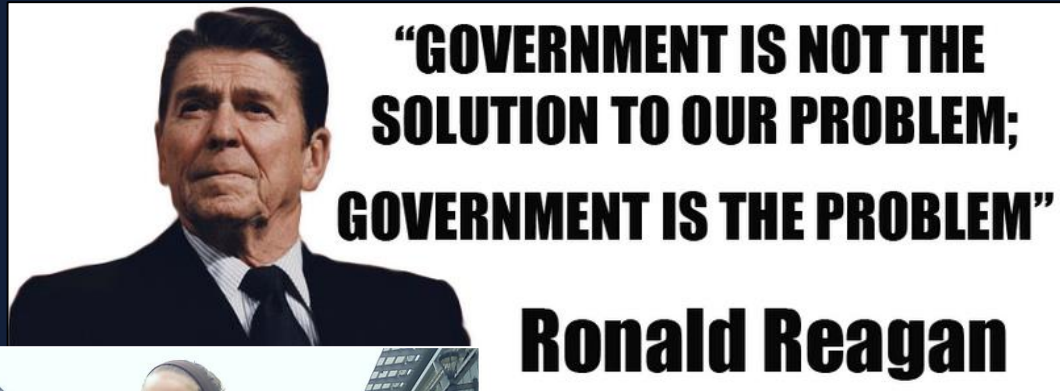
Figure 7. Global Income Distributed by Percentiles of the Population in 2007
(or latest available) in PPP constant 2005 international dollars*



Chairman of the House 'Science, Space and Technology Committee'
Lamar Smith (R-TX) is skeptical about the value of some taxpayer-supported research.



There are two competing views on the role of governments:



Between the rich and the poor, and the strong and the weak, **it is the law that liberates** and the freedom that oppresses.

Lacordaire

Europeans seem to believe that small government and deregulated capitalism offer **less individual and social options.**

William Osborne, composer, 2004, "Marketplace of Ideas: but first, the Bill," *Arts Journal*.



Paris is famous for its large and widely advertised budget public projects (left Louvre and right Quai d'Orsay). This policy was criticized on an ideological basis, not economic: eg. **Fumaroli vs. Jack Lang**.

And that capitalism **can be a leveling force** that makes the world homogenous, and destroys cultures and ways of living.



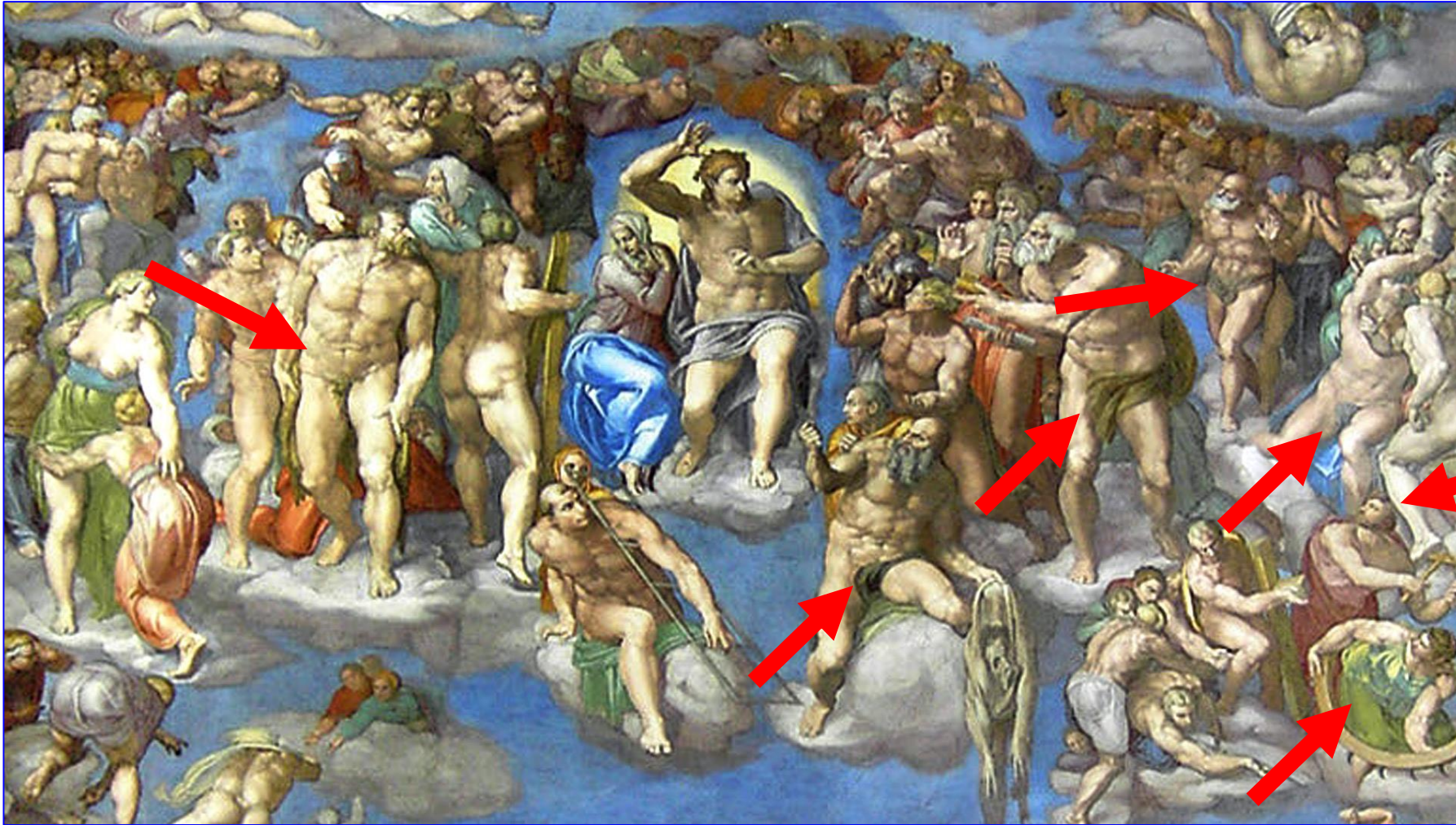
Taxes: “Germany’s public arts funding (...) allows the country to have **23 times** more full-time symphony orchestras per capita than the United States, and approximately **28 times** more full-time opera houses.”

William Osborne, 2004



Democracy problem: the production of one hour of opera may cost more than most people can afford.

How do we ensure that intellectuals (scientists, artists, etc.) are free to create?



The Last Judgement, Sistine Chapel, Rome. Painted by Michelangelo and dressed by Daniele da Volterra, il Braghettone.

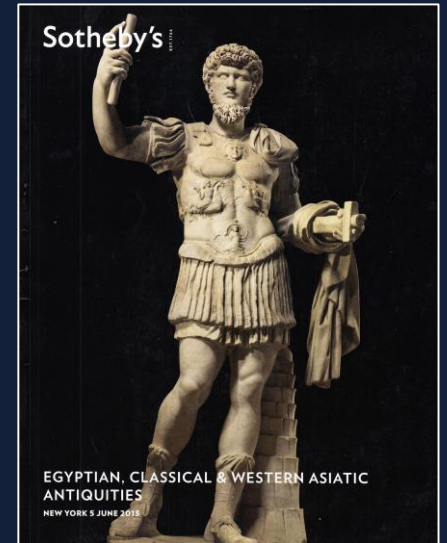
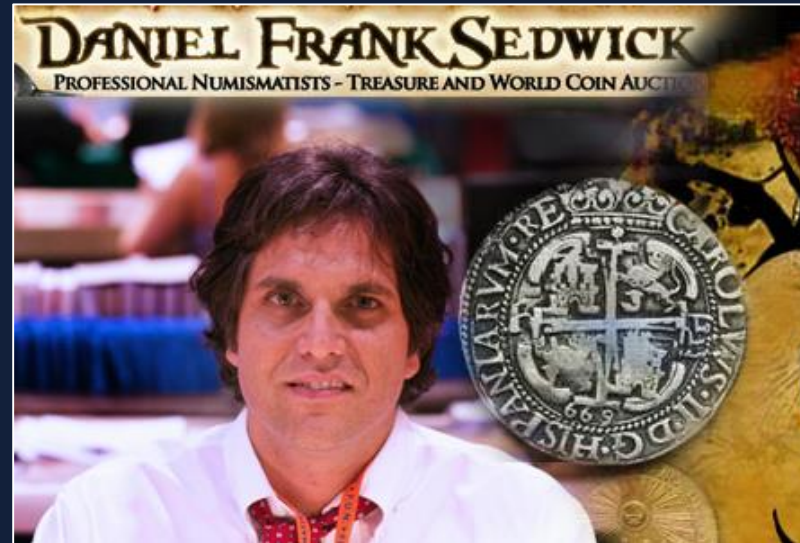
Patrons are a solution, but they will fund what interests them.

Archaeologists help **construct and deconstruct collective memories**. Like art, archaeology is political. Taxpayer's money, channeled through government agencies, with proposals and juries, promises more independence than patrons can provide.



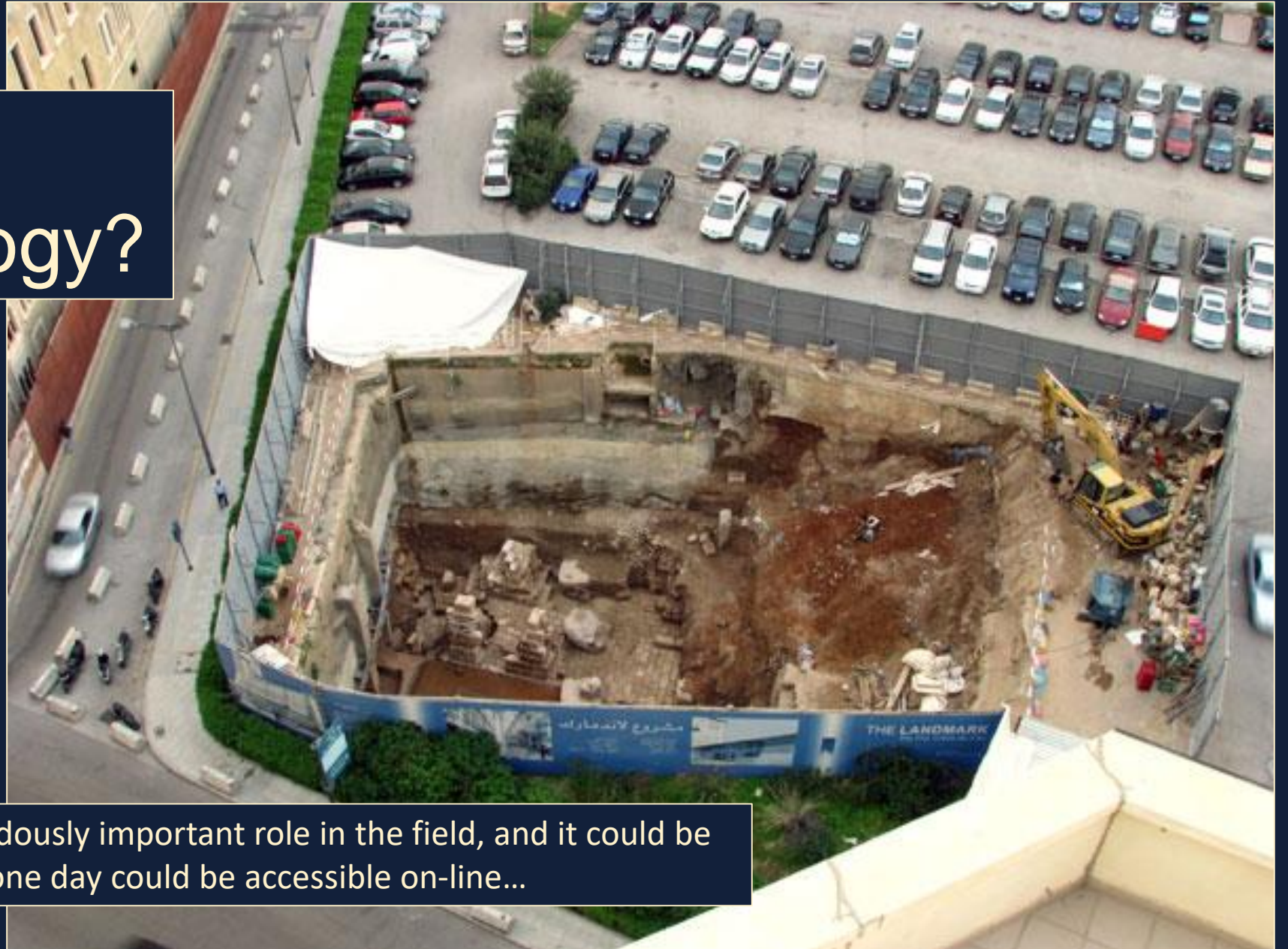
LEGO will not SELL to Ai Weiwei.

Who will decide **what narratives are acceptable**, or what gets to be studied and preserved? And who is going to pay for it?



Who will determine what gets to be studied and preserved? And who is going to pay for it?

1. Contract Archaeology?



Contract archaeology has a tremendously important role in the field, and it could be improved. Imagine if their reports one day could be accessible on-line...

2. Patrons, museums, and other private organizations!



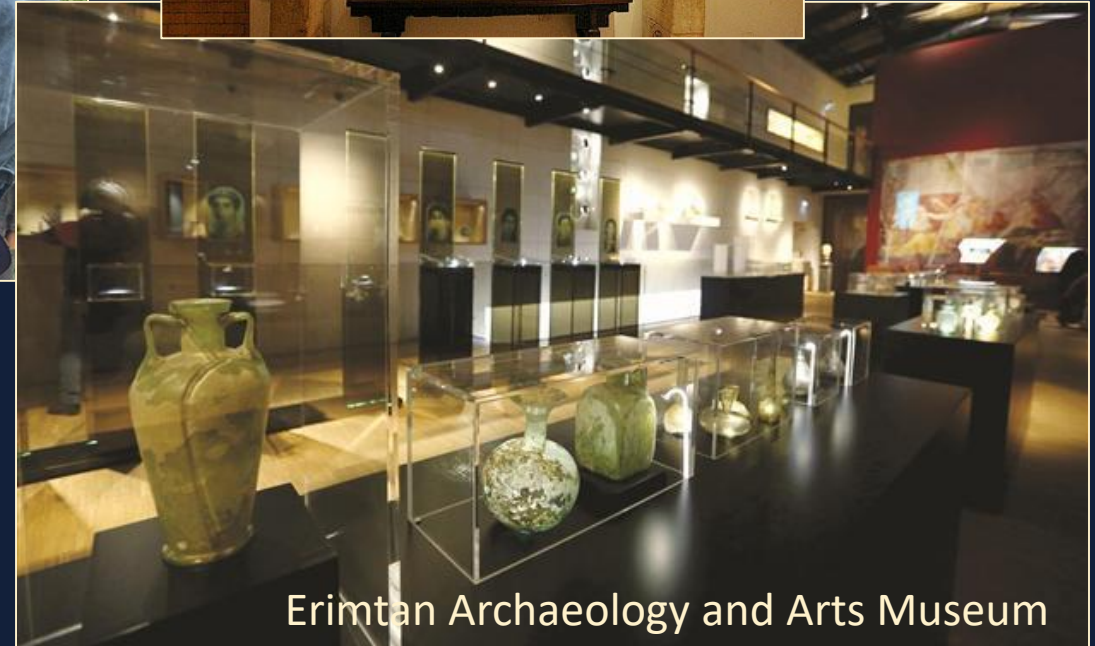
Burke Museum, Seattle



Arabia Steamboat
Museum, Kansas



Huayun Museum,
Tianjin, China



Erimtan Archaeology and Arts Museum

2. ...in joint ventures with governments.

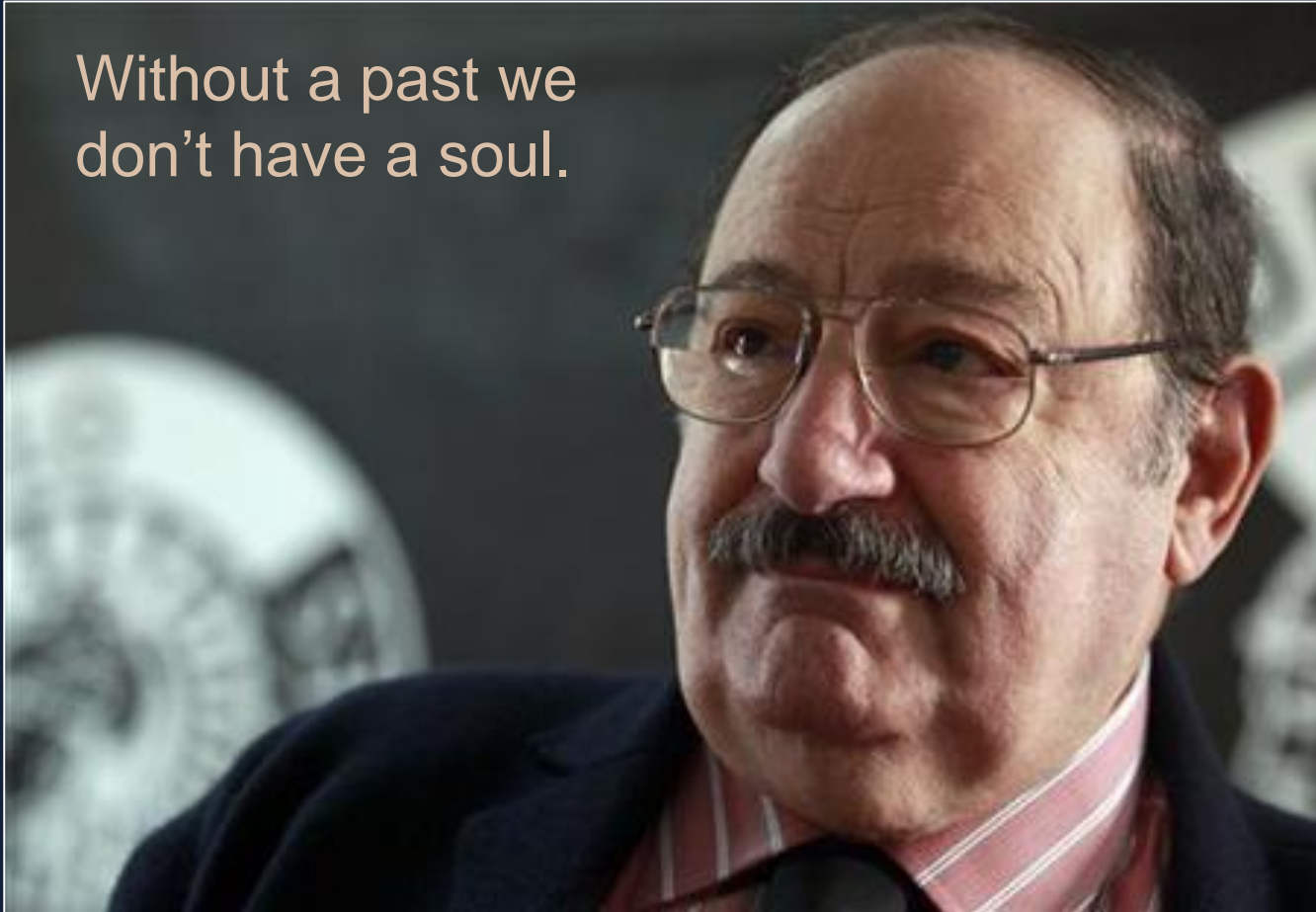
The **Institute of Nautical Archaeology** wouldn't survive without the support of Texas A&M University, the Turkish taxpayers, the Kenyan taxpayers, the Croatian taxpayers, the Portuguese taxpayers, and so on.



3. Taxpayers?

taxpayers

Without a past we
don't have a soul.



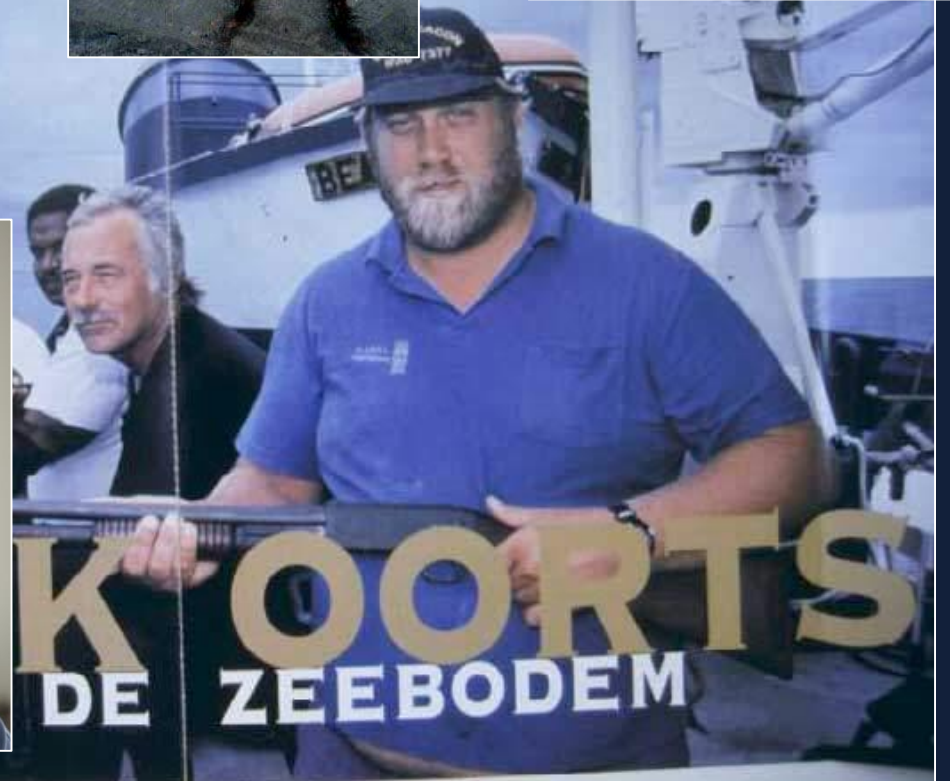
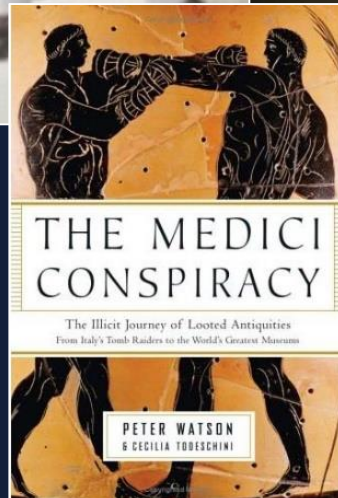
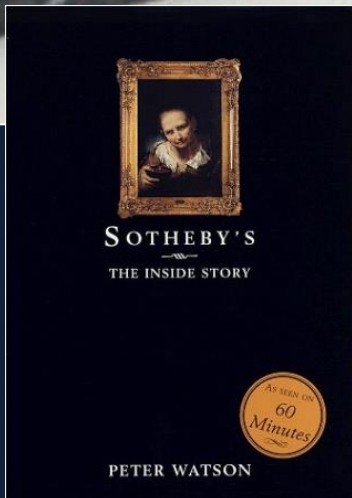
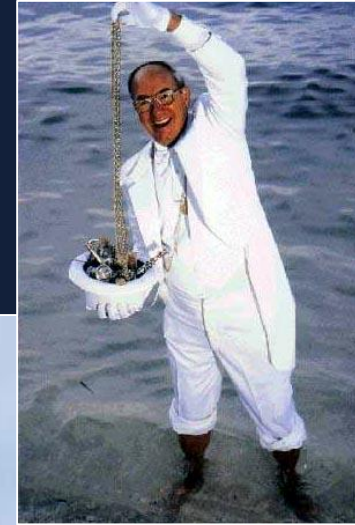
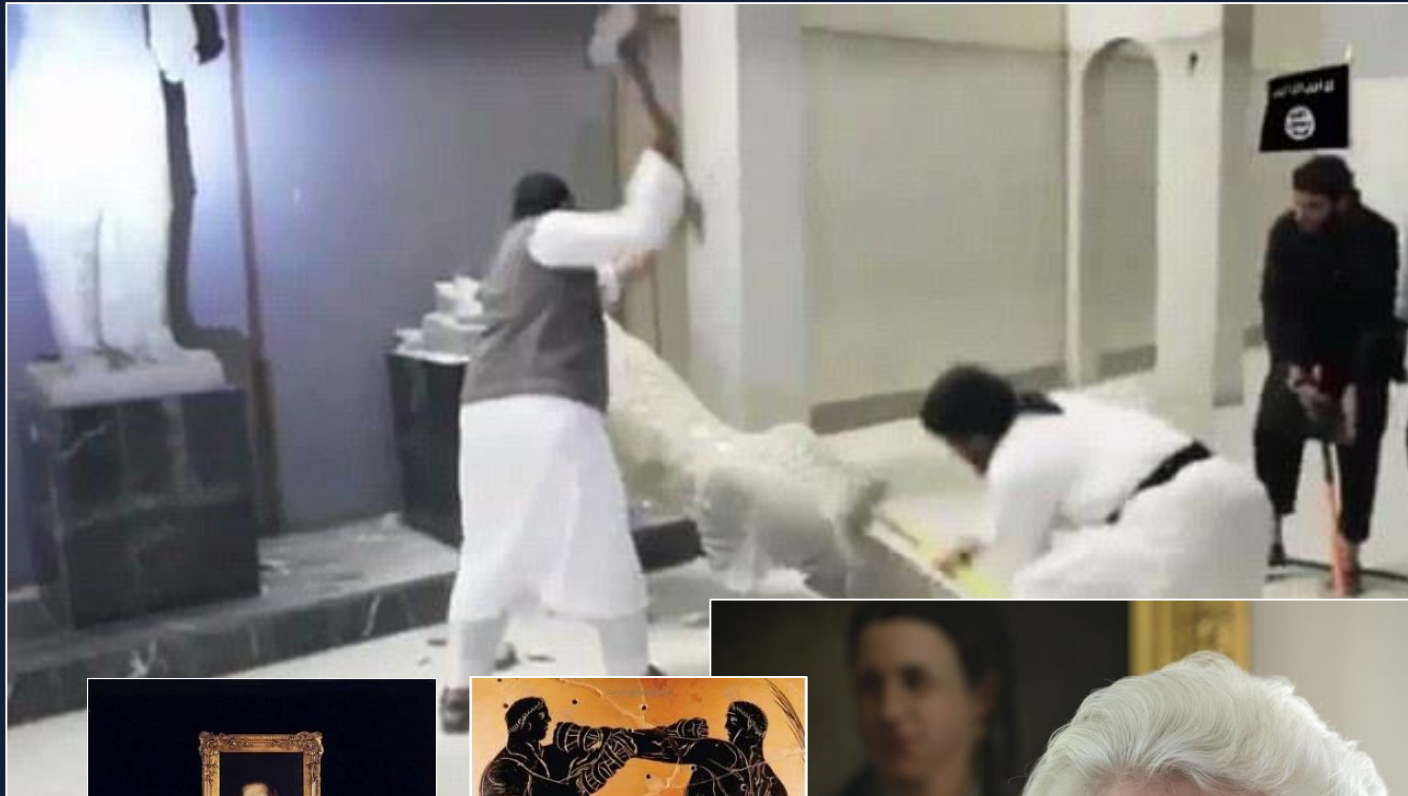
patrons and consumers



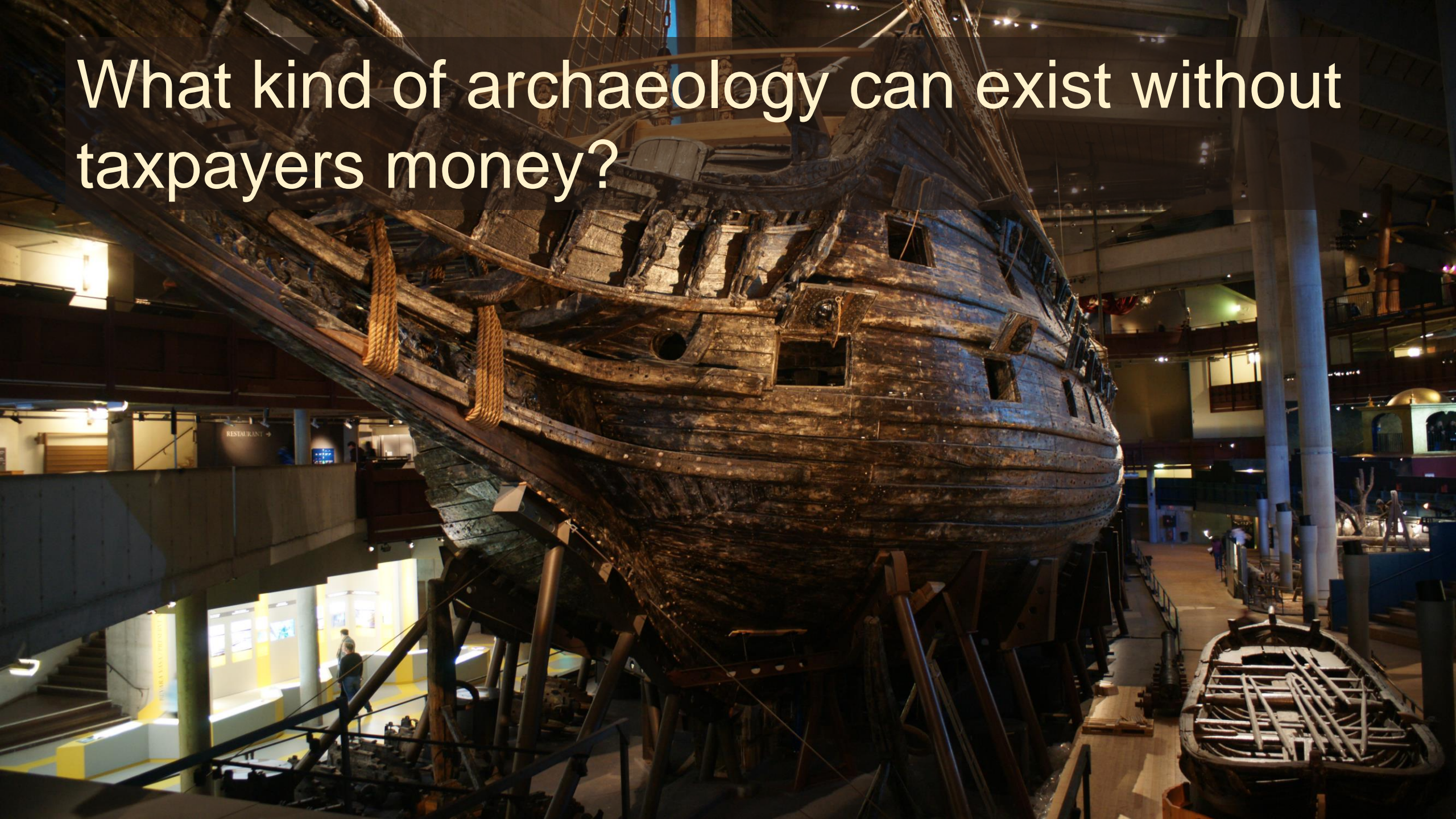
Marc Fumaroli
L'Etat culturel
Essai sur une religion moderne

Editions de Fallois
PARIS

4. Treasure hunters?



What kind of archaeology can exist without taxpayers money?



Will big projects go away?





What is the social value of archaeology?





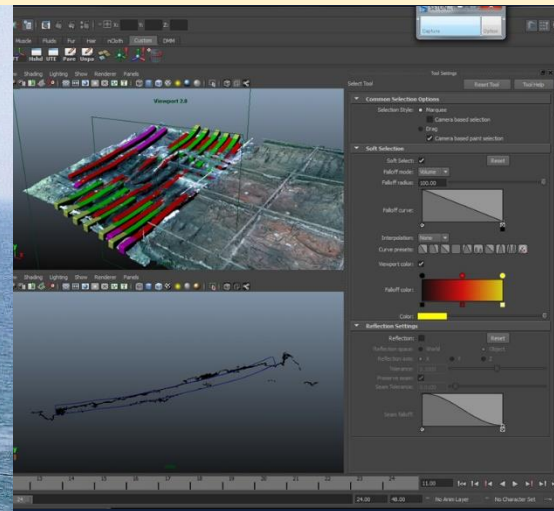
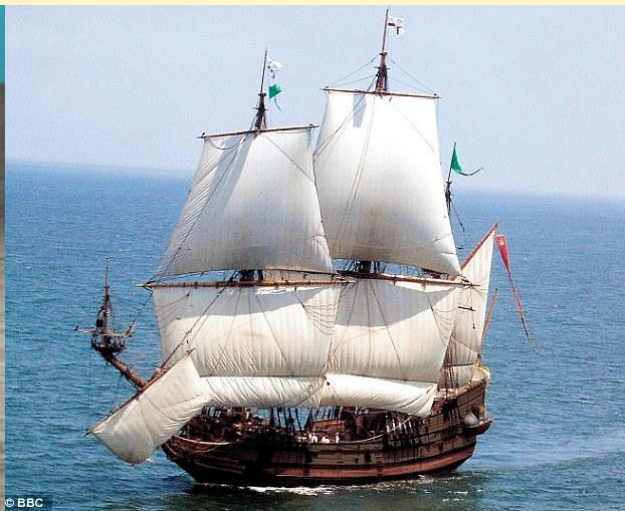
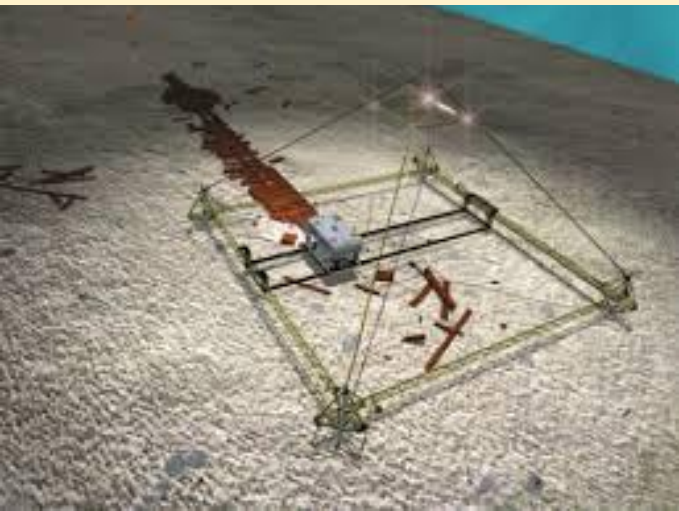
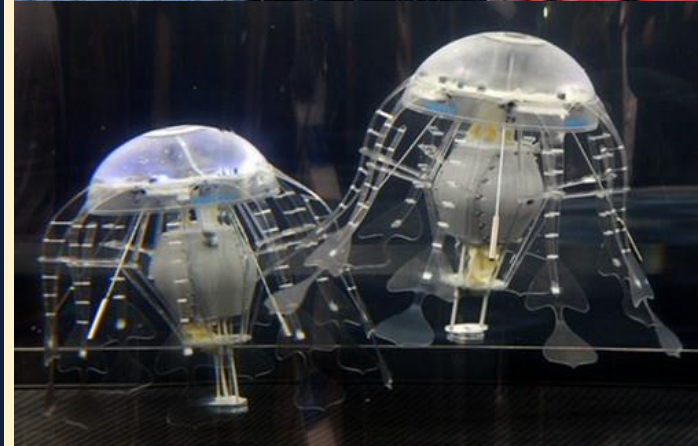
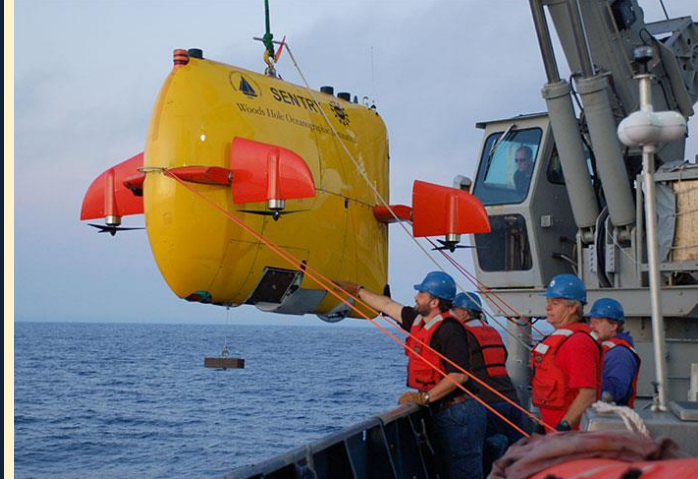
Howard Zinn:

If we don't know our past,
we will have to trust our
politicians!

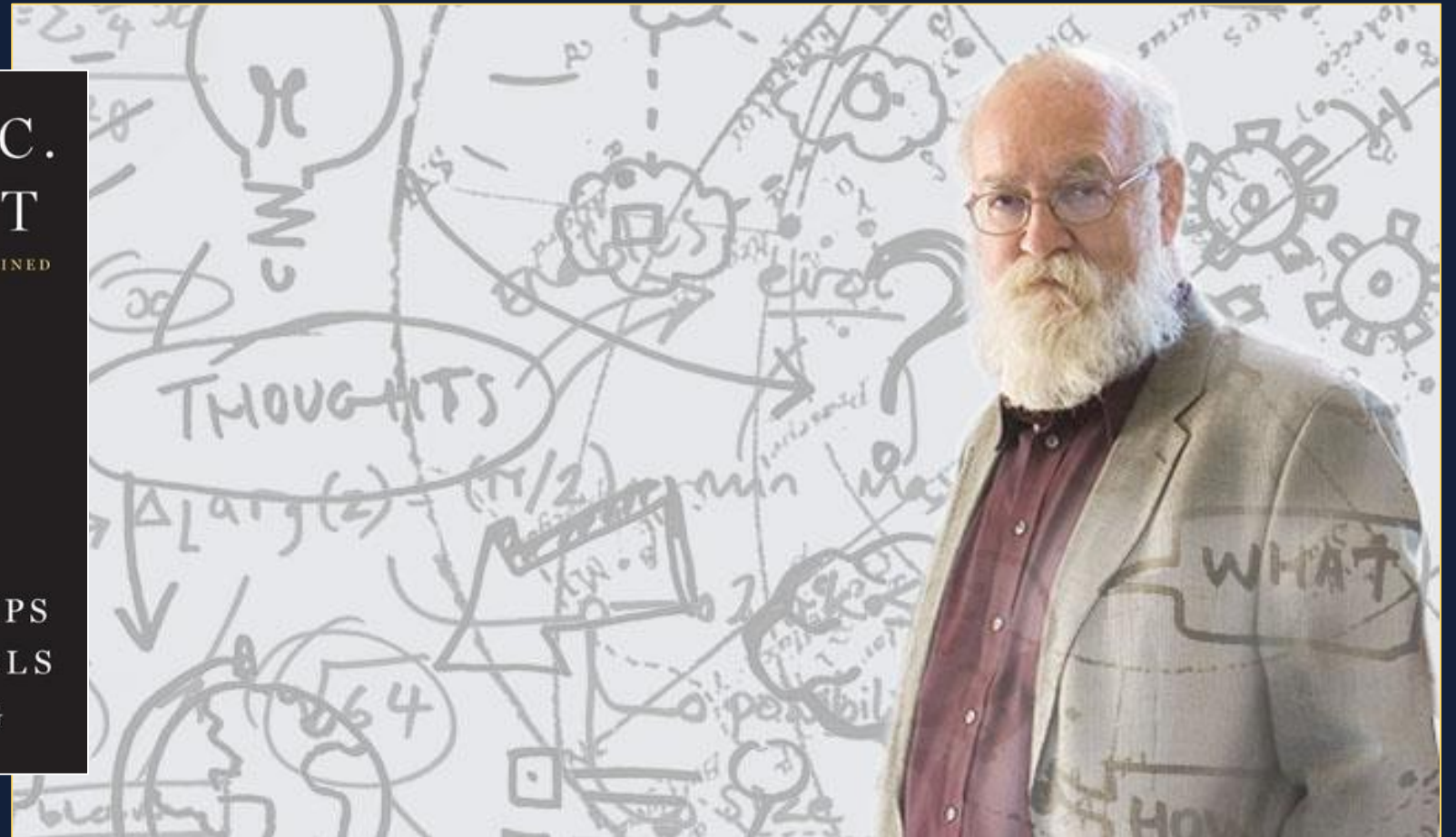
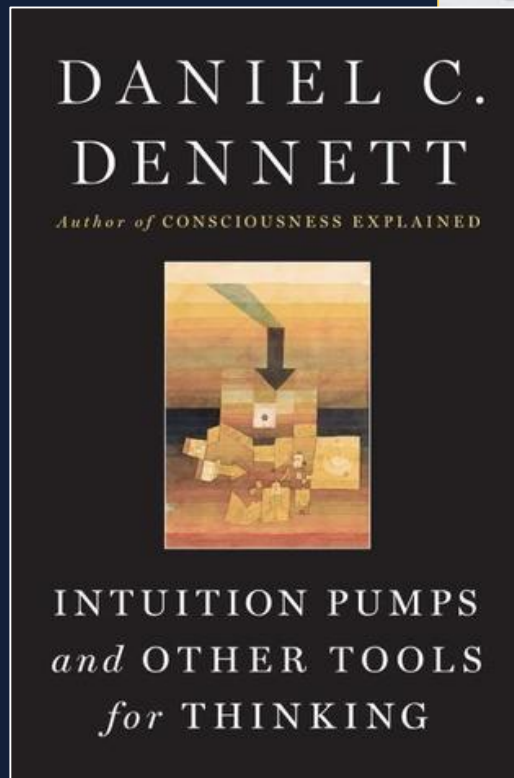
Shannon Lee Dawdy (2009) asks three questions:

- a. Should it be useful?
- b. Is it threatened?
- c. Can it save the world?

“Millennial archaeology. Locating the discipline in the age of insecurity” *Archaeological Dialogues* (2009) 16.2: 131-142.



c. It should definitely try to save the world! In fact, changing the world should be the main goal of archaeology: by providing the world with thinking tools!

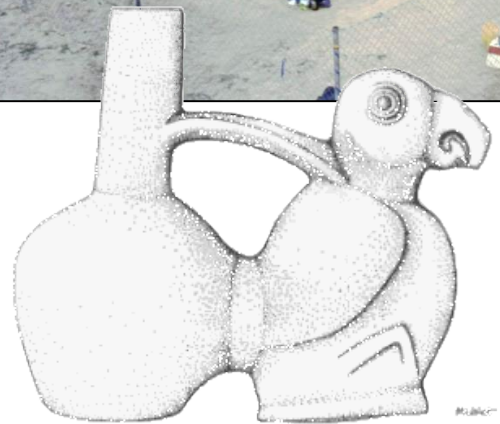


...apps that we upload to our necktops.

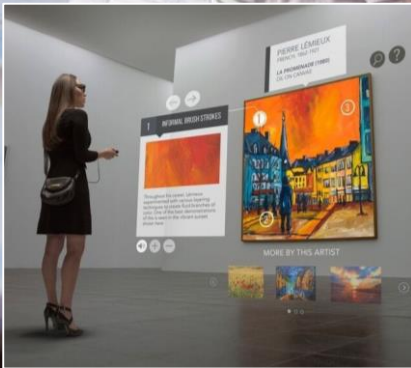
San Pedro de Alcantara
(1784)




San Pedro de Alcantara (1784) transported Fernando Tupac Amaru Bastidas, the son of José Condorcanqui (Tupac Amaru II) who was forced to witness the execution of his parents and died in exile in Spain.



Outreach: technology is changing everything, starting with museums:



A close-up, cinematic shot of a Neanderthal's face. The individual has pale, wrinkled skin and striking blue eyes. Their hand, showing prominent veins and a rough texture, is raised near their forehead, holding a dark, textured rock. The background is dark and indistinct, suggesting a cave or underground setting.

Will archaeologists start publishing their excavations?

Archaeologists probably publish around 25% of the sites they dig (e.g. Stoddart and Malone 2001; Atwood 2007; Boardman 2009; Owen 2009; Bass 2011). **Treasure hunters fill the niche created by archaeologists and cater to the interested public.**

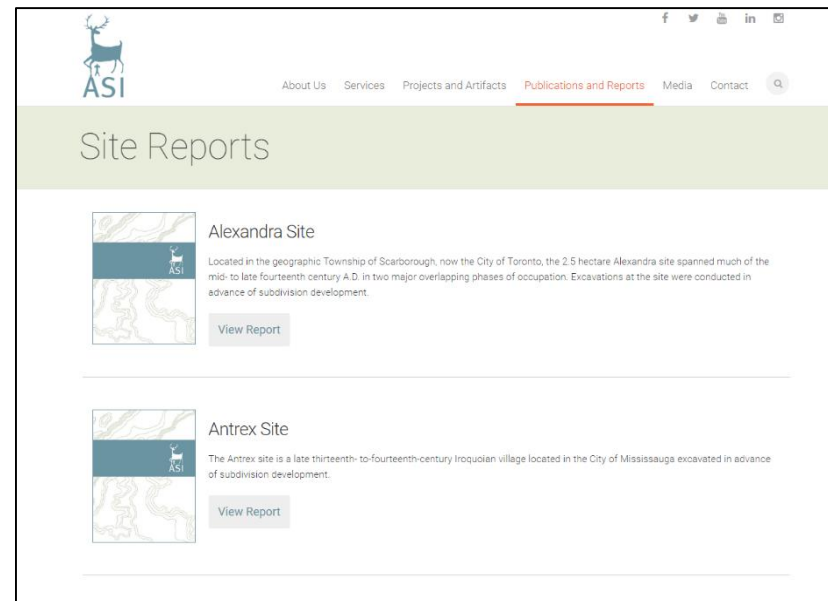
Will archaeologists start sharing their primary data?





ASI is a Canadian-owned company that was founded in 1980 in response to increasing public awareness of the importance of the province's heritage. With offices in Toronto and Burlington, we are the largest archaeological and cultural heritage consulting firm in Ontario.

<http://asiheritage.ca/>



They are putting all their reports online, because although they work for contractors and cities, they are paid by the taxpayers.



Friends of the Newport Ship



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The Newport Ship

The best preserved 15th century ship ever found

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The FONS and the Project

Find out how the Friends help the Newport Ship.



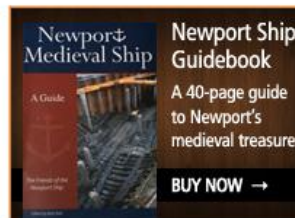
Latest News

Keep up to date with the latest news from the Friends of the Newport Ship.



Events

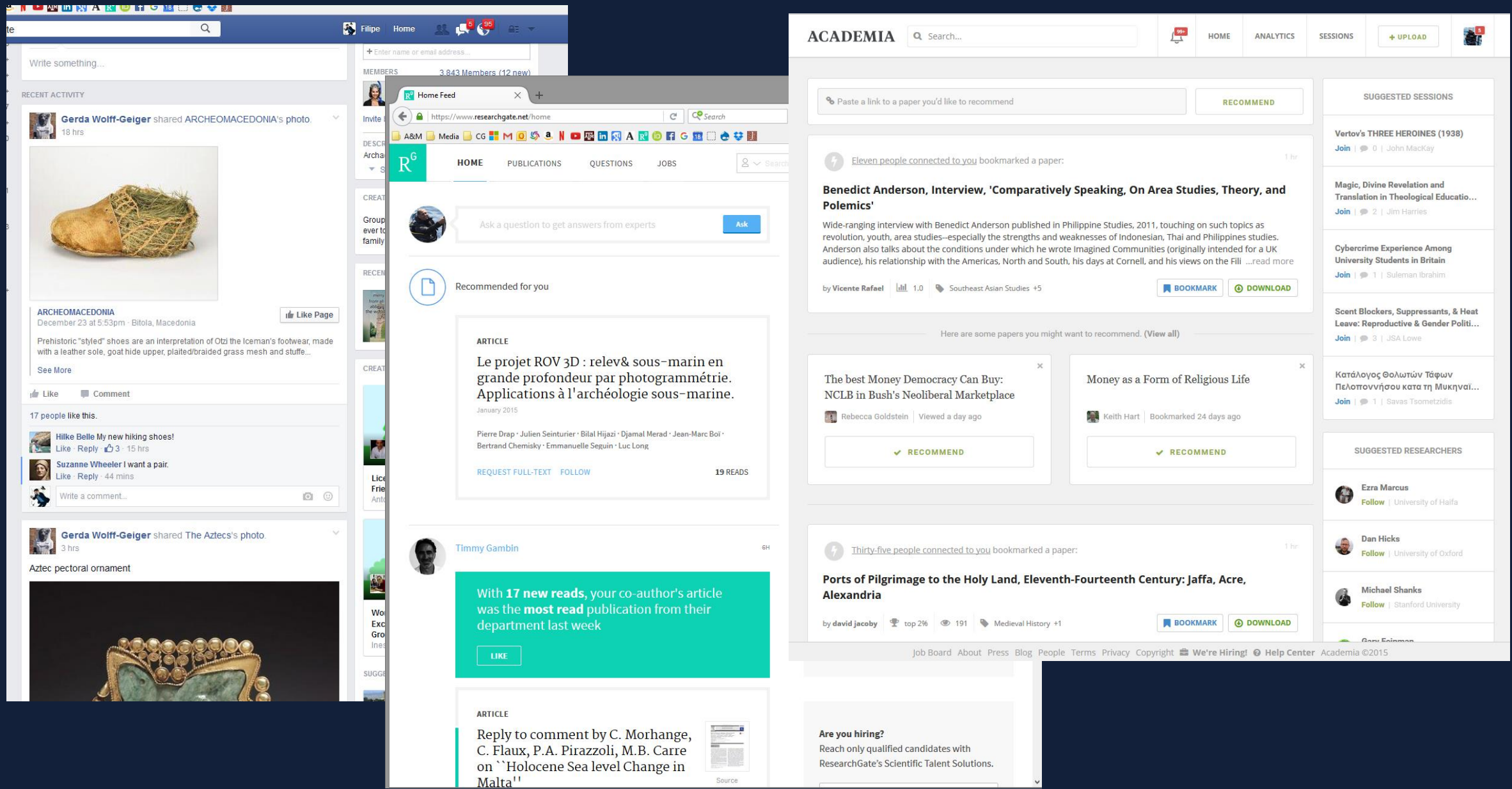
We hold talks, open days and other events throughout the year. Most are free and open to everyone.



Official Guidebook

The official 40-page illustrated guidebook is filled with information about the Ship.

It is happening...



...and the internet is changing the game fast.

Kotaro Yamafune on Sket... X +

https://sketchfab.com/kotaro_yamafune

sketchfab kotaro yamafune

Sketchfab EXPLORE COMMUNITY BLOG Search LOGIN or SIGN UP UPLOAD

Kotaro Yamafune PRO

Nautical Archaeologist / Ship Reconstructor Texas, the United States

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Interactive Virtual Reality Development

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Kotaro Yamafune

Subscribed 12

207 views

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Published on Nov 8, 2015

Enjoy real 3D experience with Google Cardboard!!!!

https://skfb.ly/EX6V (Interactive Visual Museum of Wreck 2)

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Trends:

1. The evolution of ideas is wasteful and feeds on chaos and randomness (brainstorming). Creativity has always been a part of the archaeological thought, but **images are less secret** than 20 years ago. **Archaeology** and **art** must be increasingly considered together.

2. Archaeology is including multiple publics and multiple narratives.





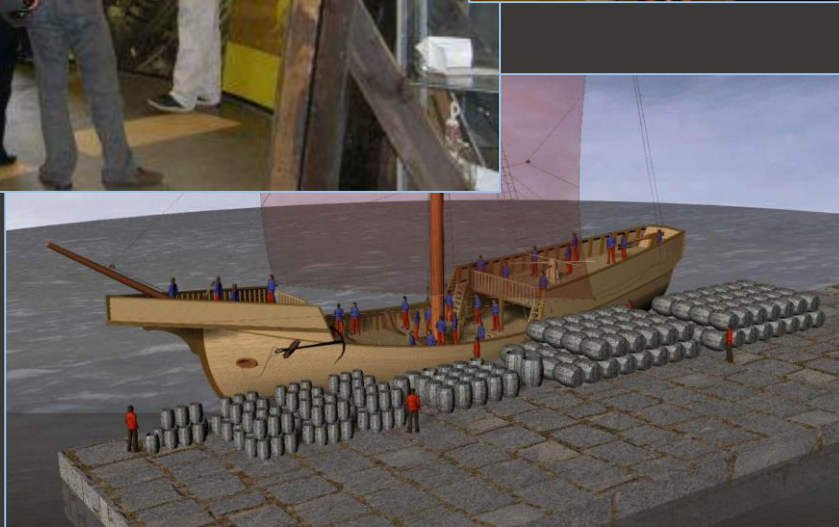
2.1. Contract Archaeology

Contract archaeology firms have **amazing archives**, with large amounts of information that can be analyzed and data mined.

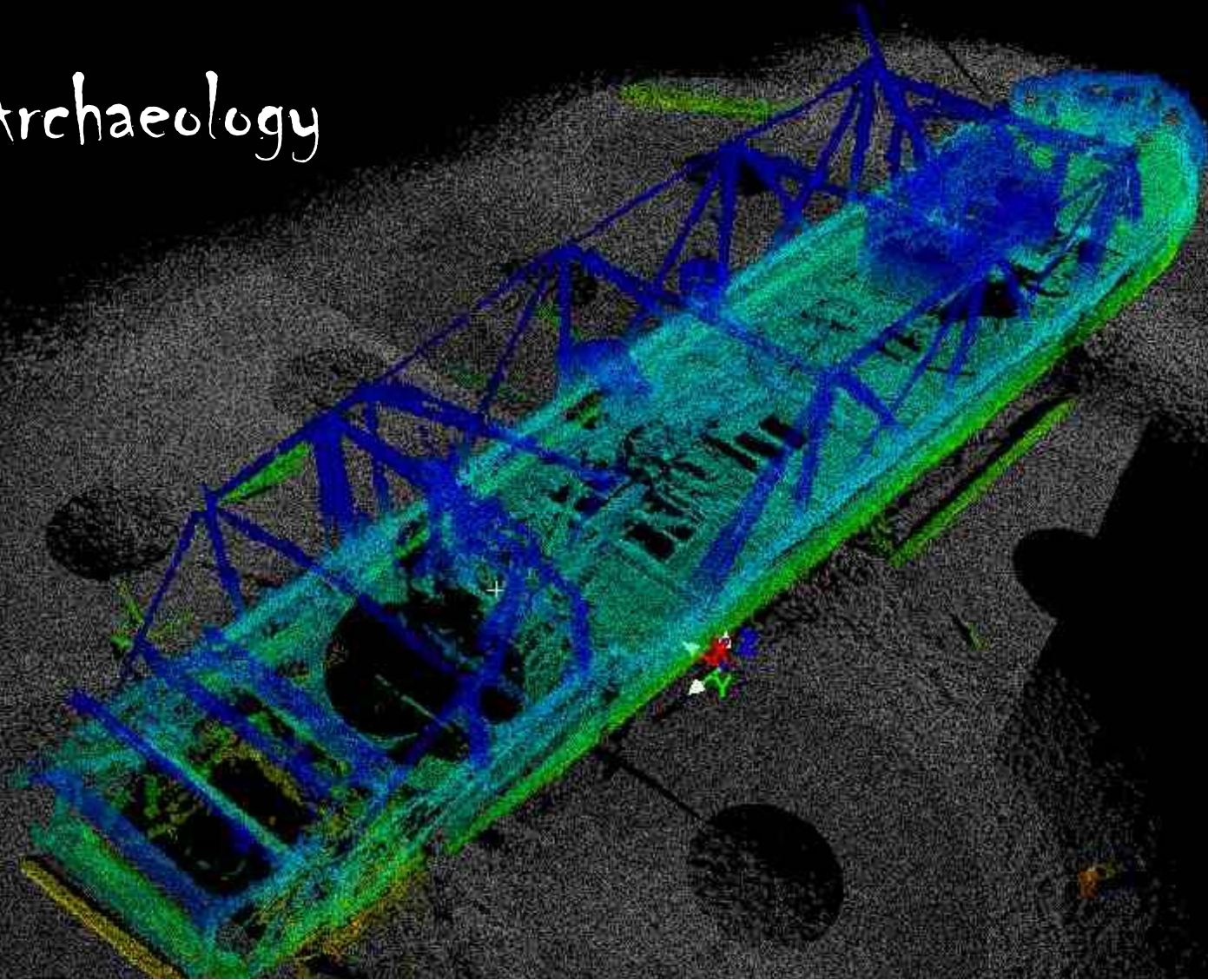
2.2. Public Archaeology

Promoting the debate “surrounding archaeological and heritage issues as they relate to the wider world of politics, ethics, government, social questions, education, management, economics and philosophy.”

Wikipedia



2.3. Didactic Archaeology



Promoting archaeological sites as **learning environments** that encourage the public – which includes k-12 students – to ask questions, wide and narrow and research them through archaeology.

2.4. Critical Archaeology

Provoking critical thinking and engaging the public on social issues such as power structures, class struggle, or inequality and ecology.



2.5. Community Archaeology

Engaging local, descendant, or ideologically related communities in the development of projects around archaeological sites.



Hodder's work at Çatalhöyük



3. Computer games are the best medium in the near future

Outreach: showing archaeological sites as landscapes or habitats within which we can see ourselves, simulate our behavior, and try to understand Humanity in its diversity and change through time.



Computers and **social networks** are the best frames to engage a large public and talk about culture and biology in dialogue with historians, geographers, philosophers, sociologists, biologists, paleontologists, climatologists, but also engineers, and technocrats, marketers, politicians and the media.

Thank you!

