



The Hand & Skill

Themes

- The Hand in Biology
- Hand & Language
- A Brief History of the Hand + Making
- The Digital Hand
- Skill & Craft



Prehensile – *prehendere* (Latin) meaning to grasp



The hand in biology
evolutionary step

Ape and Human Hands: Diagram

- Hands of orangutan, chimpanzee, gorilla and human
- **Note the following:**
- Our thumbs are longer than the others'
- We can make a finer grip than the others can
- Less visible: apes' digits are curved, ours are straight



Phalanx bone

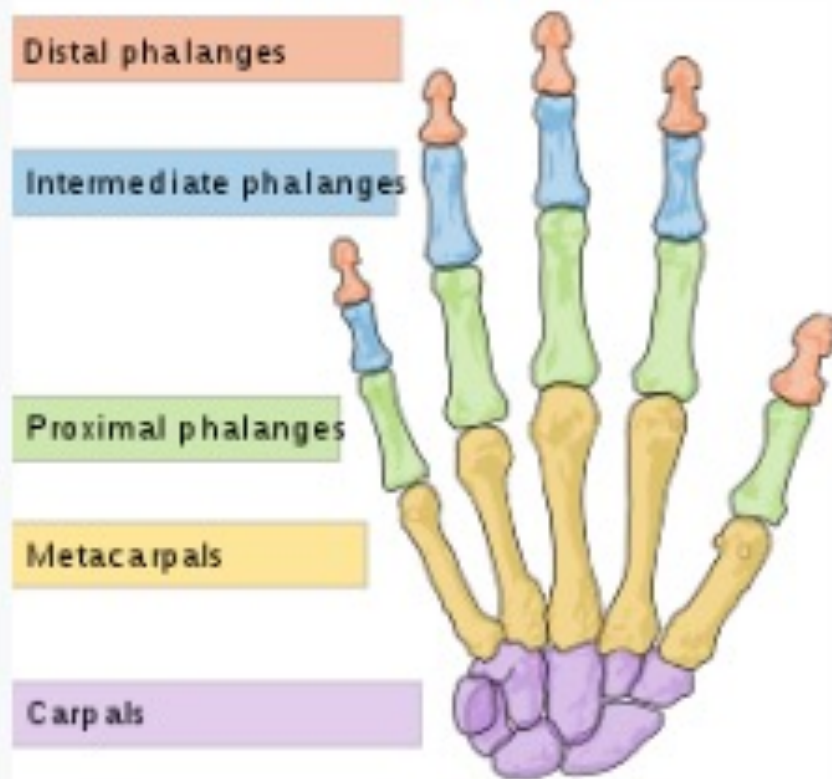
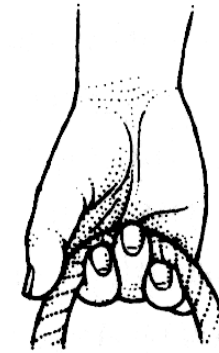


Illustration of the phalanges



The phalanges in a human hand



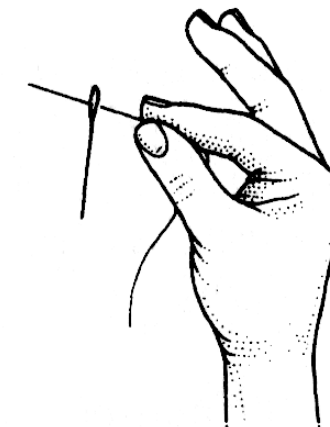
1. Hook grip



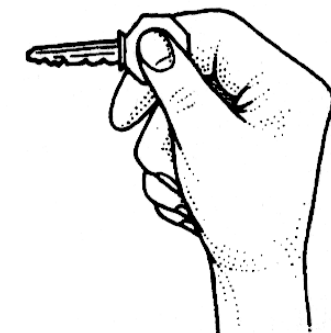
2. Scissor grip



Five-jaw chuck

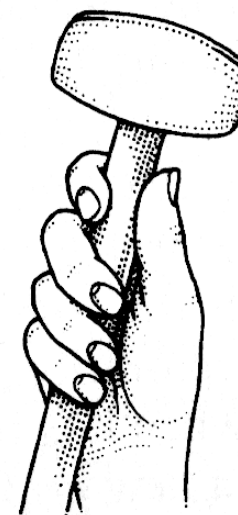


Two-jaw chuck
pad-to-pad



Two-jaw chuck
pad-to-side

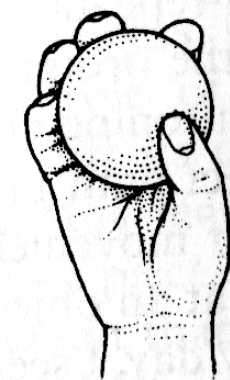
3. Precision grips



Squeeze grip



Disc grip



Spherical grip

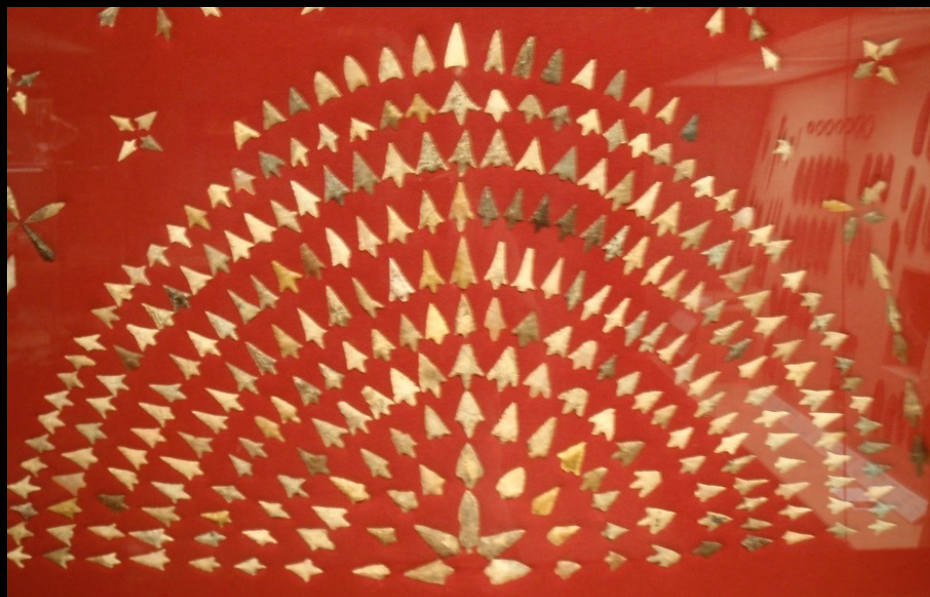
4. Power grips



Flint



Obsidian / Volcanic glass



Lithic technology

How Stone Age Humans Made Hand Axes

1. The process started with a large piece of rock.



2. The humans roughly shaped the rock with a stone hammer.



3. Using a hammer made of wood, stone, or antler, they sharpened the edge.



4. They trimmed the edge by prying off tiny flakes with a pointed stick.



finished hand ax

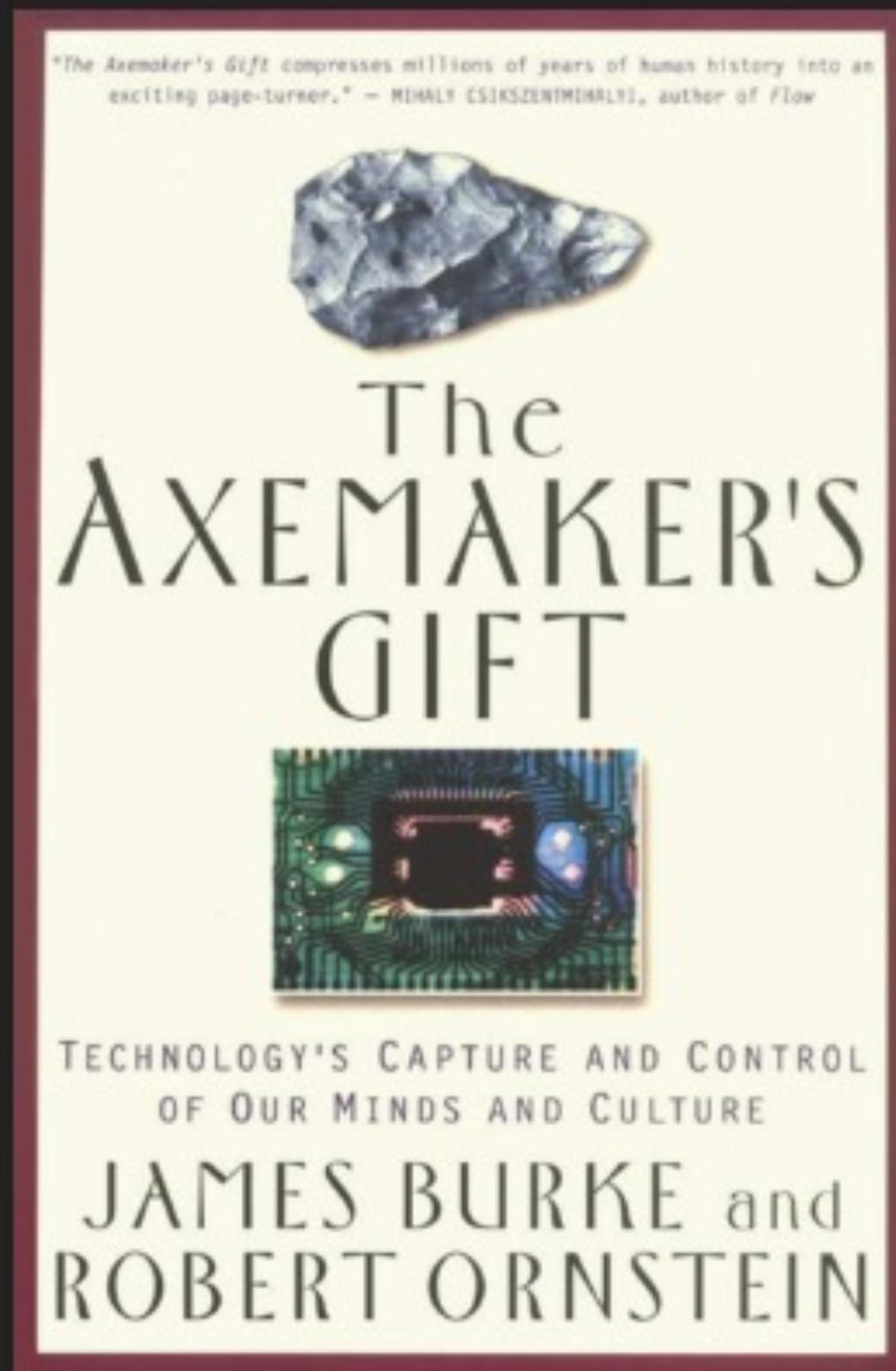


front view



side view

Lithic technology



1995



Lascaux / France



Mutawintji National Park / Australia



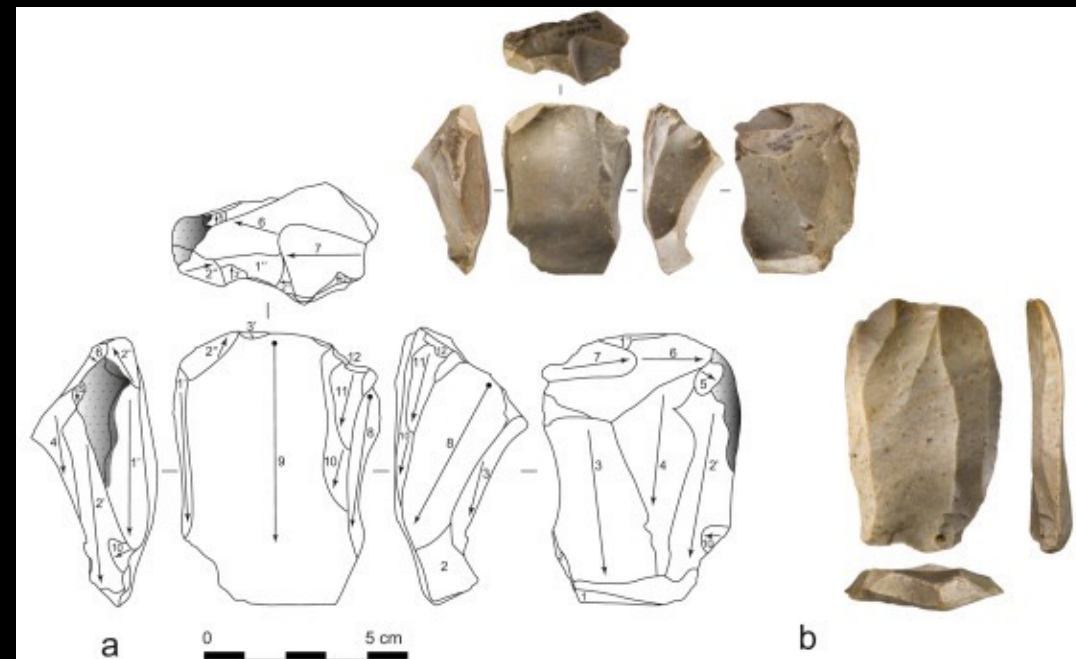
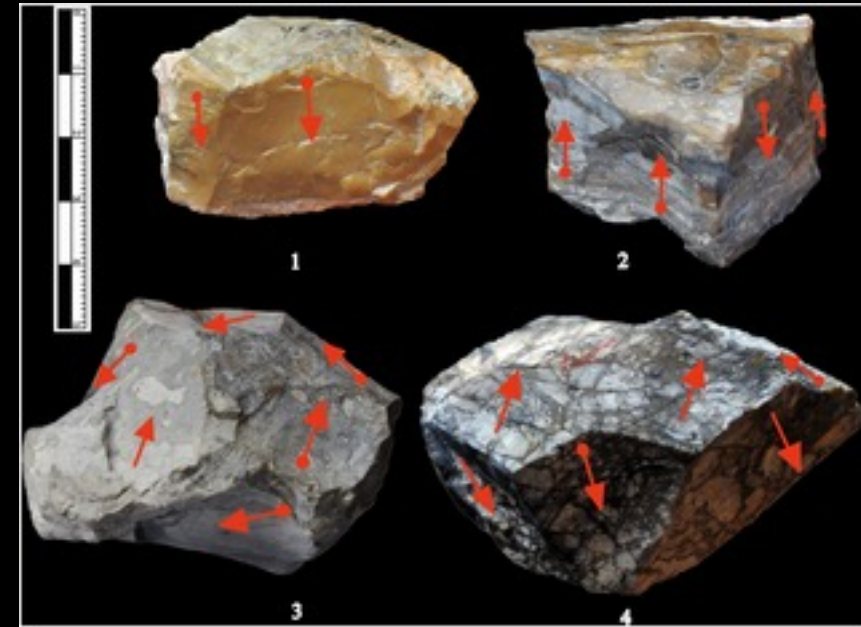
Sulawesi / Indonesia



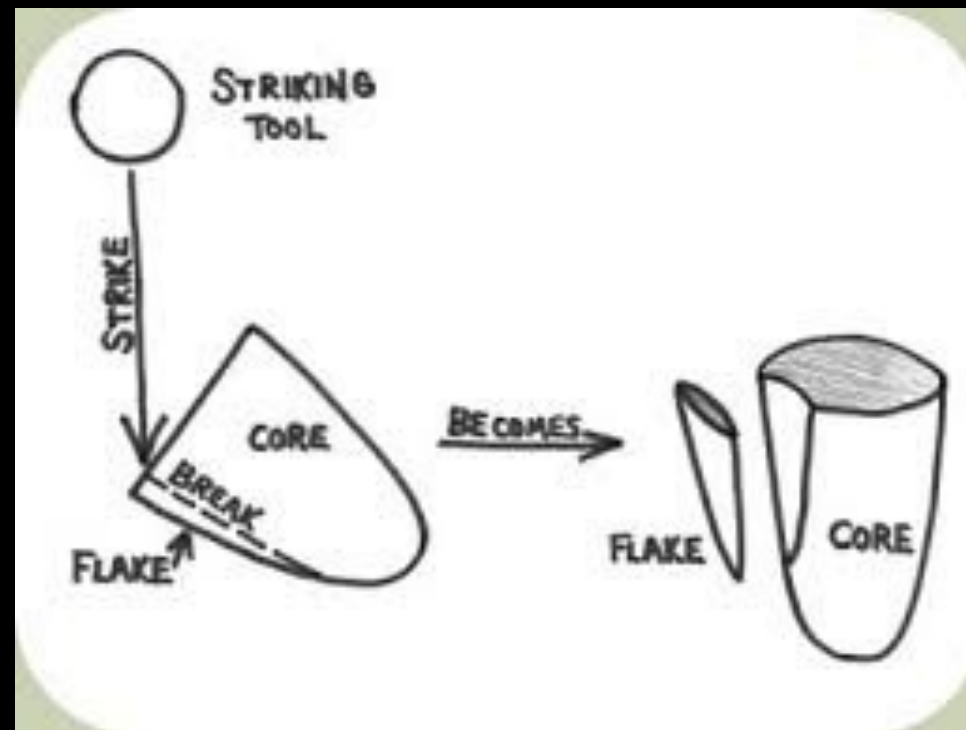
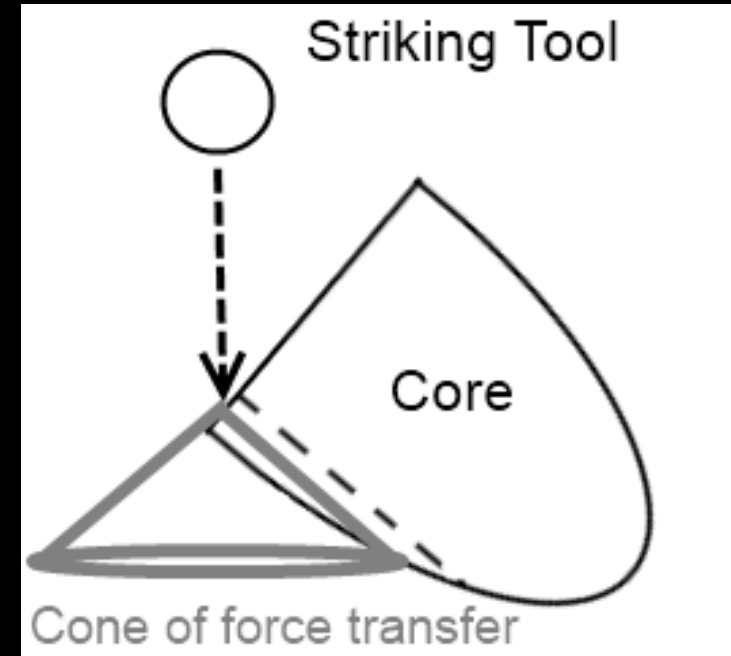
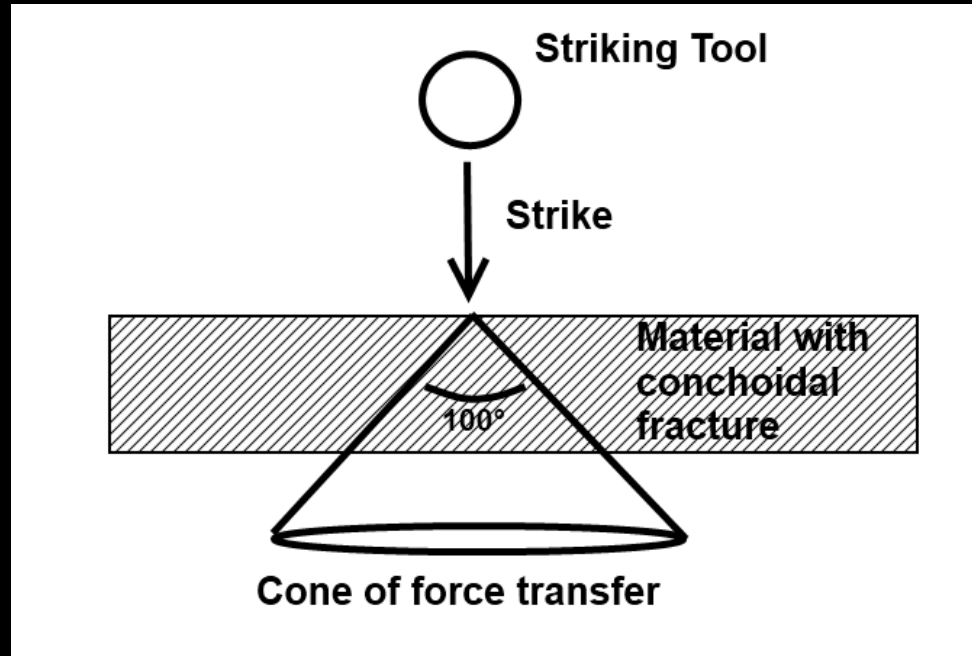
Homo Faber

- Technology :Techne: Arts & Crafts, Logos: words or speech, The means or activity by which humankind seeks to change or manipulate the environment
- to pierce, to cut and scrape, to skin (hides = clothes), arrows & spears for hunting and adzes and axes and making shelter, to harvest.
- carpenter, farmer, fisherman, hunter

The Gift of Stones



Propositional Intelligence



HANDKIND

- PROPOSITIONAL INTELLIGENCE
- WORKING MEMORY

From functional object to symbolic object

Meaning invested in an
object to represent
something other than the
object





Made by a contemporary craftsman
(Rodney Bender)

A **heuristic technique** ([/hjuːˈrɪstɪk/](#); [Ancient Greek](#): εὕρισκω, "find" or "discover"), often called simply a **heuristic**, is any approach to problem solving, learning, or discovery that employs a practical method not guaranteed to be optimal or perfect, but sufficient for the immediate goals.

the Hand = proto tool

- Haptic / Touch / communication
- Gesture / Pointing
- Making / Tools / symbols
- Counting / Number / 12 & 60

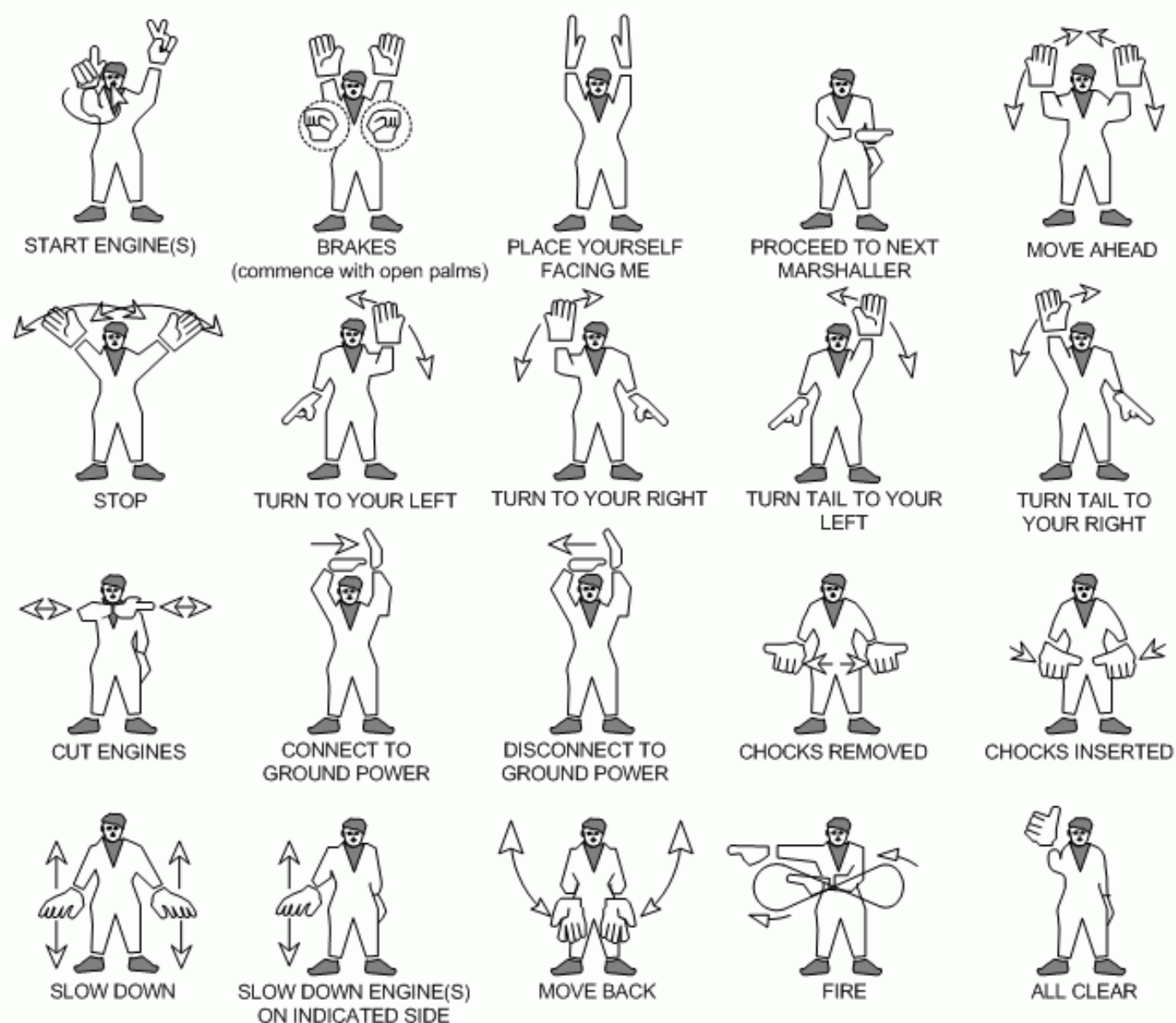
Gesture

EROTICISM



1. Accost. 2. Burgle. 3. Cunnilinguate. 4. Deflower. 5. Ensnare. 6. Fuck. 7. Gallivant.
8. Harass. 9. Irrumate. 10. Jismify. 11. Kink. 12. Lesbianise. 13. Masturbate.
14. Nidify. 15. Occult. 16. Pedicate. 17. Quench. 18. Ream. 19. Syphilize.
20. Tup. 21. Urticate. 22. Violate. 23. Waggle. 24. Xiphoidify. 25. Yonirise.
26. Zoogonise. 27. Recommence.

MARSHALLING SIGNALS



Pointing





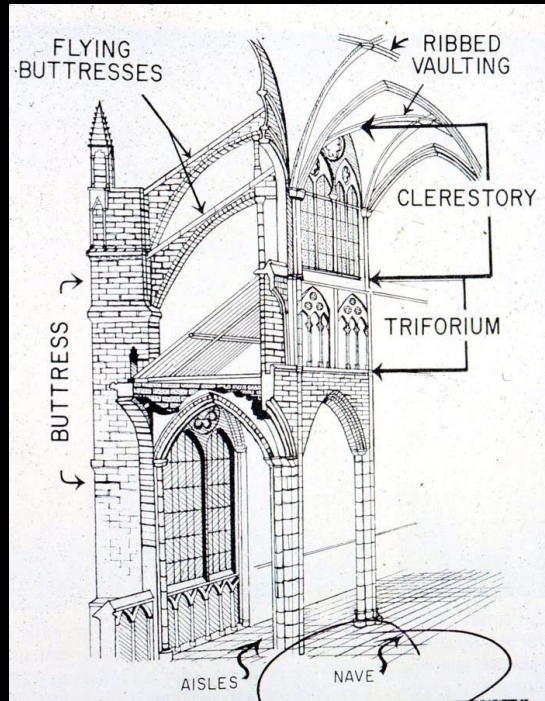
A brief History of Hand Making

Ancient-History



- anonymous / and possibly enslaved

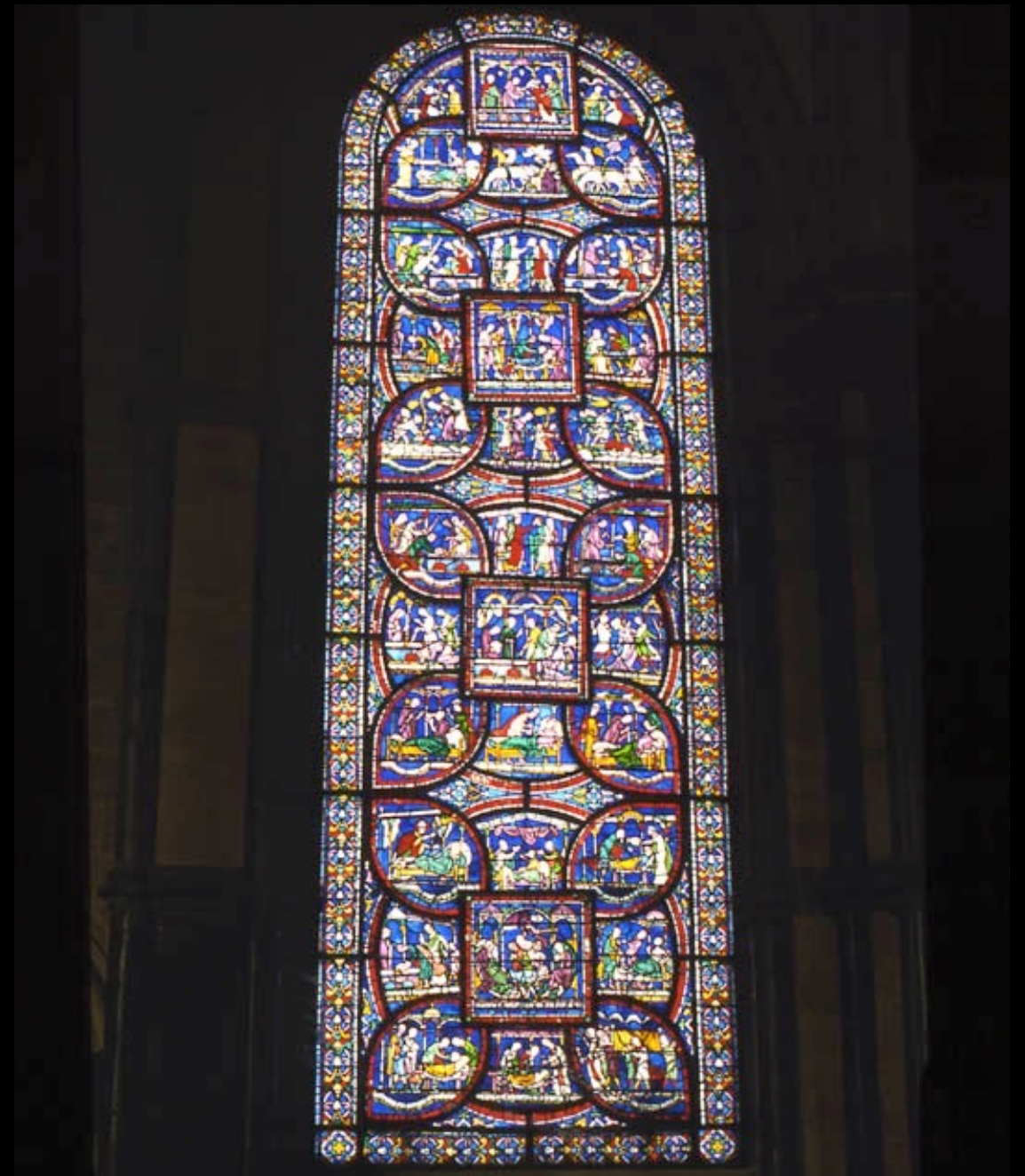
Middle Ages



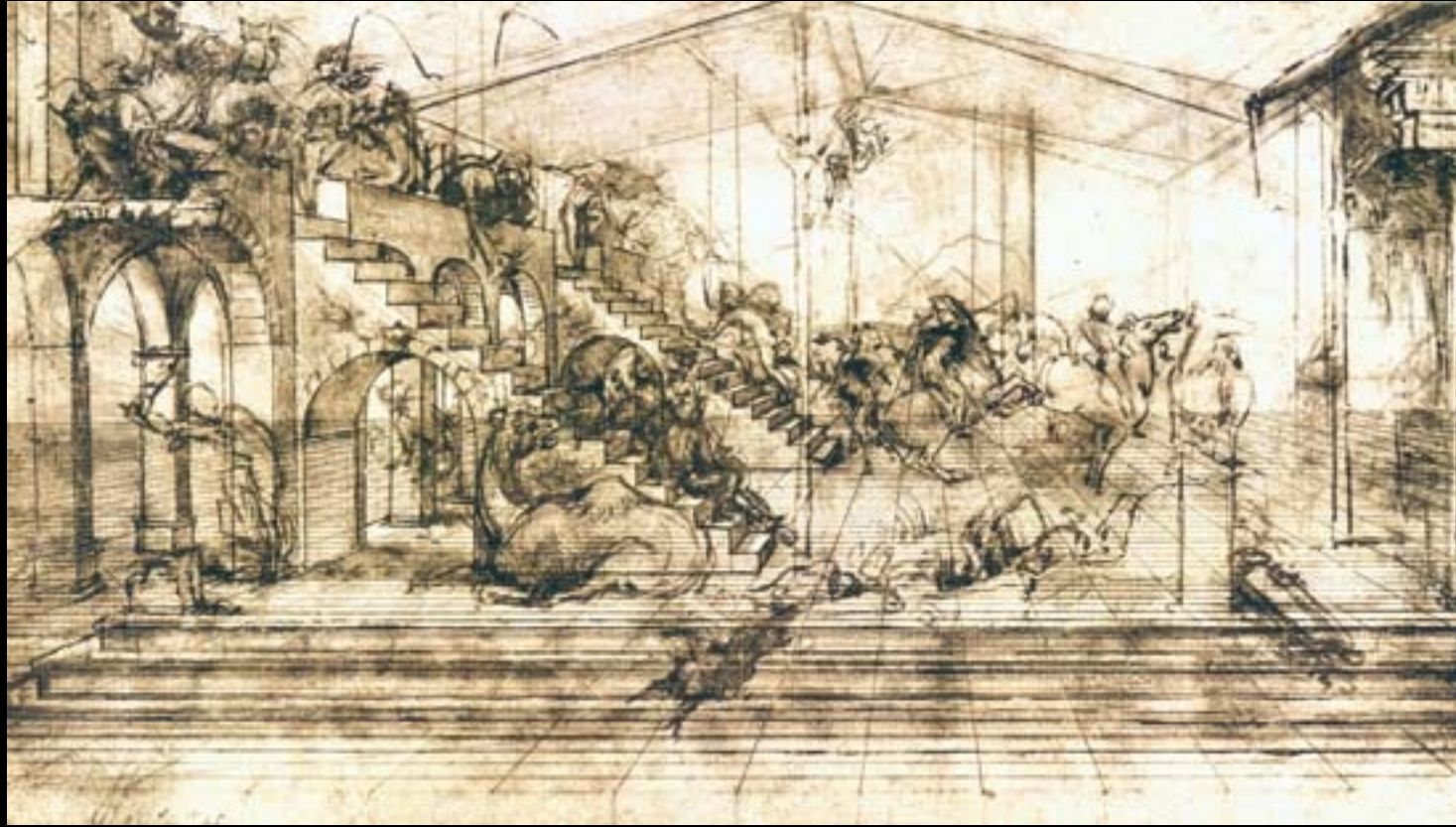
The Artisan Class

The Medieval Guilds

- Regulated the supply and demand of the crafts
- Exercised protectionism
 - Towns created guilds and guilds made towns: Commerce led to mercantilism
- Artisans at first prospered and then were surpassed by Merchants.



Renaissance



Filippo Brunelleschi 1377- 1446

the rise of the artist

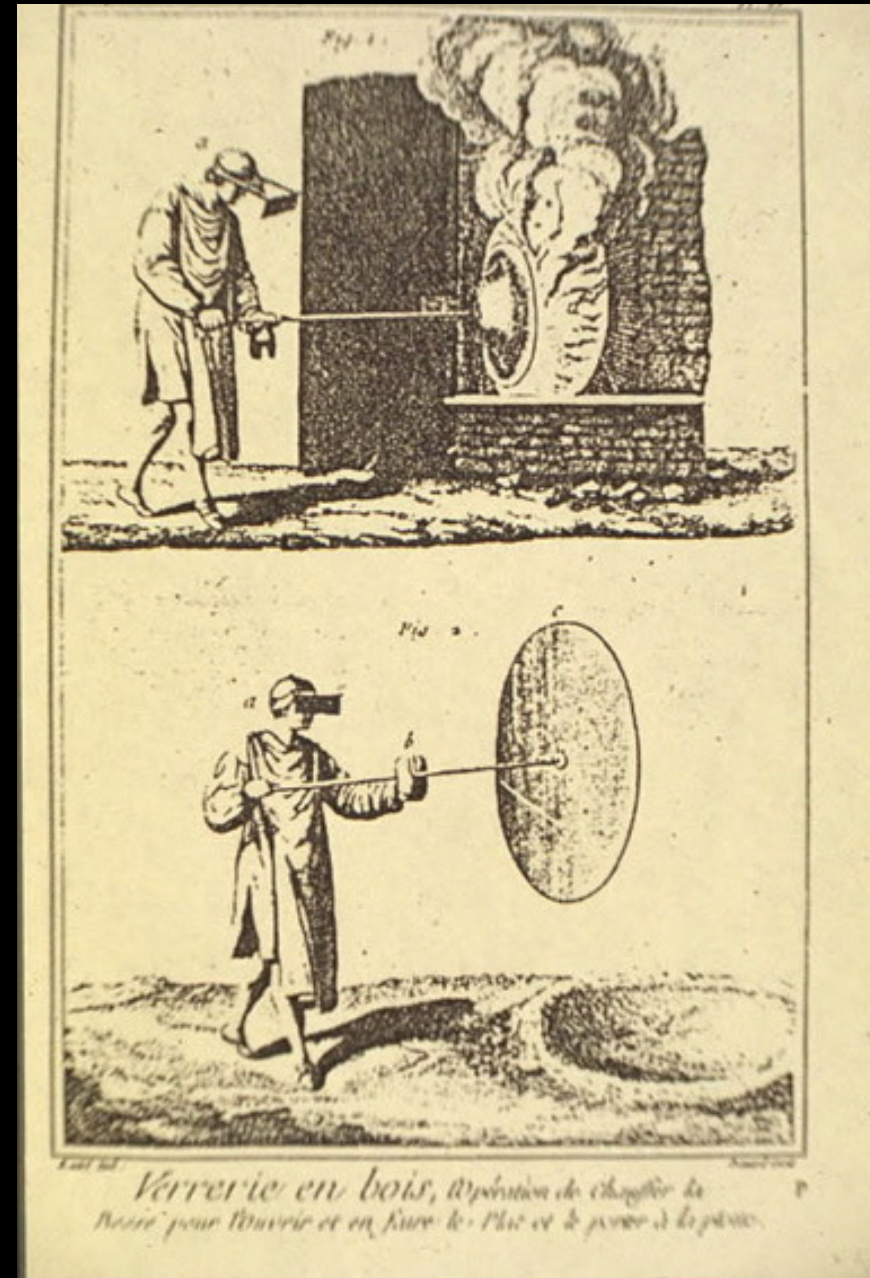
Cennino Cennini c1360
'Il libro dell'arte' The artists Handbook



Enlightenment

Diderot's Encyclopedie 1751-80

CRAFT. This name is given to any profession that requires the use of the hands, and is limited to a certain number of mechanical operations to produce the same piece of work, made over and over again. I do not know why people have a low opinion of what this word implies; for we depend on the crafts for all the necessary things of life. ...The poet, the philosopher, the orator, the minister, the warrior, the hero would all be nude, and lack bread without this craftsman, the object of their cruel scorn.



Industrial Revolution



IRON BRIDGE 1779

John Ruskin

Seven Lamps Of Architecture (1849)

For it is not the material, but the absence of human labour, which makes a thing worthless; and a piece of terra cotta, or of plaster of Paris, which has been wrought by the human hand, is worth all the stone in Carrara, cut by machinery.

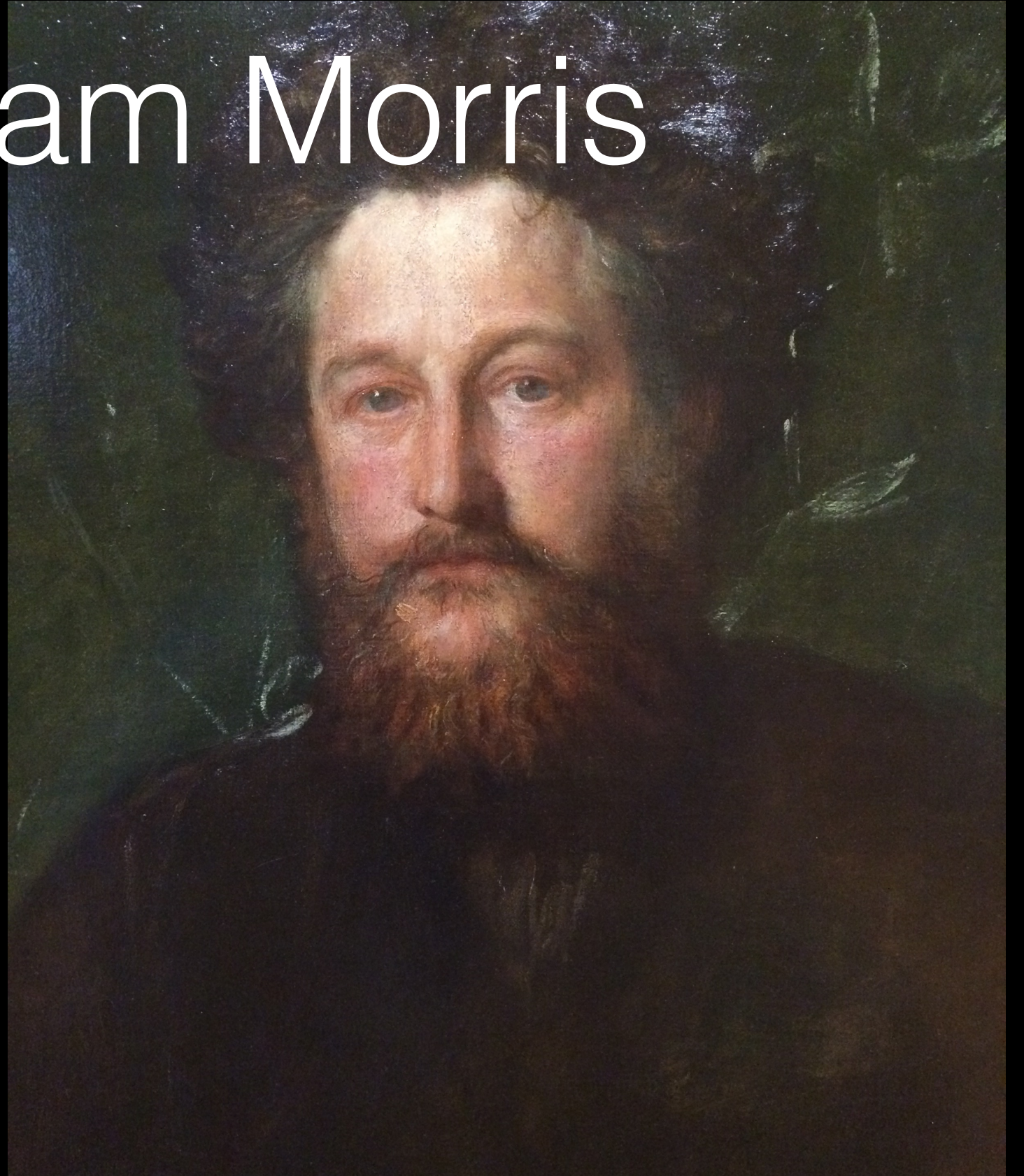
Stones of Venice (1851-1853

- *Never encourage the manufacture of any article not absolutely necessary, in the production of which invention has no share.'*
- *Never demand an exact finish for its own sake, but only for some practical or noble end*
- *Never encourage imitation or copying of any kind, except for the sake of preserving great works.*

William Morris



- Utopian Craftsman
- Socialist
- Hipster!



Arts and Crafts Movement



A gentlemanly attempt to stem aesthetic deficiencies of industrial production ?
For the few not the many, but intended for the many not the few!

Modern era



Industrial design

‘The real problem is not to adapt machine production to the aesthetic of handicraft, but to think out new aesthetic standards for new methods of production’ Herbert Read 1939



PRE-INDUSTRIAL

HAND CRAFTED

Summary

The pre-industrial age revolved around subsistence agriculture and production.

Products and production techniques

Society being primarily agricultural, products were crafted by hand, focussing on agricultural tools and household products.

Change In Production Sector Example: Textiles

Hand woven.

Sharing of information

Domesticated animals were used for any major transportation. Information was shared within communities.



1 TOWARDS THE END OF 18TH CENTURY

Summary

Mechanical production equipment powered by water and steam provided the energy needed to power this revolution. This change also brought about the concept of the 'factory system'.

Products and production techniques

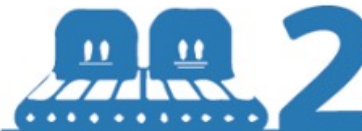
Through the use of power, production was mechanised significantly increasing productivity.

Change In Production Sector Example: Textiles

Spinning jenny and power loom.

Sharing of information

The invention of the steam locomotive and steam ships significantly reduced the time of transport and communication.



2 TOWARDS THE END OF 19TH CENTURY

Summary

Production equipment moved to electrical power. This change, along with standardised replacement parts and the automated factory line, provided the productivity gains to usher in 'mass production'.

Products and production techniques

The factory system built around mechanical power, namely line shafts and belts, could be replaced by centralised electric power supply improving efficiency.

Change In Production Sector Example: Textiles

Industrial sewing machines.

Sharing of information

The rise of motoring and increased use of the railway led to faster transportation and sharing of ideas. With the birth of electrical power came the telegraph.



3 1970s ONWARDS

Summary

Sometimes known as the digital revolution, the third industrial revolution saw high levels of automation through the increased proliferation of digital logic circuits and microprocessors.

Products and production techniques

Examples of new production technologies included automated robots, control systems, computer aided design and a range of digitally based techniques.

Change In Production Sector Example: Textiles

Digital screen printing on fabrics.

Sharing of information

Computer networking, the internet, mobile phones and other forms of digital communication significantly reduced the time needed to share large volumes of information.



4 TOMORROW

Summary

The 4th industrial revolution is the coming together of cyber networks, with physical networks, to create new autonomous systems.

Products and production techniques

Through the use of sensors, more and more data will be collected allowing new products, processes and integration to be conceived.

Change In Production Sector Example: Textiles

Personalised design and 3D printed clothing.

Sharing of information

The autonomous nature of communication systems allows greater coordination with supply chains, tracking of assets and integrated business planning and production.



A Tom of Holland workshop in full swing

Handicraft

“The word ‘craft’ means ‘skill’”
(Walker, 1989, p38)



A Tom of Holland workshop in full swing

High Craft, Low Craft,
Reproductive Craft and Conceptual
Craft



Craft is a verb: To exercise skill in making an object typically by hand

Craft is a noun: An activity involving skill in making things by hand



Craft is a metaphor: a skill used for
deceiving others

- to be crafty

Shrewdness and manipulation

- Witchcraft

(Corbett, 2017, p.12)



Hand Made

Made using the hands rather than a machine?
'Handicraft' or 'handmade' are historical and social terms, not technical ones.
David Pye (1971) The Nature and Art of Workmanship p11

“hylomorphism”

This is to start with an idea in mind, of what we want to achieve, and with a supply of the raw material needed to achieve it. And it is to finish at the moment when the material has taken on the intended form (Ingold, 2013, p. 20).

Hand Made

Ingold, T. (2013). Making: Anthropology, archaeology, art and architecture. London: Routledge.

I want to think of making [...] as a process of growth. This is to place the maker from the outset as a participant in amongst a world of active materials. These materials are what he has to work with, and in the process of making he 'joins forces' with them, bringing them together or splitting them apart, synthesizing and distilling, in anticipation of what might emerge. (Ingold, 2013, p. 21; emphasis in original).

Making

Ingold, T. (2013). Making: Anthropology, archaeology, art and architecture. London: Routledge.

[t]he most he can do is to intervene in worldly processes that are going on, and which give rise to the forms of the living world that we see all around us—in plants and animals, in waves of water, snow and sand, in rocks and clouds—adding his own impetus to the forces and energies in play. (Ingold, 2013, p. 21)

Making

Ingold, T. (2013). Making: Anthropology, archaeology, art and architecture. London: Routledge.

- a) Craft knowledge is merely technical
- b) Craft knowledge can be learned as and when you need it.
- c) Craft knowledge and 'having ideas' or 'being creative' are separate activities
- d) Craft knowledge is separate from making aesthetic judgements
- e) Craft knowledge is rule-based and rules conflict with personal creativity
- f) Craft knowledge is about forming habits, and habits also conflict with or inhibit creativity.

Craft Knowledge

The Art of The Maker: Skills and its meaning in Art, Craft and Design by Peter Dormer 1994

Sleight of hand

- Concept of craft and the 'Handmade' is relatively new / from the mid C19th
- The majority of things that are identified as hand made are not made by hand! Usually a tool is employed!
- The computer is a remote tool.

Digital Craft and Robotics







Grinling Gibbons (1648 – 1720/1)



Giovanni Strazza (1841 – 1875)

Burke, J. & Ornstein, R. (1995) *The Axemaker's Gift: Technology's capture and control of our minds and culture.* London: Penguin.

Dormer, P. (1994) *The Art of The Maker: Skill and its meaning in Art, Craft and Design.* London: Thames & Hudson

Ingold, T. (2013). *Making: Anthropology, archaeology, art and architecture.* London: Routledge.

Pye, D. (2007) *The nature and art of workmanship.* London: Herbert Press

Sennett, R. (2009) *The Craftsman.* London: Penguin.

Walker, S. (1989) *Design History and the History of Design.* London: Pluto Press

Choose ONE essay question from the following:

Question 1: What is the role of the designer/maker in the 21st Century and how might this role change in the next 10 years? Discuss your ideas with reference to two of the practitioners or thinkers discussed in your lecture strand.

Question 2: Define skill in the context of your own practice and the work of two artists/makers/designers from the lecture series.

Question 3: How useful are Manifestos to designers and/or design groups?

Outline your discussion with reference to three key manifestos. Through careful critique, conclude your text by defining your own design values in a 10-point manifesto.

Question 4: Outline a current environmental, political, or social issue that requires redesign. Explain how you will solve this issue over the duration of your future design career. Underline the tools and approaches you will use and discuss how and why.

Question 5: From the series of Thinking Making research strand lectures, choose a theme, movement, or selection of artists or designers that relate to your practice or interests, and construct a 2,500-word essay. Critically assess primary themes, key writers, and relevant practitioners.

Question 6: With an emphasis on Welsh language, Culture or Identity chose a theme or focus on creative practitioners relevant to your field of study and critically analyse your choices. This essay can be presented in Welsh or in English in discussion with your tutor