

# The Hand & Skill

# Themes

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




Human right hand

X-ray of human hand

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



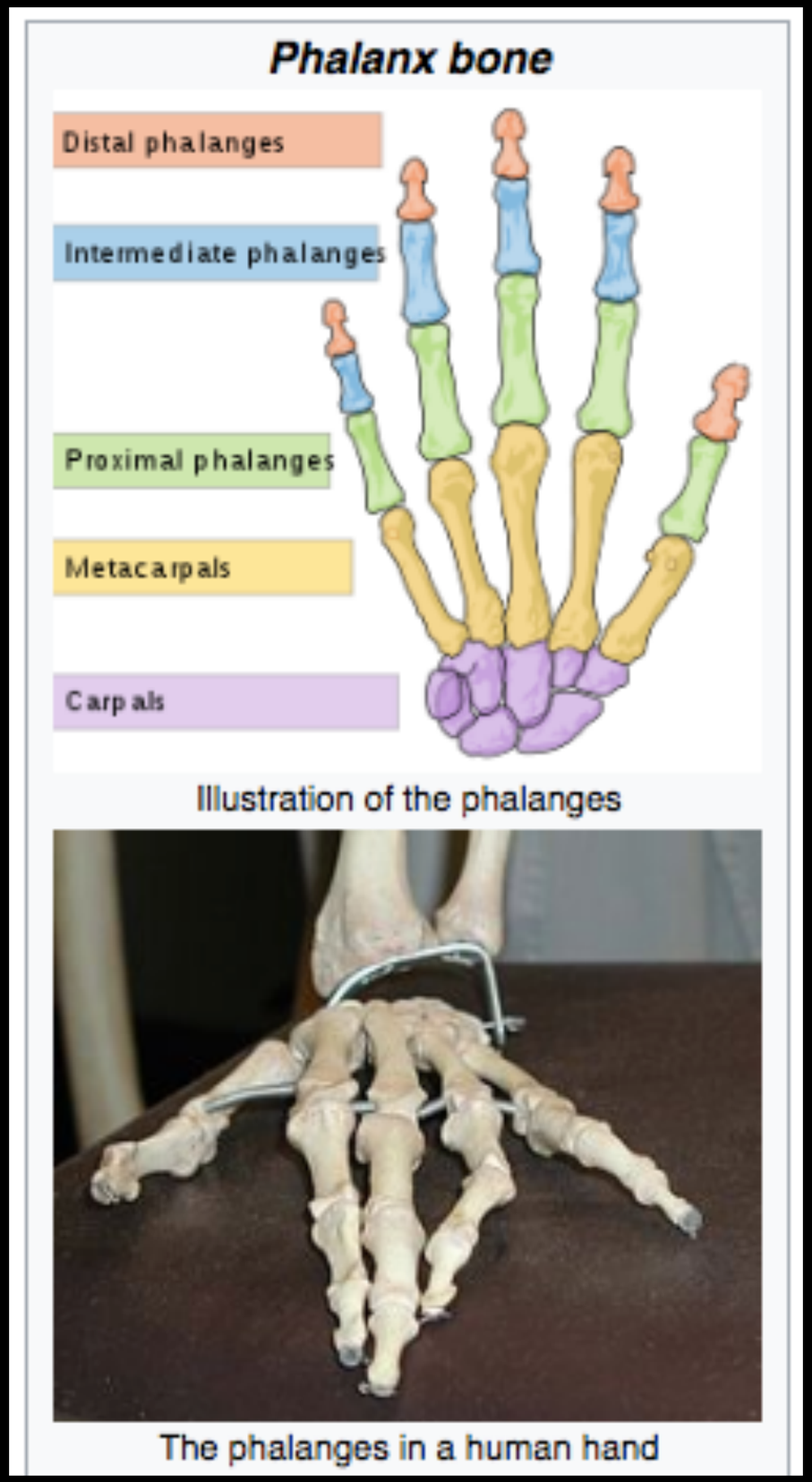
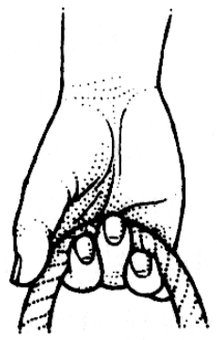


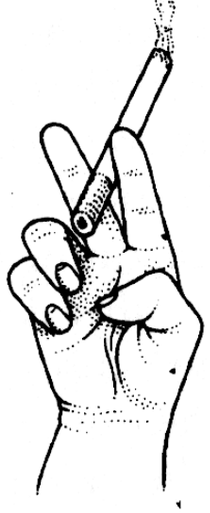

Illustration of the phalanges



The phalanges in a human hand



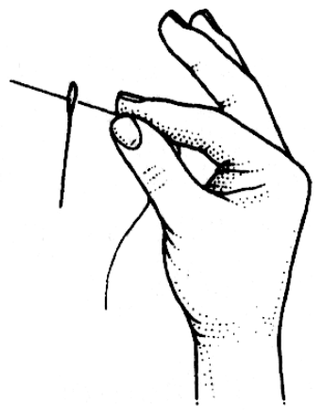
1. Hook grip



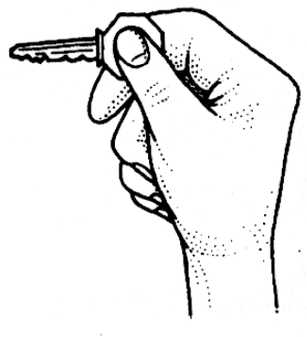
2. Scissor grip



Five-jaw chuck



Two-jaw chuck
pad-to-pad



Two-jaw chuck
pad-to-side

3. Precision grips



Squeeze grip



Disc grip

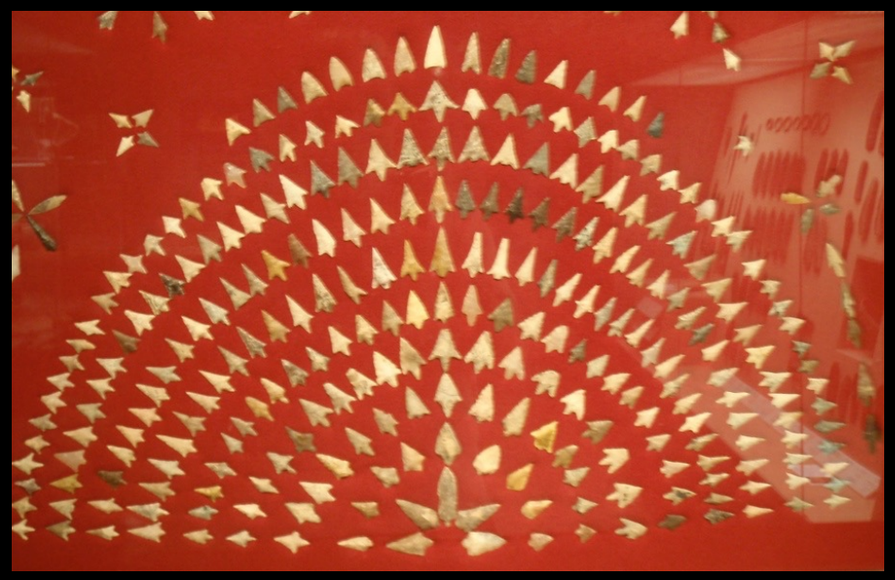


Spherical grip

4 . Power grips



Flint





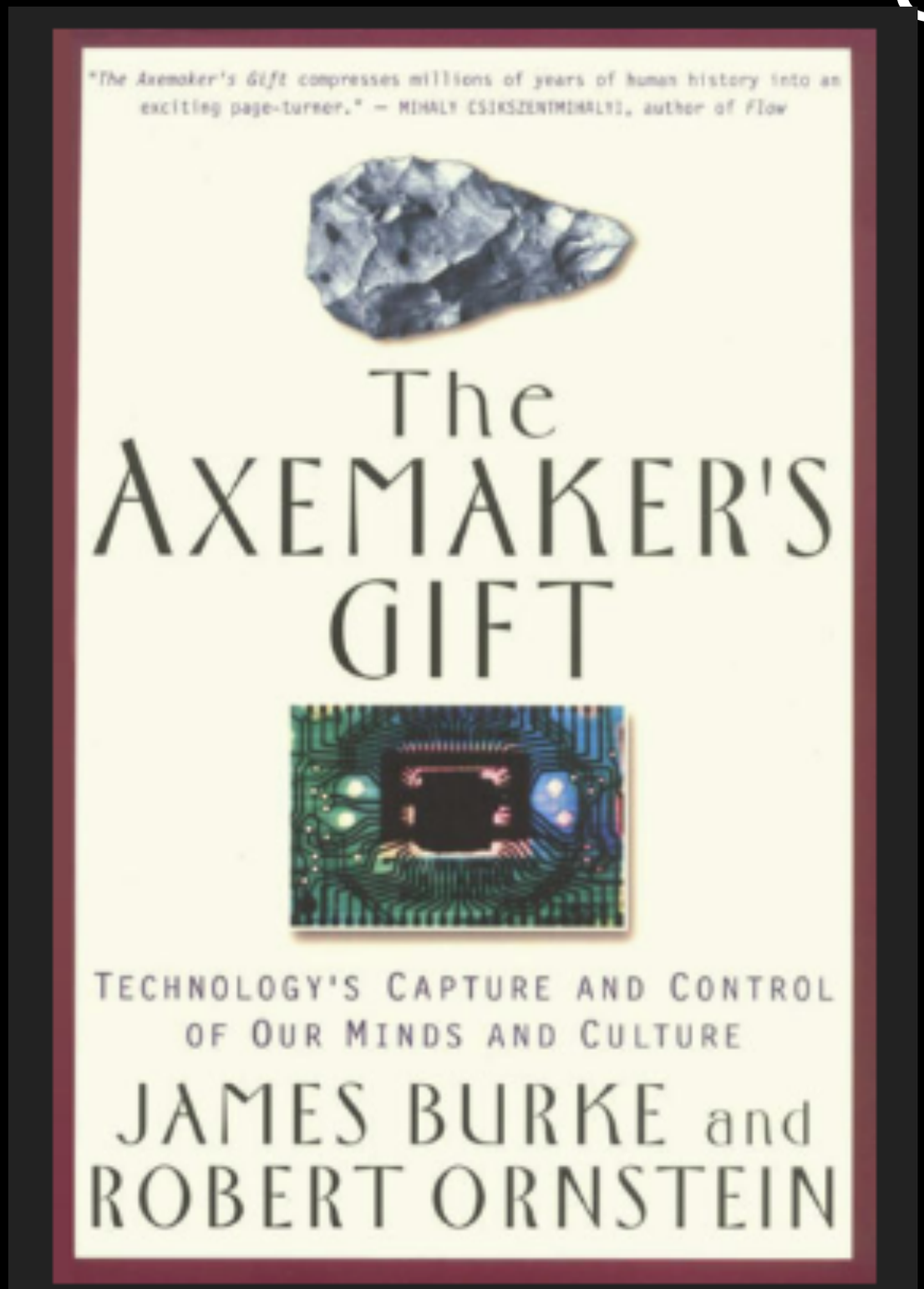
Obsidian / Volcanic glass



# Lithic technology



# Lithic technology




1995



Lascaux / France




Mutawintji National Park / Australia



Sulawesi / Indonesia



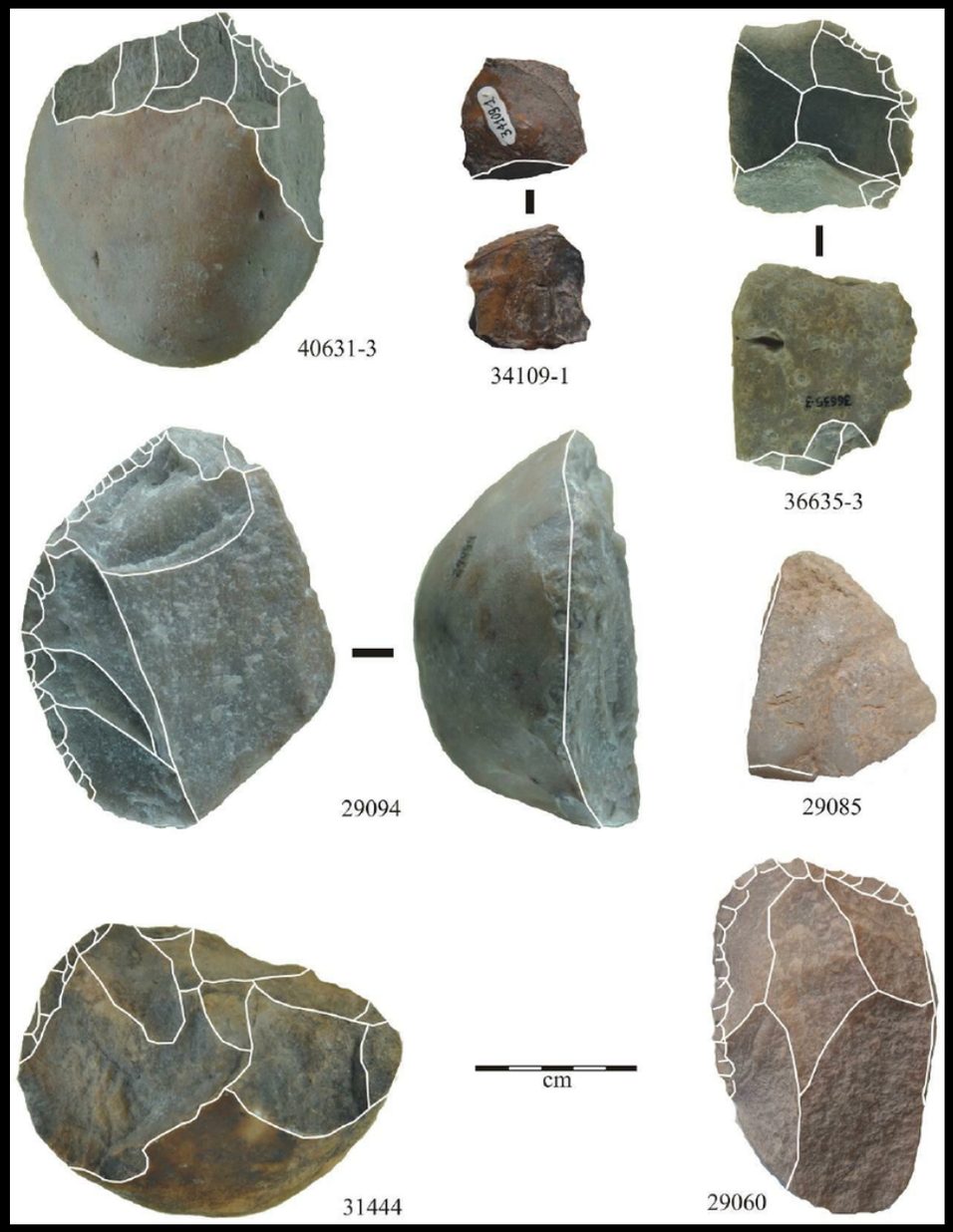
# Homo Faber

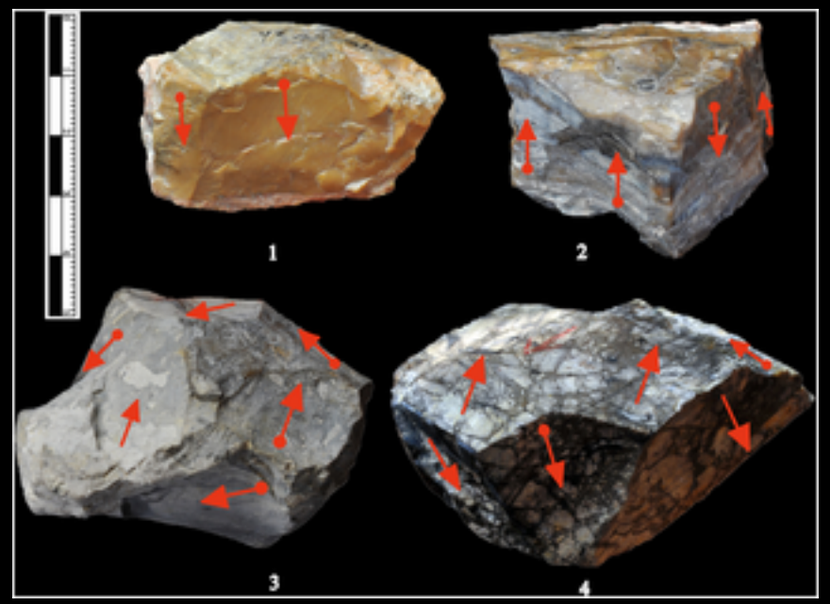
- Technology :Techne: Arts & Crafts, Logos: words or speech, The means or activity by which humankind seeks to change or manipulate the environment

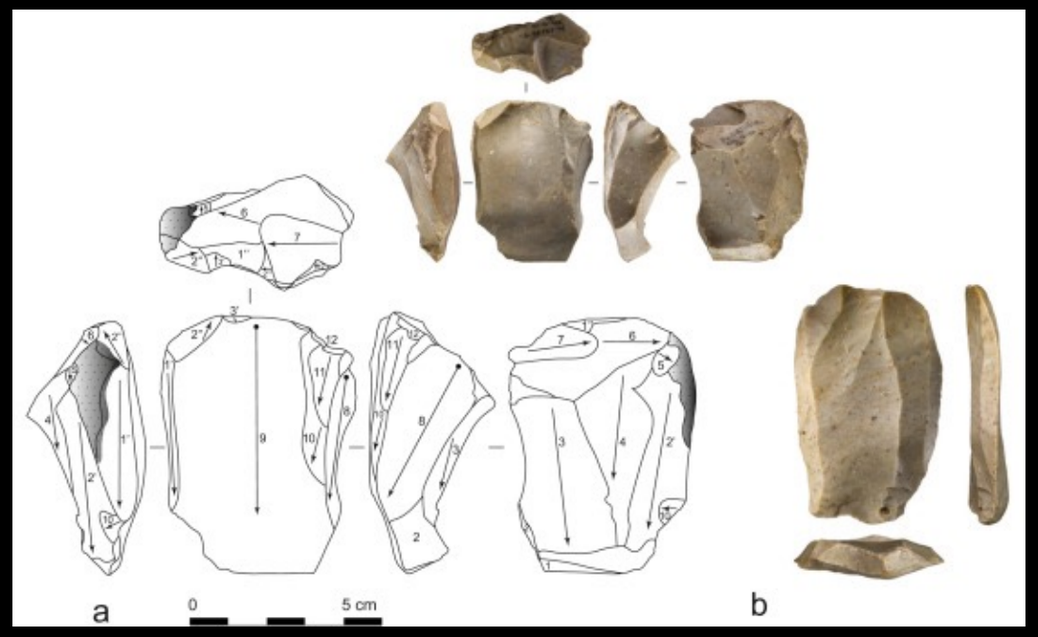
- to pierce, to cut and scrape, to skin (hides = clothes), arrows & spears for hunting and adzes and axes and making shelter, to harvest.

- carpenter, farmer, fisherman, hunter

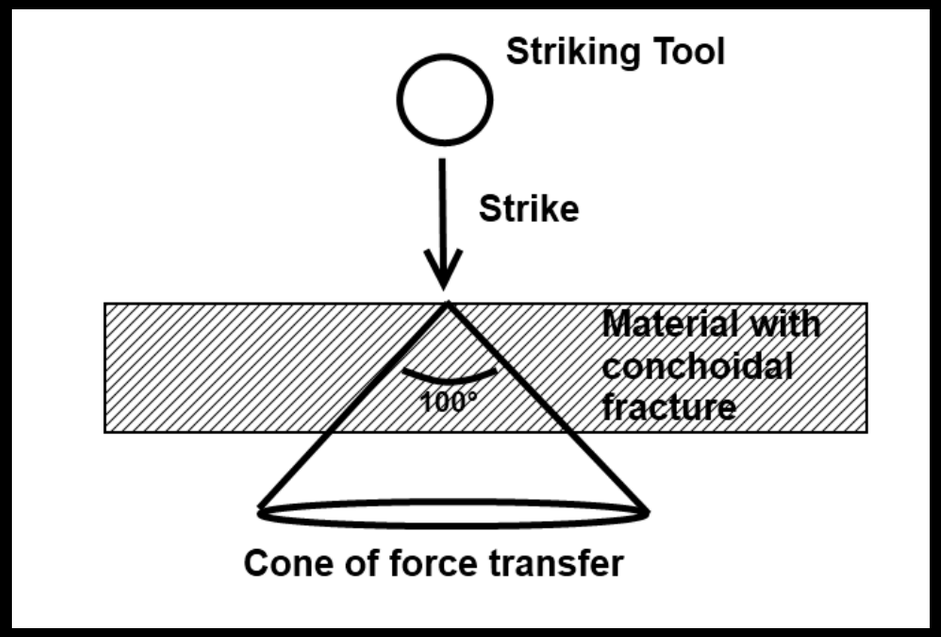
# The Gift of Stones

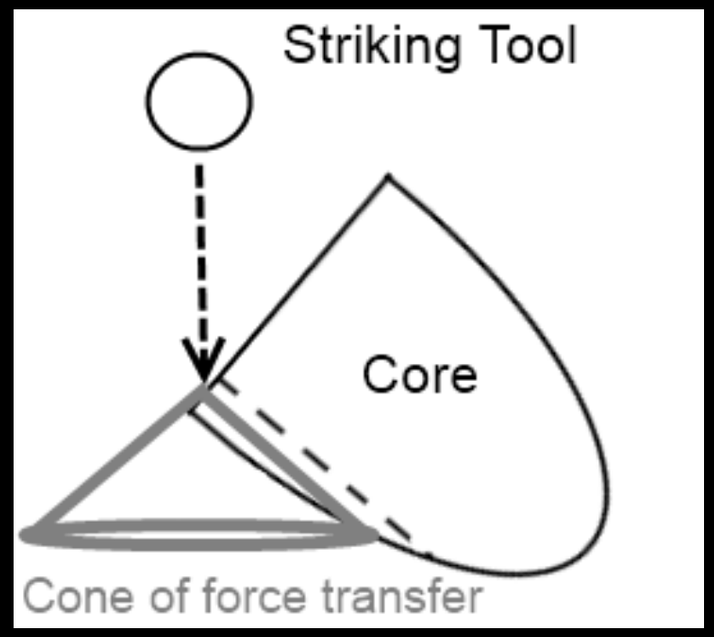


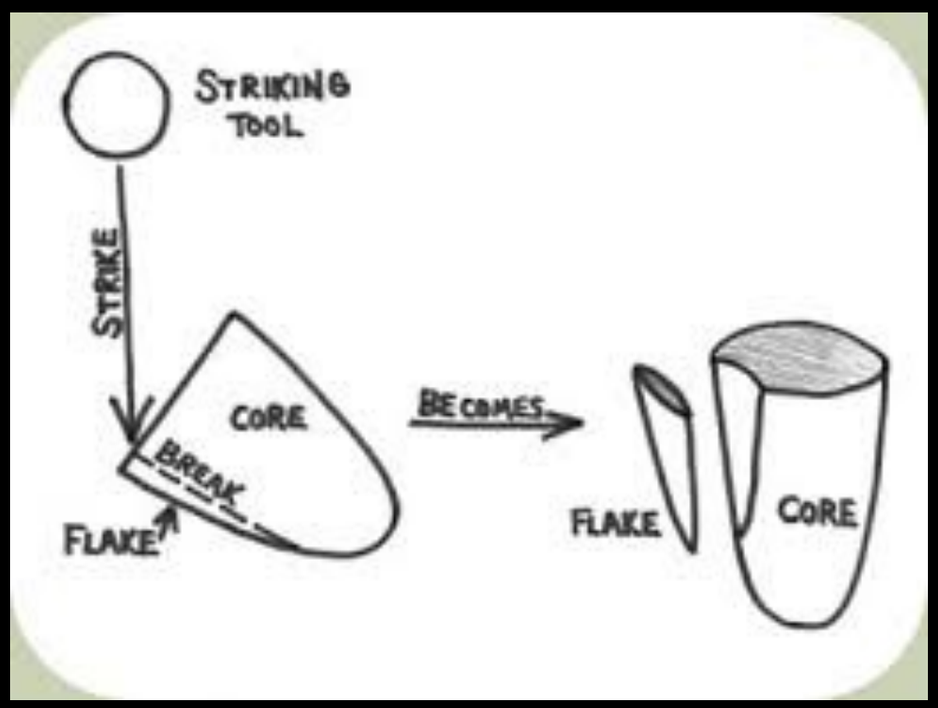



# Propositional Intelligence



# HANDKIND

- PROPOSITIONAL INTELLIGENCE
- WORKING MEMORY

# From functional object to symbolic object

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







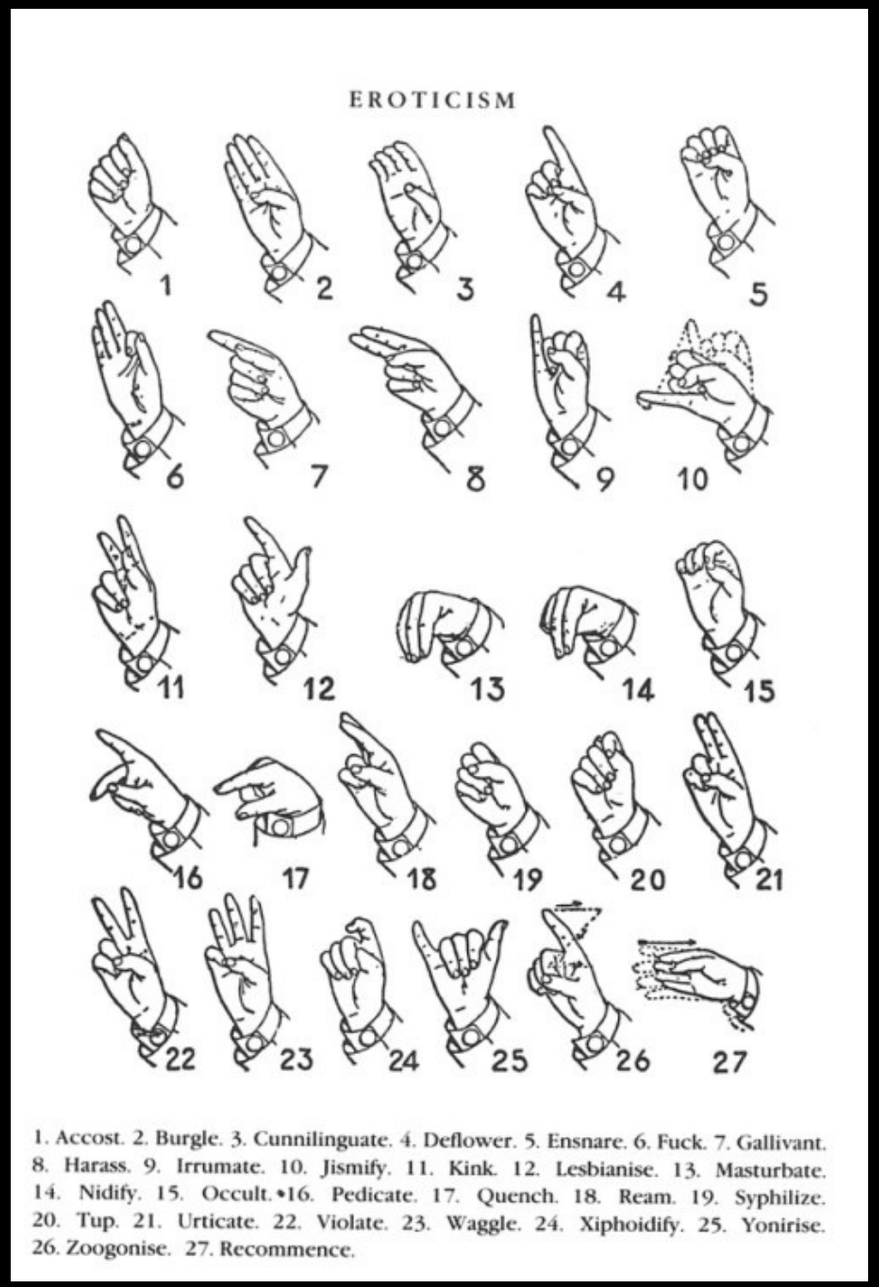
# “My hands made these”

A **heuristic technique** (/hjuːˈrɪstɪk/; Ancient Greek: εὑρίσκω, "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.

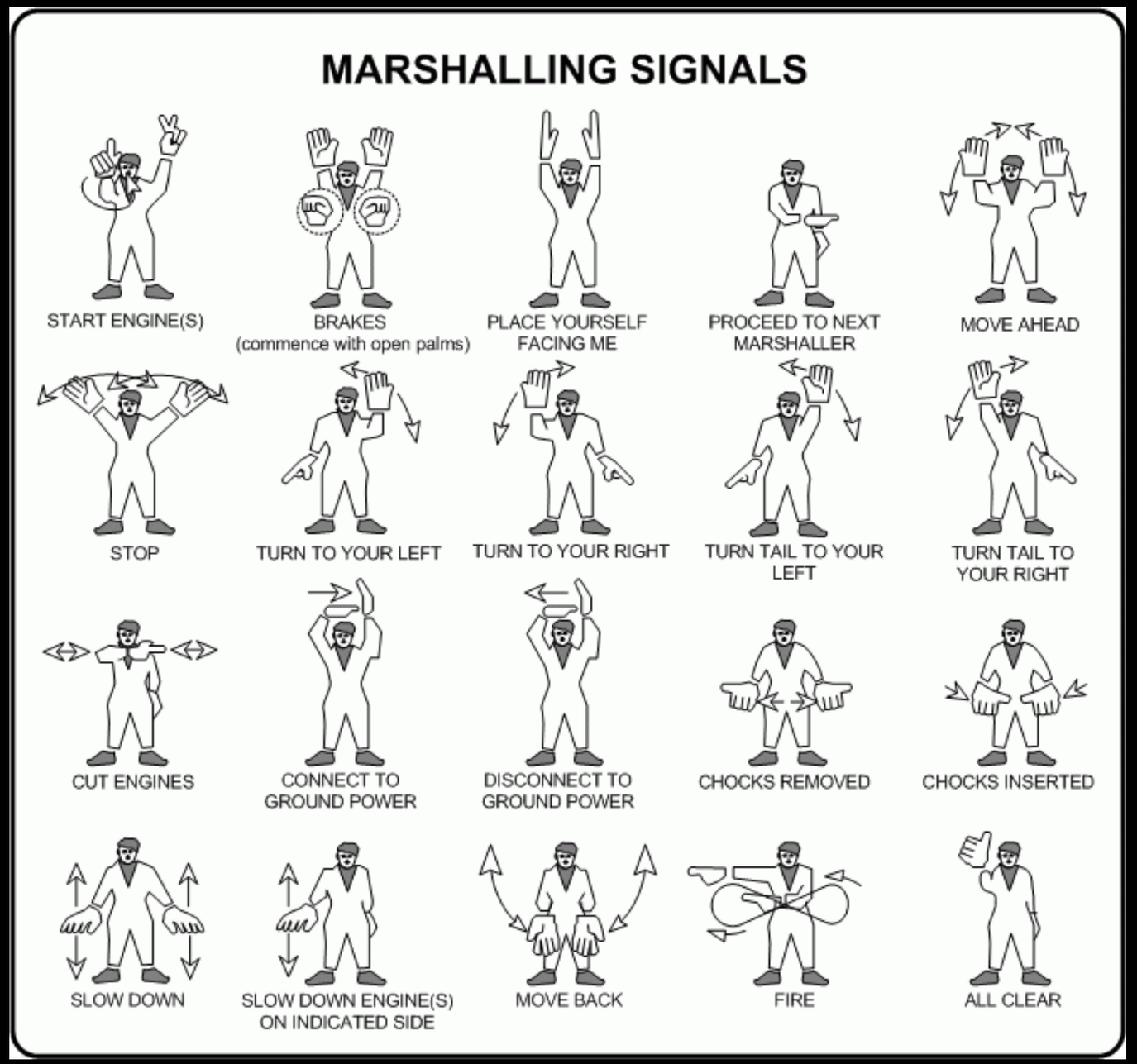
# the Hand = proto tool

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

# Gesture




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.



# Pointing














www.wolvo.net

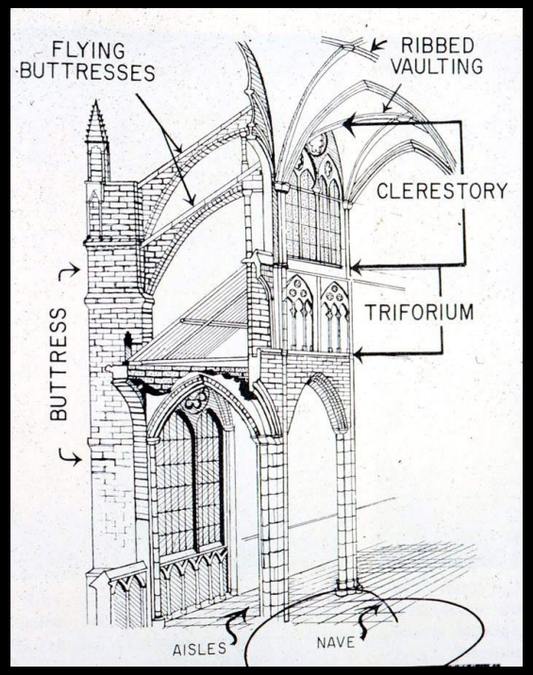
# A brief History of Hand Making

# Ancient-History

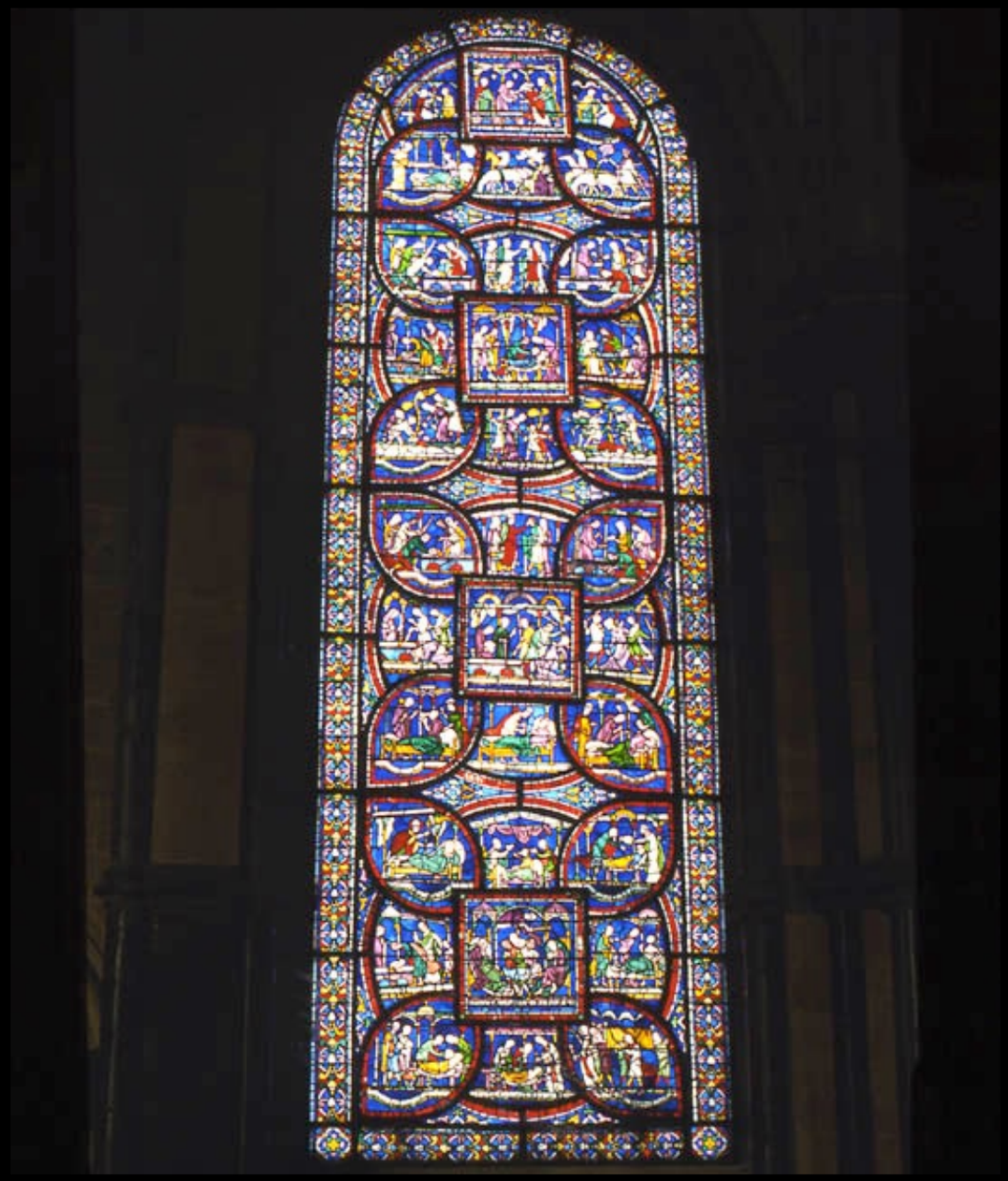




- anonymous / and possibly enslaved




# Middle Ages

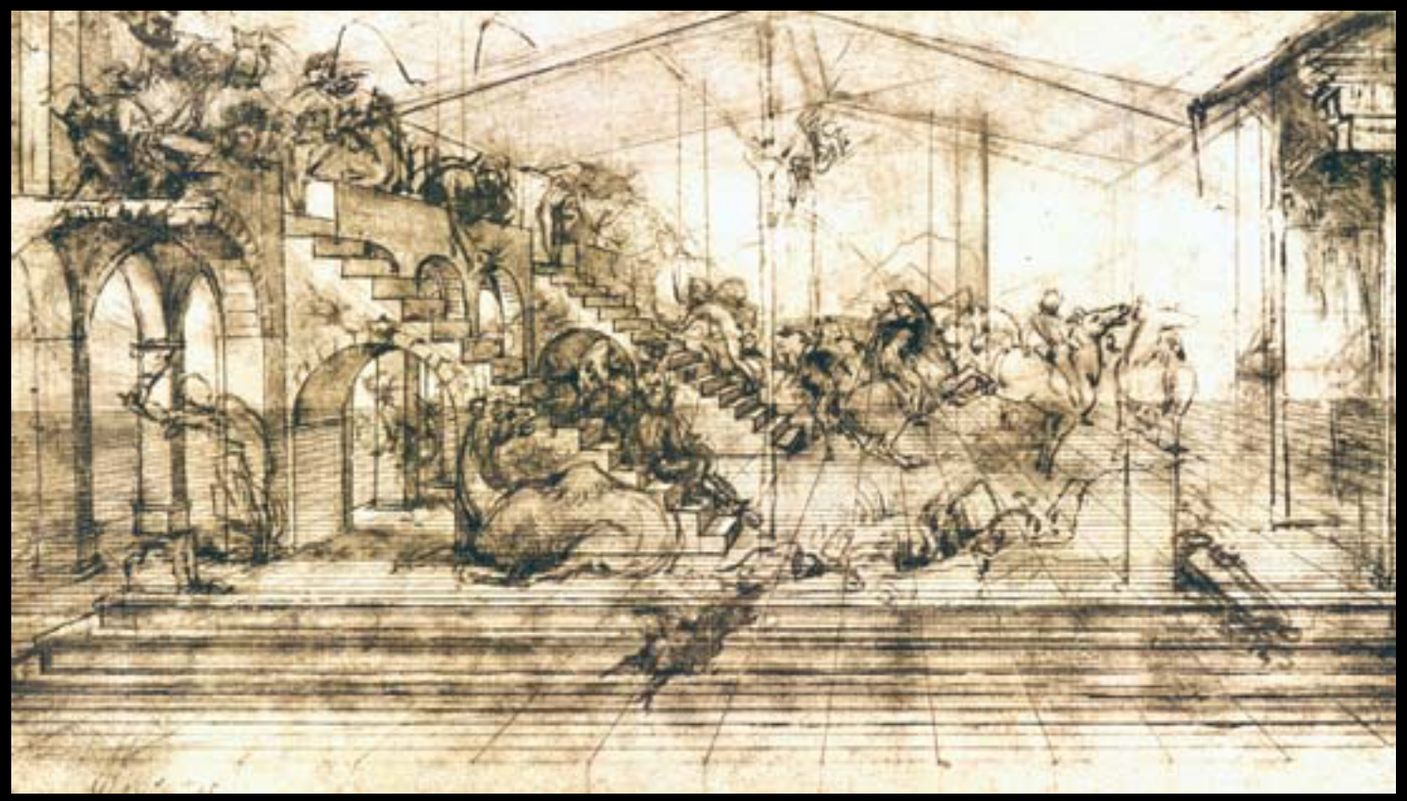


## The Artisan Class

## 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



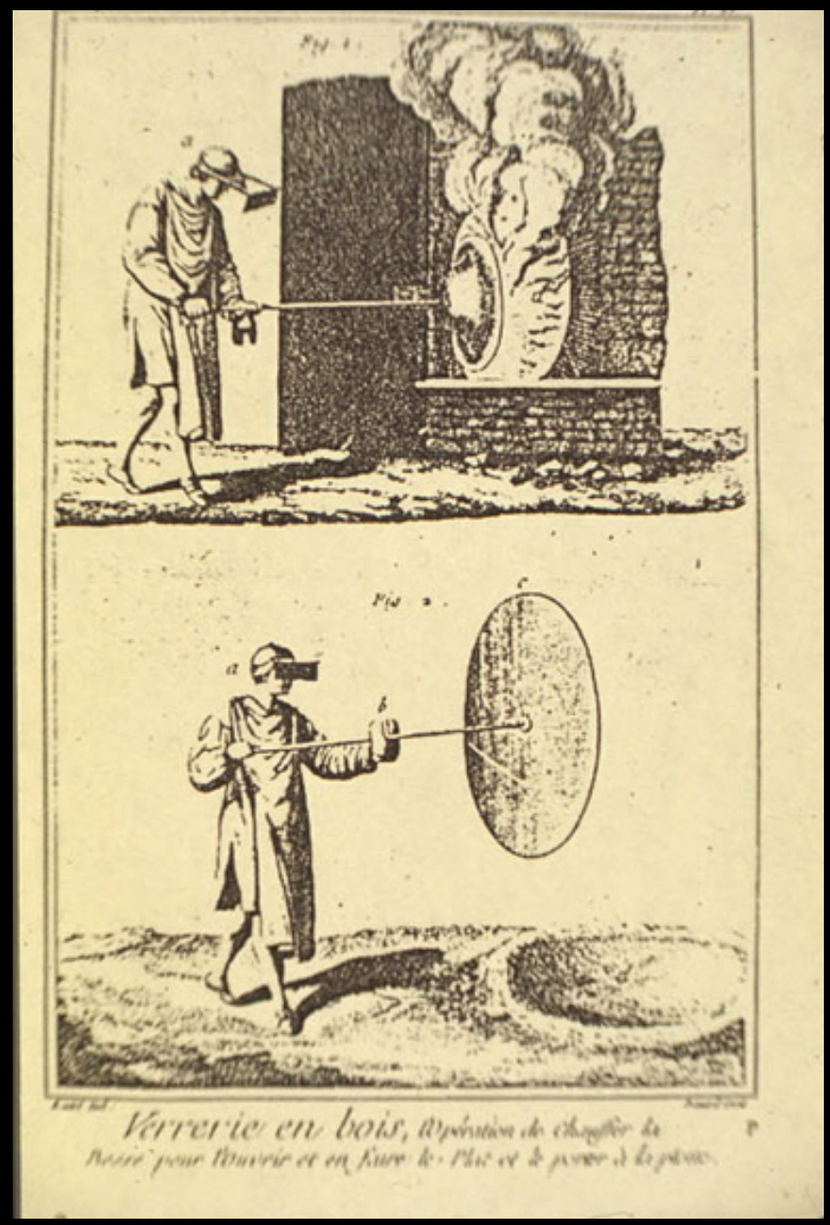
the rise of the artist

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

# Enlightenment

## Diderot's Encylopedie 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

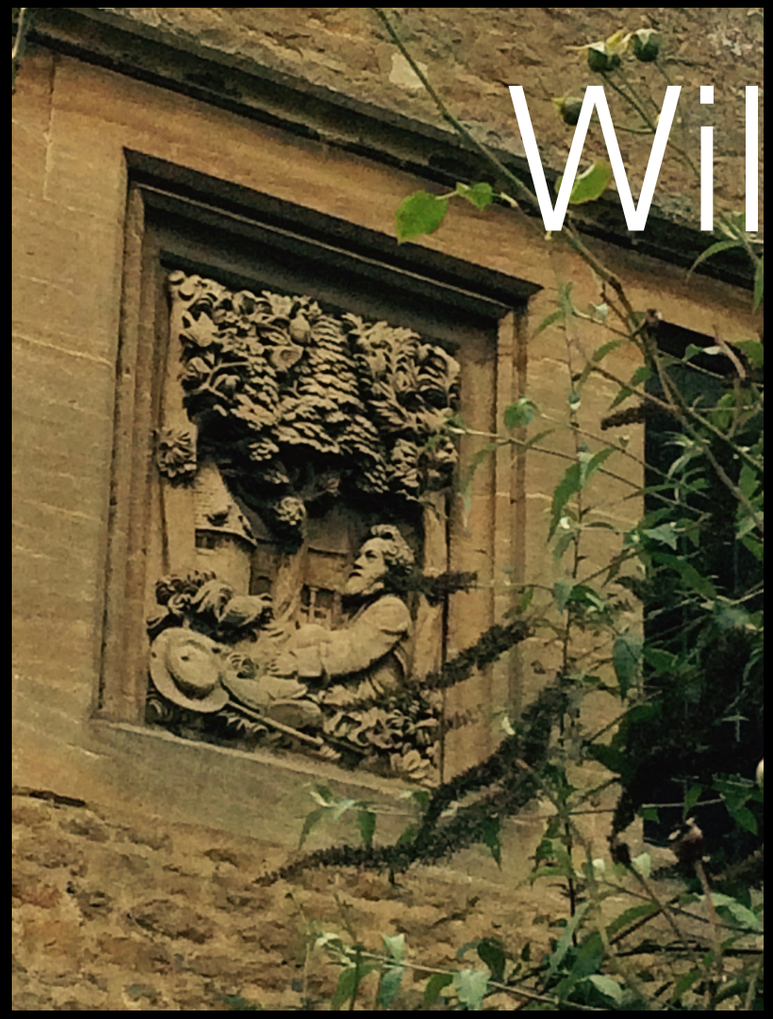
## *Seven Lamps Of Architecture (1849 )*

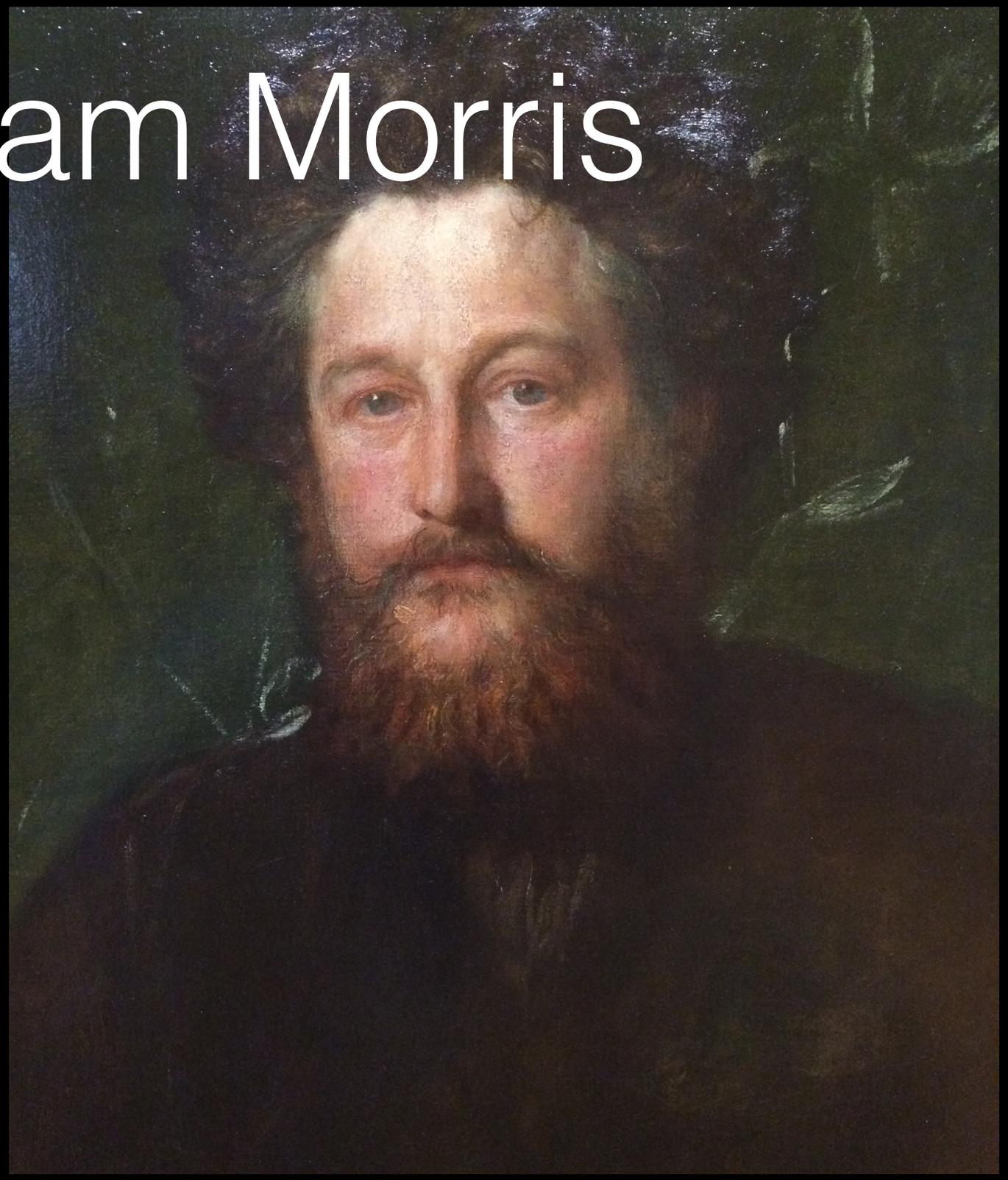
For it is not the material, but the absence of human labour, which makes a thing worthless; and a piece of terra cotta, or of plaster of Paris, which has been wrought by the human hand, is worth all the stone in Carrara, cut by machinery.

## *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



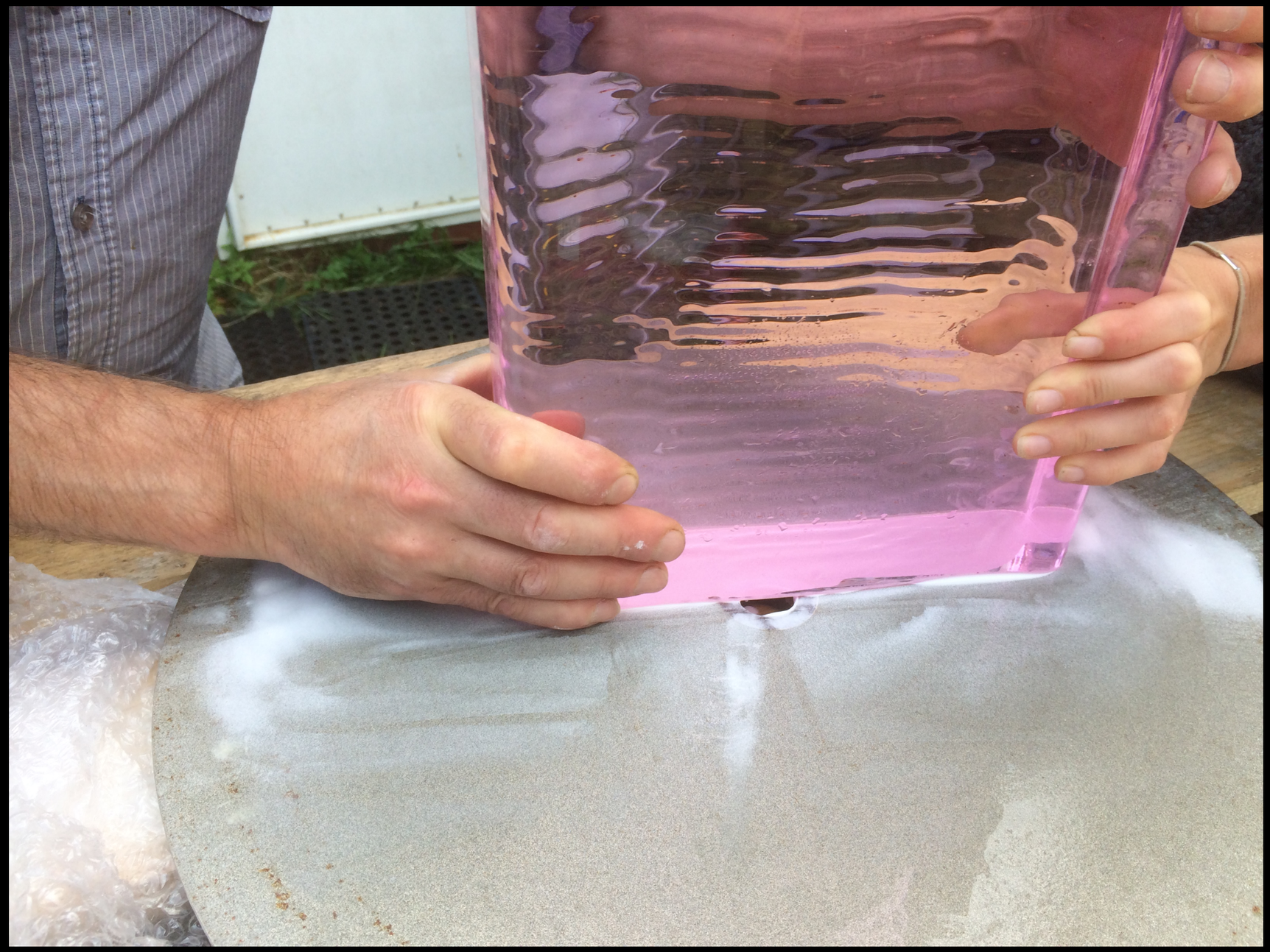

Craft is a verb: To exercise skill in making an object typically by hand

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

(Corbett, 2017, p.11)



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

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

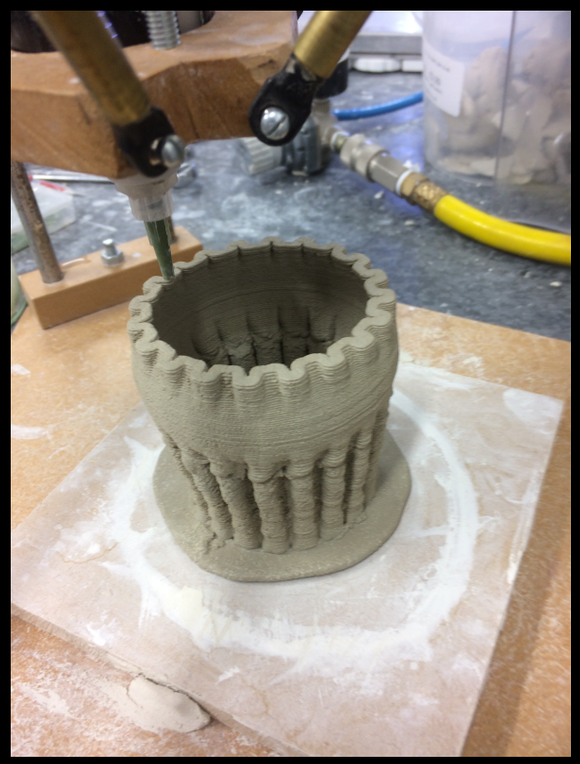
- The majority of things that are identified as hand made are not made by hand! Usualy a tool is employed!

- The computer is a remote tool.

# Digital Craft and Robotics













Grinling Gibbons (1648 – 1720/1)