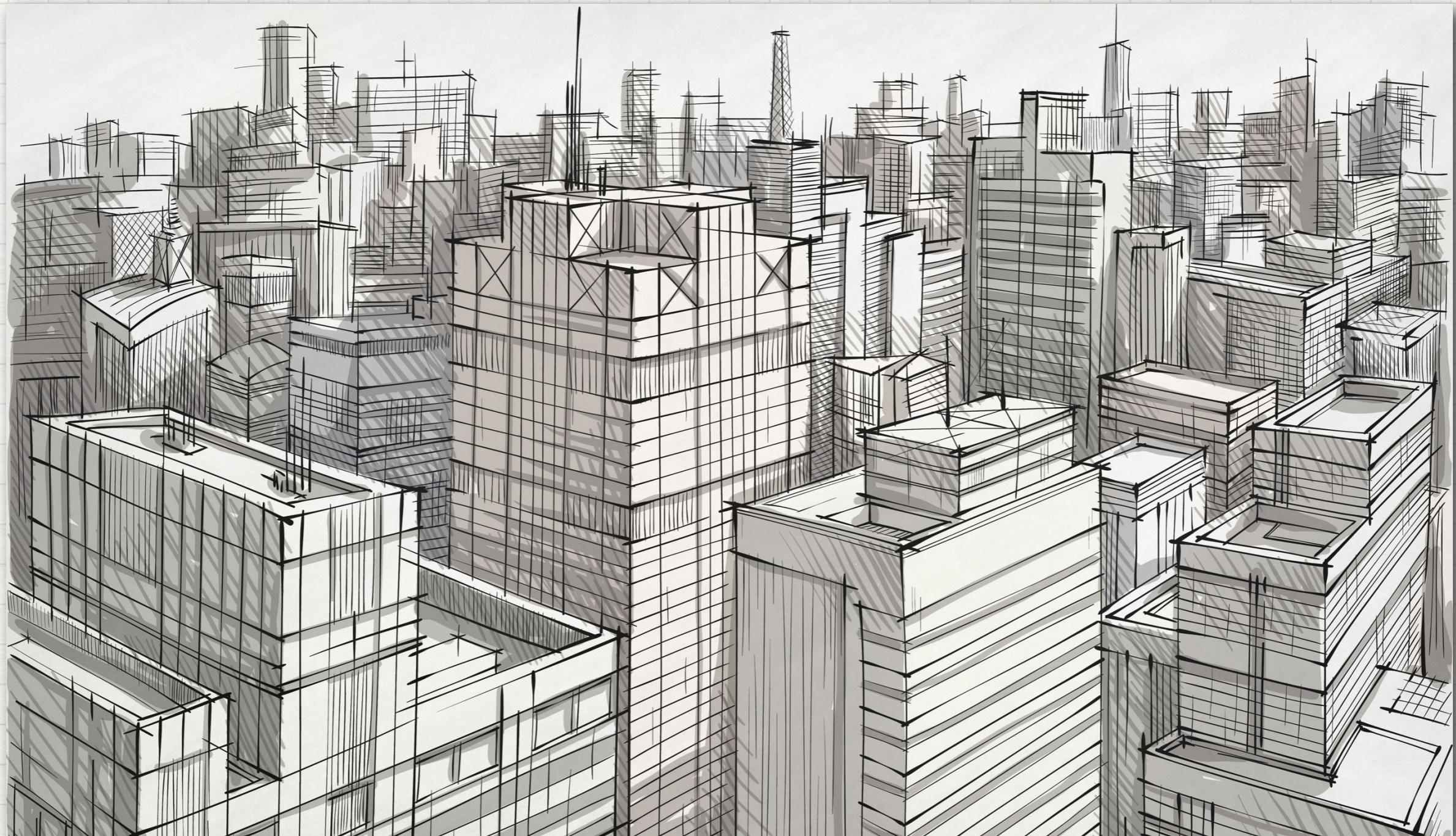


BUILDING KNOWLEDGE STRUCTURES

UNDERSTANDING THE ARCHITECTURE OF KNOWLEDGE



THE TWO QUESTIONS

How did the structure become so complex?
How does one understand the structure?

Architecture

Staves off:
Excessive Sunlight
Harsh Winds
Heavy Rain

Knowledge

Staves off:
Fear and Confusion

“
AN OBJECT IS NOT AN
OBJECT, IT IS A WITNESS TO
A RELATIONSHIP

— *Cecilia Vicuna*

”

All Knowledge Systems consist of the following:

Finitely Many Nuclear Objects

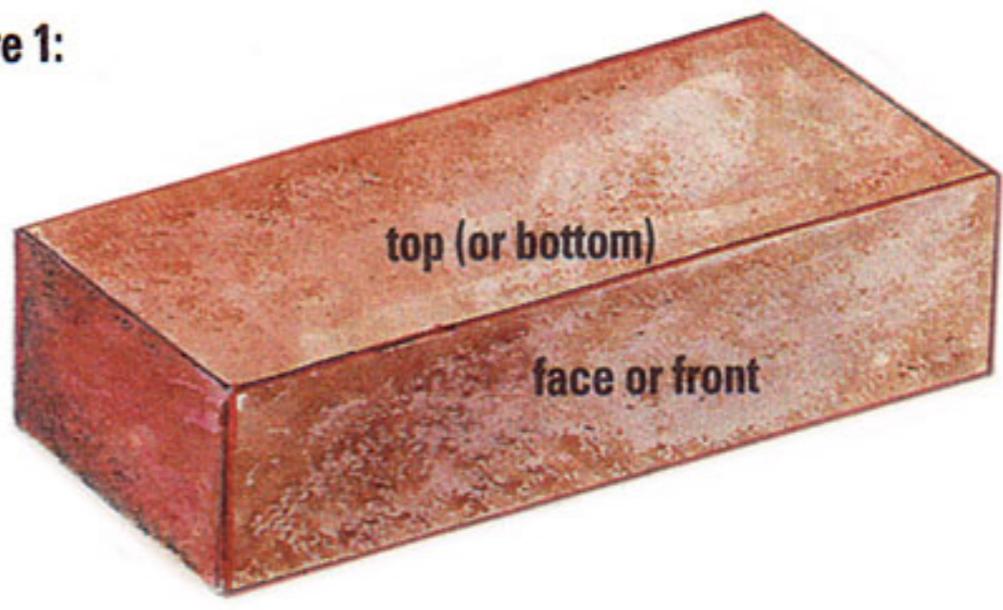
Finitely Many Relationships between the Nuclear Objects

Patterns of Relationships: Relationships repeated several times

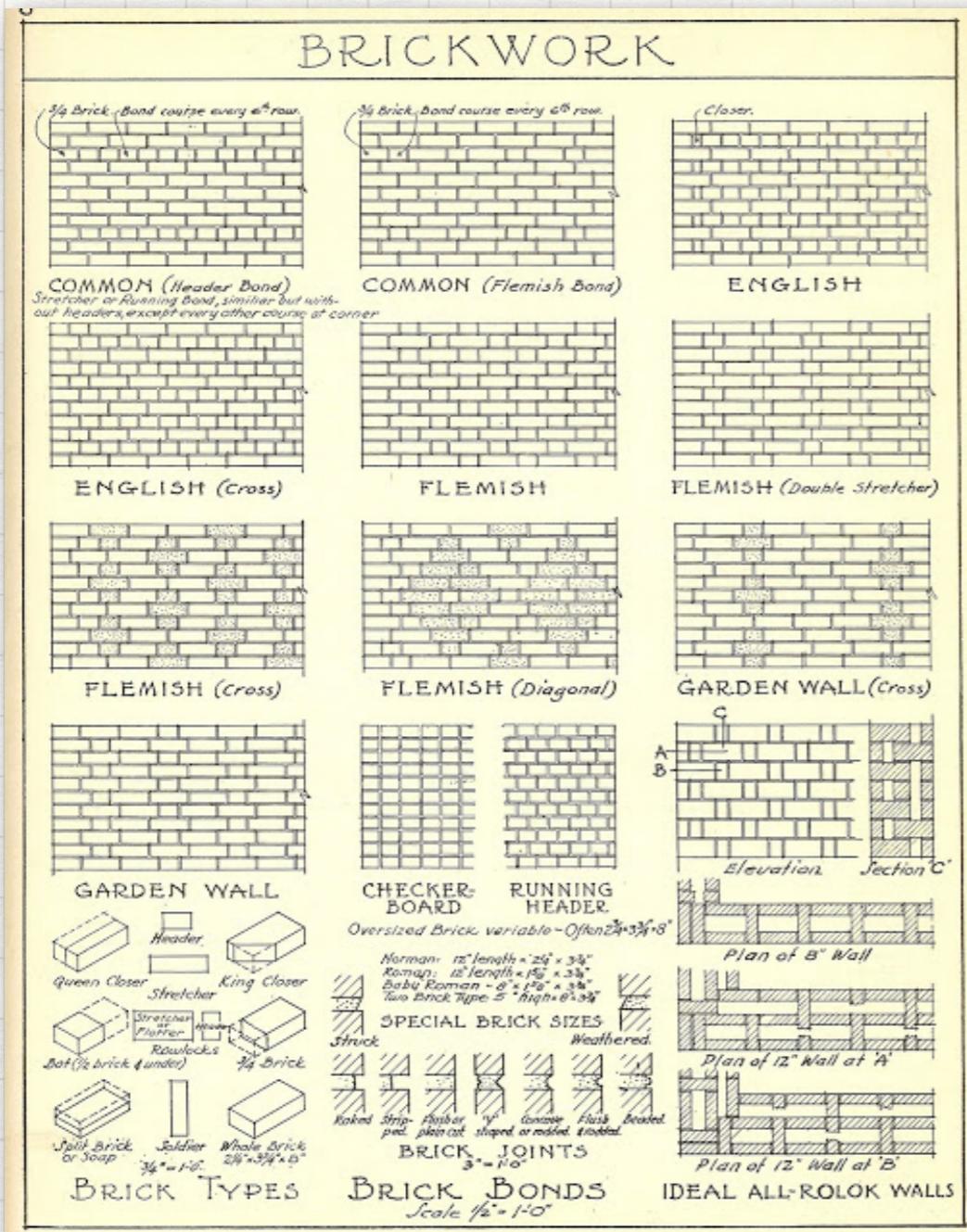
THE BRICK AS A NUCLEAR OBJECT

- Three types of faces: top/bottom, end and face
- Types of relationships between two bricks:
 - A. End to End
 - B. End to Face
 - C. End to Top
 - D. Face to Face
 - E. Face to Top
 - F. Top to Top

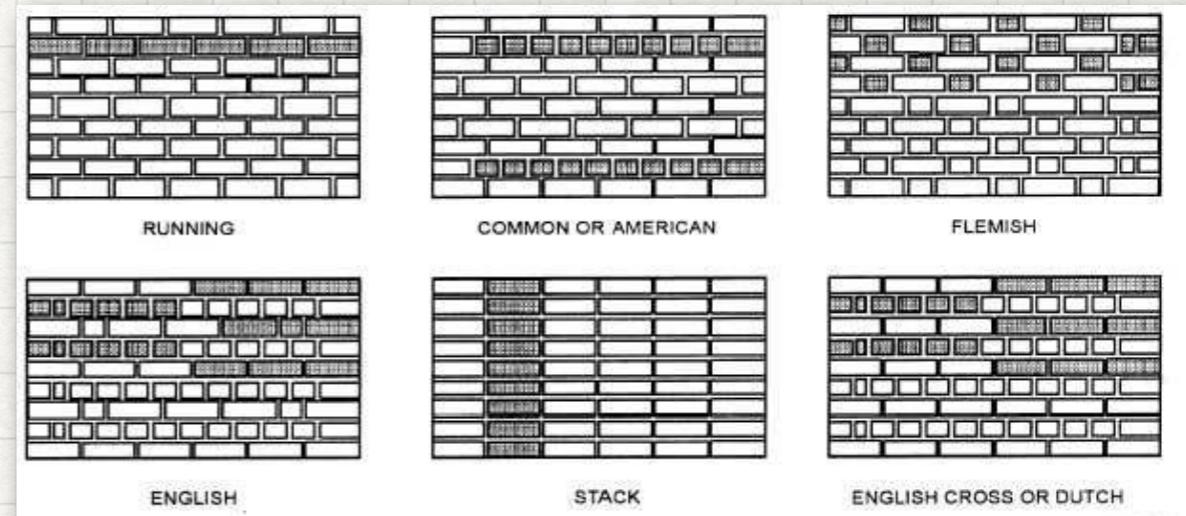
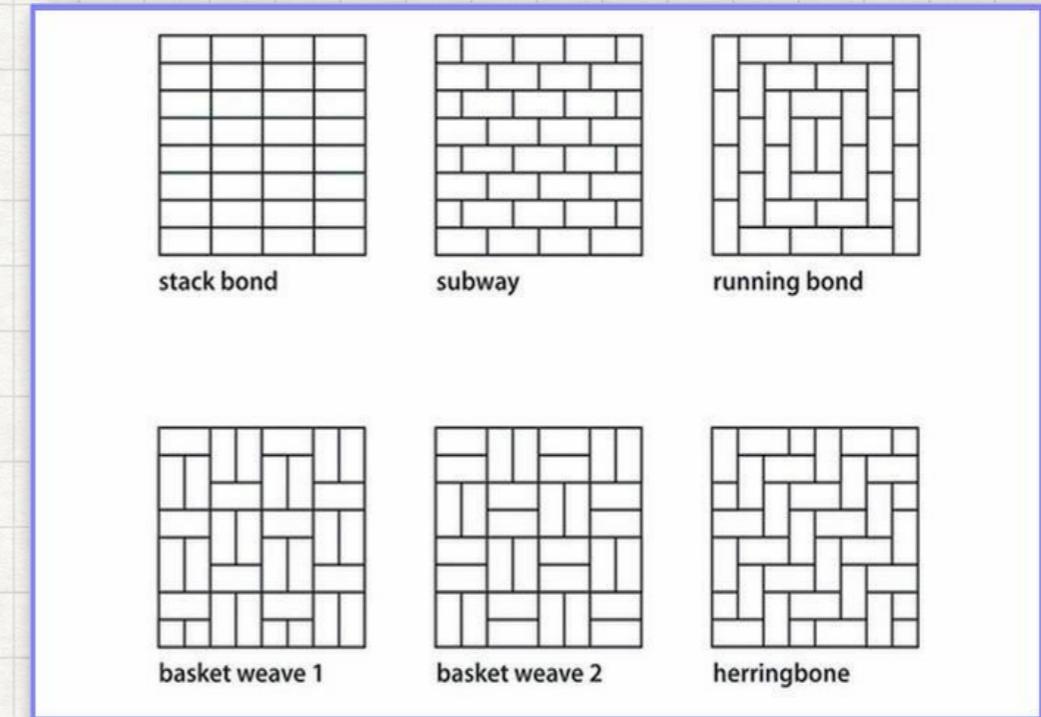
Figure 1:

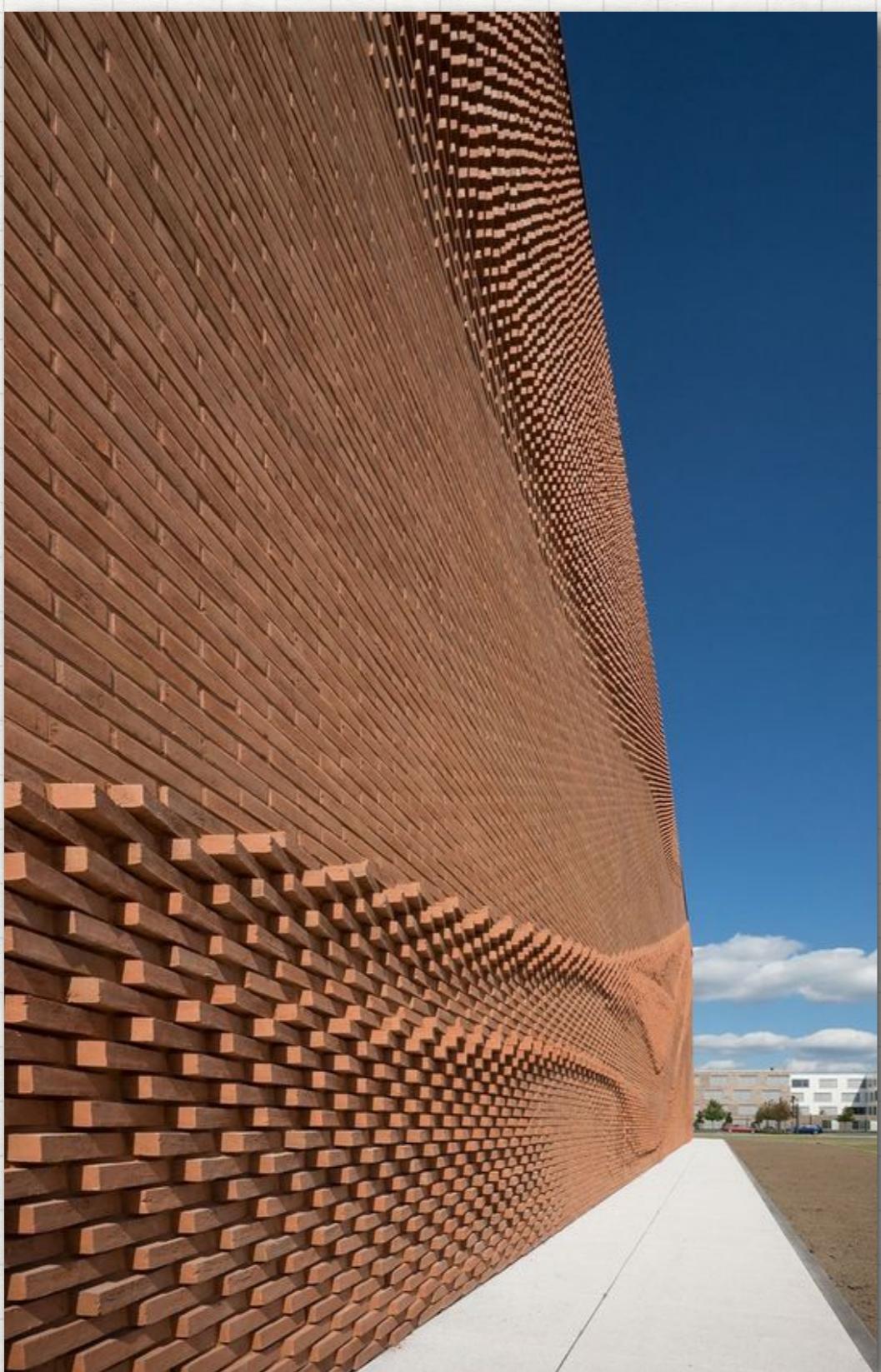


Source: <https://www.motherearthnews.com/diy/diy-bricklaying-zmaz98onzraw>

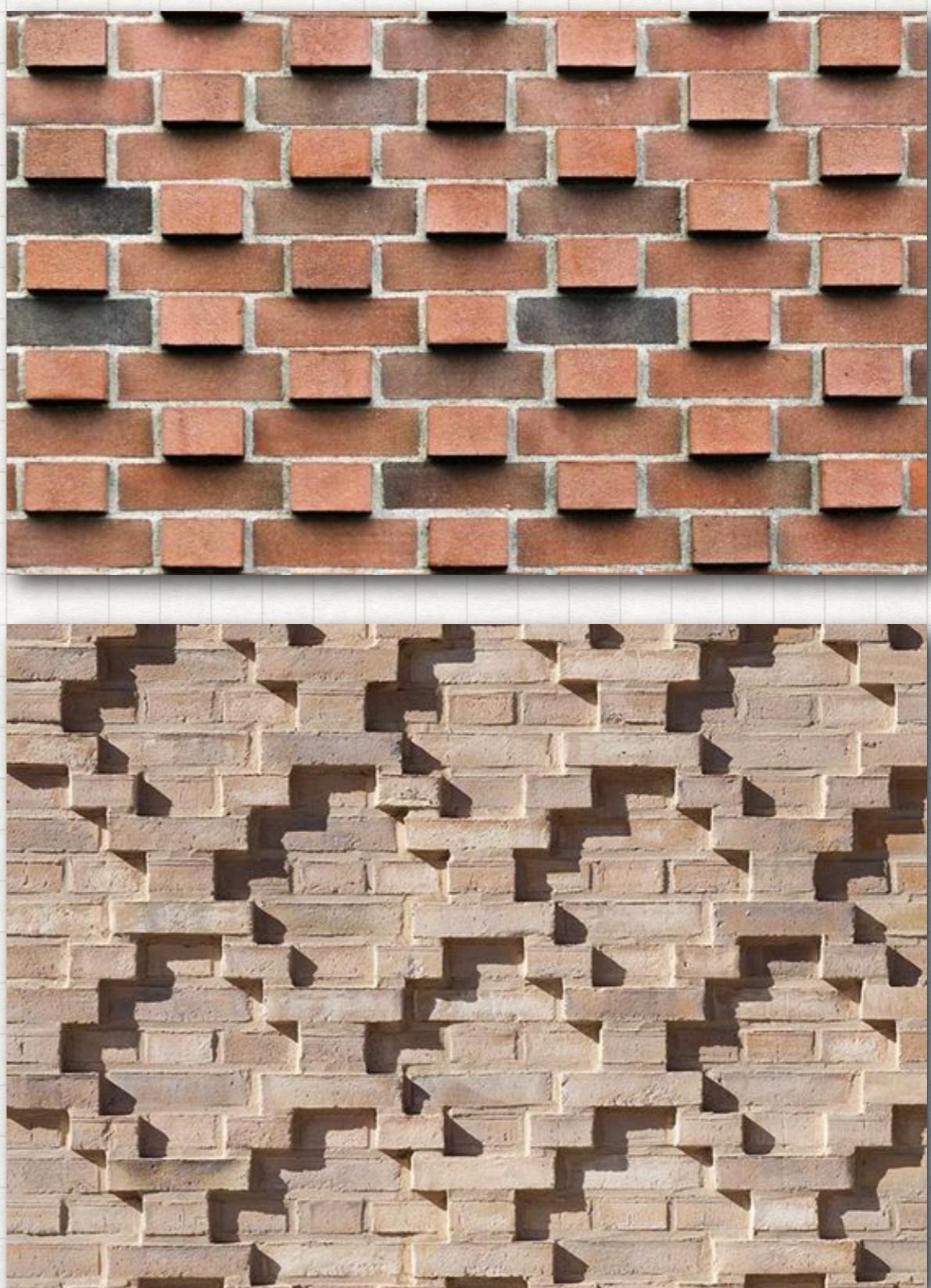


<http://ermillerdesign.blogspot.com/2011/02/im-working-on-new-project-for-gallery.html>





<https://www.designboom.com/architecture/behet-bondzio-lin-architekten-undulating-brick-facade-11-18-2018/>



THE ARCHITECTURE OF KNOWLEDGE

THE CORD-19 CORPUS AS A KNOWLEDGE SYSTEM

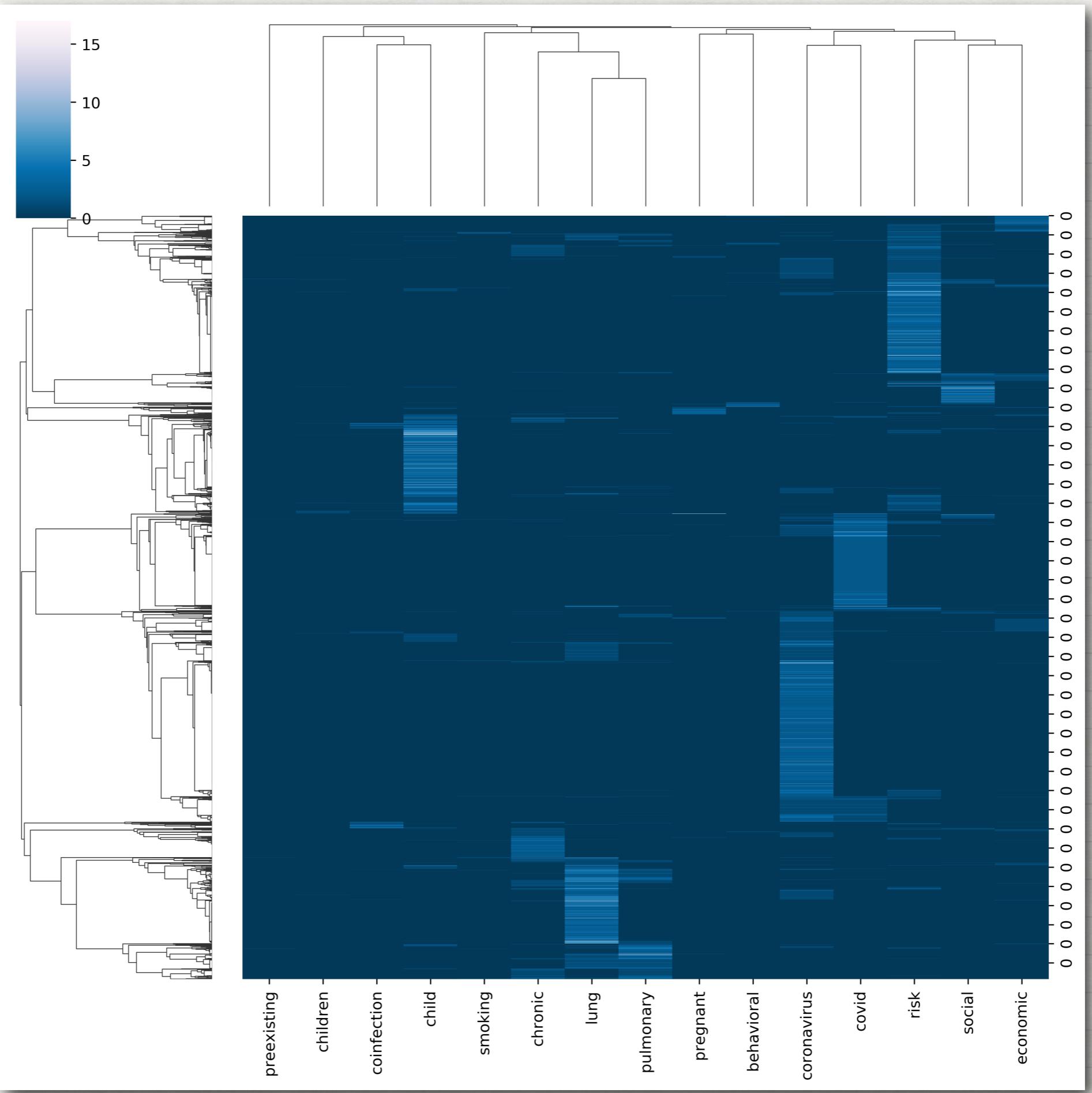
- Nuclear Objects: Concepts
- Relationships: Ideas linking two of more concepts.
- Patterns: Production Systems based on Relationships

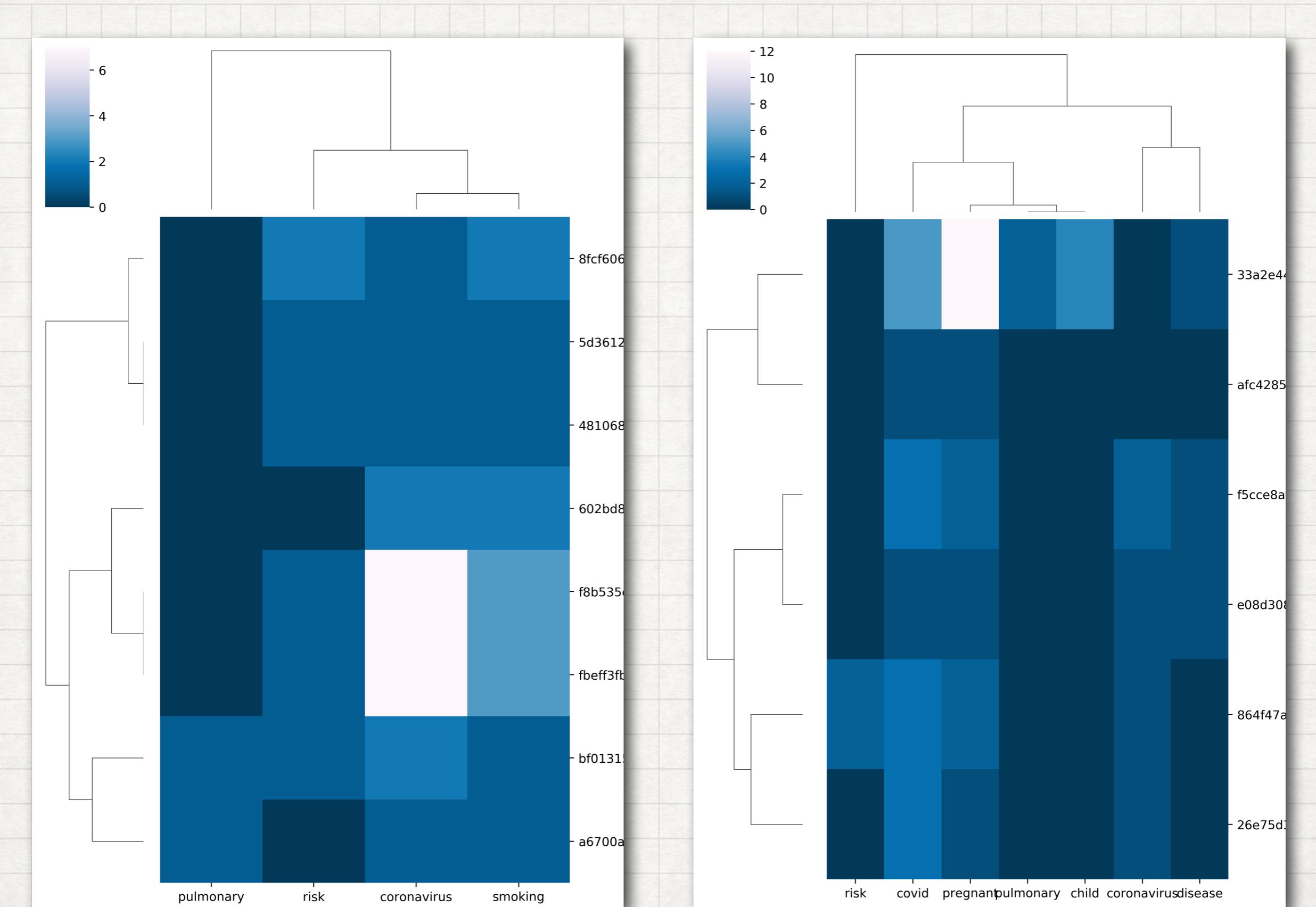
Angiotensin Converting Enzyme II (ACE2) is used by COVID-19 as a cellular entry receptor to infect the lower respiratory tract.

There has been a concern regarding the safety of ACE inhibitors(ACEi) and angiotensin receptor blockers (ARB) during the ongoing COVID-19 pandemic. These agents up-regulate expression of ACE2 in various tissues, including on cardiomyocytes. -Bansal et al.

SUGGESTIONS ON A SURVEY

- Concepts are represented by words. So the primary challenge is to agree upon the most relevant '**Vocabulary**'. Methods like looking up **glossaries** in the field, **expert advice**, are frequently helpful.
- Relationships between concepts are expressed by their presence in the **same Language Unit**. eg. Two concepts mentioned in the same article or the same sentence.
- Possible patterns among relationships have to be inferred using visualisation techniques. eg. Cluster Maps, Network Diagrams.





MY NOTEBOOKS

- On the Risk Factors for COVID-19: <https://www.kaggle.com/sagarkolte/cord-19-risk-factors>
- Transmission, Incubation and Environmental Stability: <https://www.kaggle.com/sagarkolte/cord-19-knowledge-maps-and-vocabularies>