ARCHITECTURAL STRUCTURE

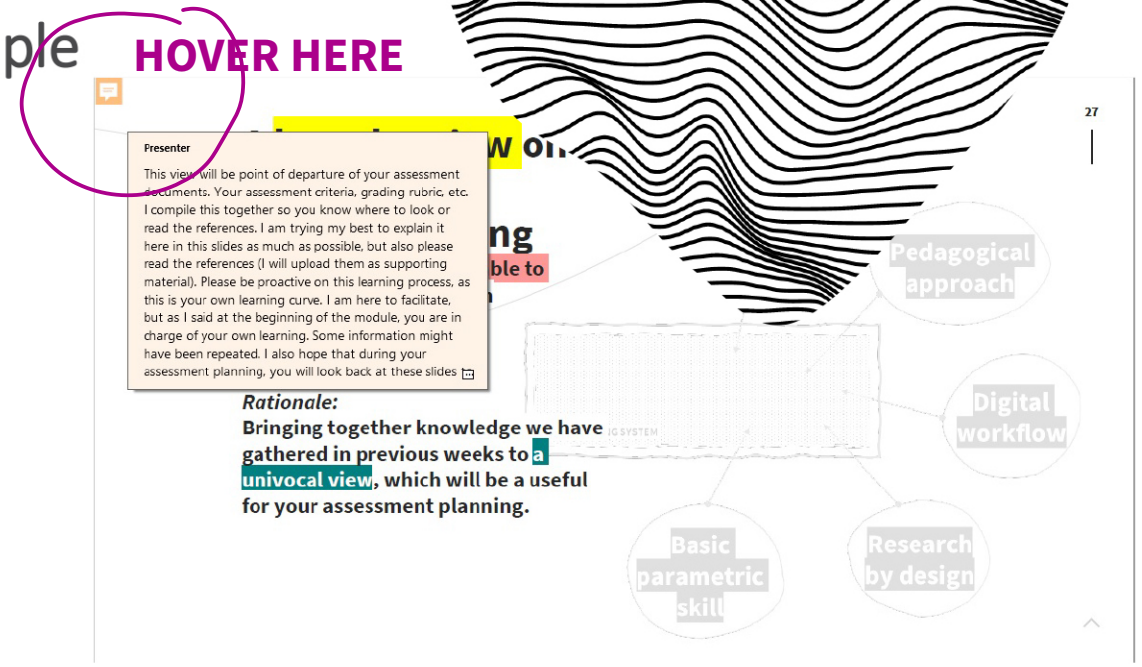
Week 10: Assignment 2 Tectonic Thinking

(Recap and supplementary materials)

Photo by Kiarash Mansouri on Unsplash

How to use this week's material as self study material:

1. Open it in your Adobe Reader
2. Hover the square at the top left of the page is you see one.
3. Lecture notes will pop out (if there are any), example is as follow:



Outline

1
INTRODUCTION
Aims
LOs

2
SELF STUDY:
- ASSIGNMENT 2 BRIEF

3
SELF STUDY:

- TECTONIC
- SUPPORTING MATERIALS FOR ASSESSMENT 2.1 AND 2.2

4
~~SUMMARY~~ REFLECTION

- NO ONLINE SUBMISSION (PLEASE CONTINUE TO WORK ON YOUR ASSIGNMENT 1 SUBMISSION)

Aims and objectives

- To expand on **Assessment 2**’s brief: rationale, aim and mapped learning objectives, timeline, etc
- **Assessment 2.1** and **Assessment 2.2**
- A recap on **Tectonic Thinking**, which we explored in Week 1
- To provide **supplementary materials** for Assignment 2 related to Tectonics

Learning outcomes

Students will be able to..

01 Prepare for the Assessment 2

02 Become aware on the submission timescale

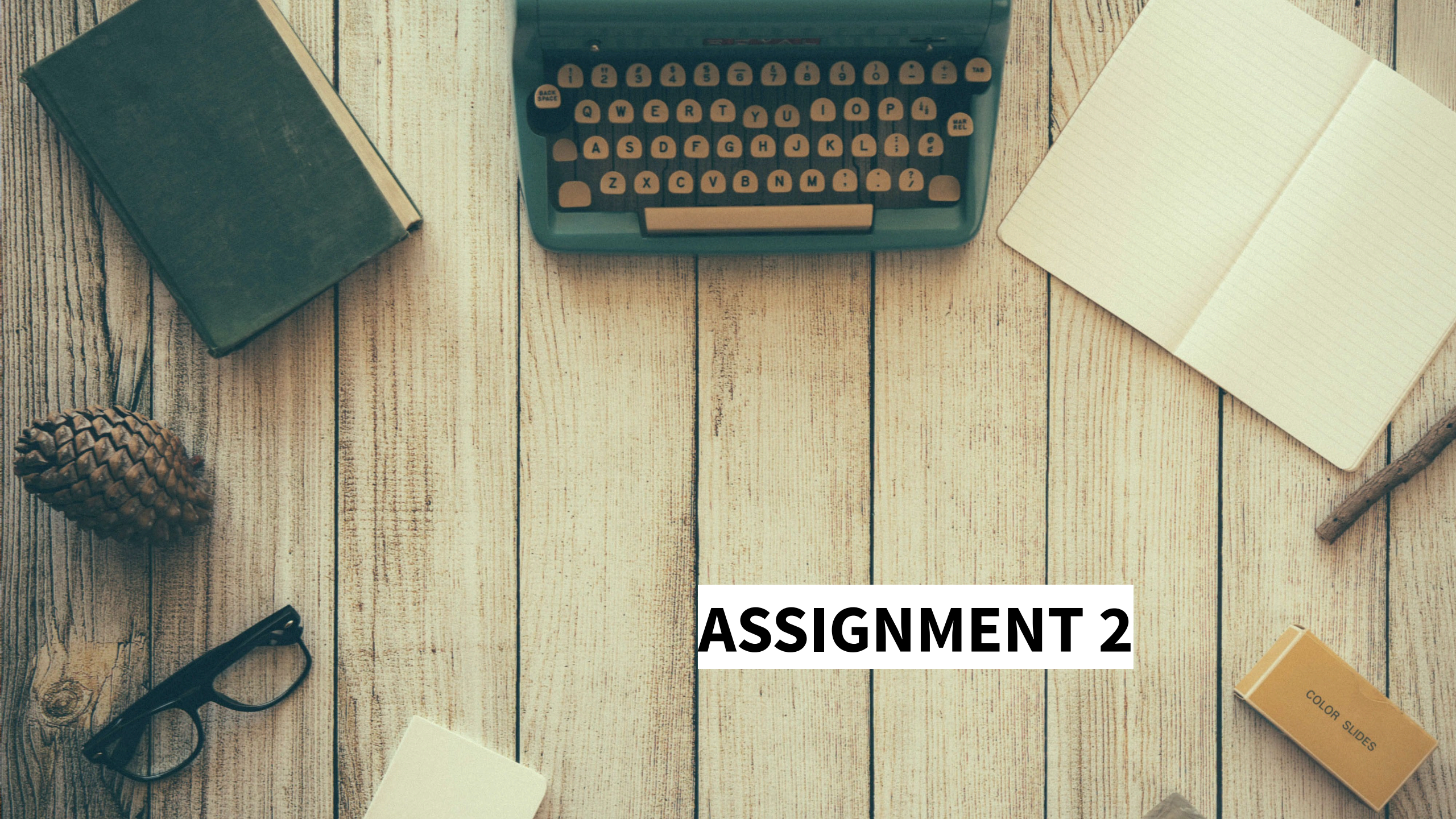
03 Use supplementary materials (selectively) to frame your arguments and help your analysis

What we have learnt so far..

- Week1 : Brief understanding of **tectonic thinking** in architecture practice
- Week 2: **Historical understanding** of tectonics
- Week 3-6: (Revisiting) **Material based structural system** (timber structure, steel structure, concrete structure and masonry structure)
- Week 7: **Expert talk** and **site visit** in Beilun
- Week 8: **Technical drawings**
- Week 9: **Reading week** (working on Assignment 1)

REMINDER:
Assignment 1's deadline is on May 8th – Saturday (11:45pm)

Late submission is not tolerable
Note: You had 2x4hr classes to work on this assignment
Via email: mia@miatedjosaputro.com



ASSIGNMENT 2

Live assessments' link:

https://miatedjosaputro.com/2021/04/07/as-2021-assessments/

Documents you need to look at:

- Document **#1**
- Document **#6**
- Document **#7**
- **Fundamentals of academic writing**

Architectural Structure

Protected: AS 2021: Live Assessments Documents

April 7, 2021 0 Comments

Assessment 1 documents:

1- AS_assessment brief_general

2- AS_assessment 1

3- AS_assessment 1- grading rubric

4- AS_assessment 1- example

5- Link to the SketchUp file: https://www.dropbox.com/s/mzflu293nhbx576/5-%20AS_assessment%201-%20sketchup%20file.zip?dl=0

Assessment 2 documents:

6- AS_assessment 2

7- AS_assessment 2- grading rubric

Fundamentals of **academic writing**:

Avoiding Plagiarism

assessments NBU-AStructure

Deadline:

Assignment 2.1: May 15th 2021 (11:45pm)

Assignment 2.2: June 2nd 2021 (11:45pm)

Late submission is not tolerable
Via email: mia@miatedjosaputro.com

Assignment 2.1 and 2.2

Aim:

- To put tectonic thinking (and its parameters) in context of students' current studio design project
- To exercise critical thinking on suitability of structural systems in a specific design brief
- To demonstrate understanding on currently available methods of construction

Assignment 2.1

STATEMENT OF INTENT

Deadline: May 15th (Saturday), 11:45pm
Format: A4 pdf file
Submission via email to mia@miatedjosaputro.com
Subject and file naming:
AS_2.1_[Your nickname]_[ID number], for example: AS_2.1_Mia_123456

Assignment 2.1

STATEMENT OF INTENT

This document encapsulates the **design brief** for this assignment that **you define yourself**.

Project: **Commercial Street Design**

You have to submit **Assignment 2.1. on time** to be able to submit Assessment 2.2.

Commercial Street Design of Student Community

Picture courtesy of Claire

Assignment 2.1

STATEMENT OF INTENT

Content should include (the minimum):

1. Chosen **scope of work** with regards to the whole design
2. Preview **image** of the urban planning and labelled chosen scope of work. Use your existing drawings/ photographs to illustrate this.
3. A paragraph **elaborating the chosen scope of work**, including: rationale and brief explanation about the space
4. A **brief plan of work**.

Assignment 2.1

STATEMENT OF INTENT

Content should include (the minimum):

1. Chosen **scope of work** with regards to the whole design
2. Preview **image** of the urban planning and labelled chosen scope of work. Use your existing drawings/ photographs to illustrate this.
3. A paragraph **elaborating the chosen scope of work**, including: rationale and brief explanation about the space
4. A **brief plan of work**.

Assignment 2.2

AN ESSAY SUBMISSION

	EXPLANATION
Format	Written assignment on A4 paper. Page numbers are strongly suggested.
Cover Page	Please make sure your cover page includes: university name, your full name, ID number and title of essay. Please start your essay on the second page. ADDITIONAL NOTE: Include word count (except reference list) on the cover
Referencing style	Harvard (click here)
Language	English (only)
Word count	No more than 2000 words, exclude references. If you submit <1800 words, 10% of your mark will be deducted.
Basic structure	Abstract (100 words), introduction, body paragraphs, conclusions and future studies.
Submission	Electronic submission, MS Word and pdf files (both have to be submitted).

Assignment 2.2

AN ESSAY SUBMISSION

	EXPLANATION
Format	Written assignment on A4 paper. Page numbers are strongly suggested.
Cover Page	Please make sure your cover page includes: university name, your full name, ID number and title of essay. Please start your essay on the second page.
Referencing style	Harvard (click here and see next slide)
Language	English (only)
Word count	No more than 2000 words, exclude references. If you submit <1800 words, 10% of your mark will be deducted.
Basic structure	Abstract (100 words), introduction, body paragraphs, conclusions and future studies.
Submission	Electronic submission, MS Word and pdf files (both have to be submitted).

Academic writing style: Harvard referencing style

Download the guide from this link or use *Google Scholar* to generate reference list
https://miatedjosaputro.com/uploads/sites/2/2020/02/CTR-Harvard-guide-2.pdf

IN-TEXT CITATION
Author (Year) or (Author, Year)
Example:
"After that I lived like a young rajah in all the capitals of Europe…" (Fitzgerald, 2004).
or
Fitzgerald (2004) posits that he lived like a young rajah in the capitals of Europe..

REFERENCE LIST
Author (Year).
Example:
Fitzgerald, F. (2004). The great Gatsby. New York: Scribner.

Academic writing style: Harvard referencing style

Download the guide from this link or use *Google Scholar* to generate reference list
https://miatedjosaputro.com/uploads/sites/2/2020/02/CTR-Harvard-guide-2.pdf

REFERENCE LIST FOR ONLINE RESOURCES

Example:

Department of Health (2017) *Recovering the cost of NHS treatments given to overseas visitors*. Available at: https://www.gov.uk/government/news/ /recovering-the-cost-of-nhs-treatments-given-to-overseas-visitors (Accessed: 24th February 2017).

Academic writing style: Harvard referencing style

Download the guide from this link:
https://miatedjosaputro.com/2021/04/07/as-2021-assessments/

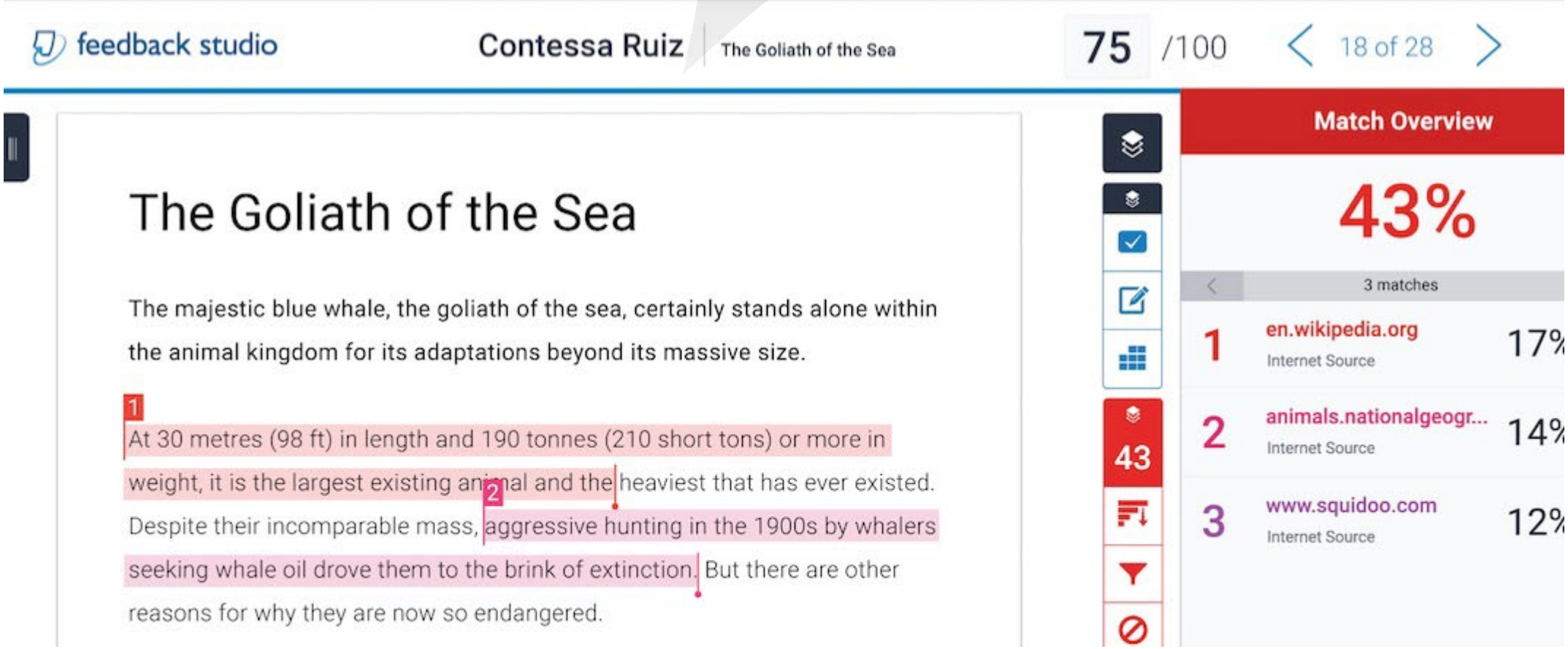
FUNDAMENTALS OF ACADEMIC WRITING:
PARAPHRASING, CITING, AND BALANCE BETWEEN AUTHORS' WRITER'S VOICE

25 May 2020
By: Matt Wallwork

Note: green is the author's voice, purple is the writer's voice (yours).

In academic writing there is a three- way relationship, between the reader, the authors (the sources you are using), and the writer (you). The way you use the arguments or facts from authors- sources- to develop your own stance (argument) is called source synthesis. Whenever you use information from a source, you must cite it- if you do not, you are guilty of plagiarism, which is academic misconduct. You must use sources so that your writing is objective. If the ideas were all your own, they would be subjective, and therefore less valid. The ideal blend is 50:50, i.e. 50% of the information comes from sources, and 50% comes from your ideas about what the sources say. For other considerations in academic writing, refer to the Andy Gillet articles on Uefap, here: http://www.uefap.com/writing/writfram.htm

Plagiarism


feedback studio
Contessa Ruiz
The Goliath of the Sea
75 /100
18 of 28
The Goliath of the Sea
The majestic blue whale, the goliath of the sea, certainly stands alone within the animal kingdom for its adaptations beyond its massive size.
1
At 30 metres (98 ft) in length and 190 tonnes (210 short tons) or more in weight, it is the largest existing animal and the heaviest that has ever existed.
2
Despite their incomparable mass, aggressive hunting in the 1900s by whalers seeking whale oil drove them to the brink of extinction. But there are other reasons for why they are now so endangered.
43
Match Overview
43%
3 matches
1 en.wikipedia.org Internet Source 17%
2 animals.nationalgeogr... Internet Source 14%
3 www.squidoo.com Internet Source 12%

Assignment 2.2

AN ESSAY SUBMISSION

	EXPLANATION
Format	Written assignment on A4 paper. Page numbers are strongly suggested.
Cover Page	Please make sure your cover page includes: university name, your full name, ID number and title of essay. Please start your essay on the second page.
Referencing style	Harvard (click here)
Language	English (only)
Word count	No more than 2000 words, exclude references. If you submit <1800 words, 10% of your mark will be deducted.
Basic structure	Abstract (100 words), introduction, body paragraphs, conclusions and future studies.
Submission	Electronic submission, MS Word and pdf files (both have to be submitted).

Assignment 2.2

AN ESSAY SUBMISSION

	EXPLANATION
Format	Written assignment on A4 paper. Page numbers are strongly suggested.
Cover Page	Please make sure your cover page includes: university name, your full name, ID number and title of essay. Please start your essay on the second page.
Referencing style	Harvard (click here)
Language	English (only)
Word count	No more than 2000 words, exclude references. If you submit <1800 words, 10% of your mark will be deducted.
Basic structure	Abstract (100 words), introduction, body paragraphs, conclusions and future studies.
Submission	Electronic submission, MS Word and pdf files (both have to be submitted).

WHAT IS **CRITICAL THINKING?**

Photo by Diego PH on Unsplash

1. ***Criterion*** *based: assessing things based on criteria*
2. *Basing hypotheses on* ***evidence***
3. ***Concession rebuttal*** *(assessing both sides of arguments to be objective)*

Evidence based thinking based on the three above-mentioned points

Previously in Week 1..

TECTONIC THINKING

Common problem in practice:

The division between architectural design of a building and the structural design of the building.

The key is the conceptual understanding of structural behaviour.

Millais, M. (2017). *Building Structures: understanding the basics*, Routledge.

What is tectonic approach in architecture?

Tectonics is the science of art of construction, both in relation to use and artistic design.

It was derived from a Greek word, “Tekton”, meaning carpenter or builder.

Poetic of construction

Related to material and structure

Maulden, R. (1986). *Tectonics in architecture: from the physical to the meta-physical.* Massachusetts Institute of Technology.

Tectonics resembles:

- Integration of structure and construction
- The application of technical aspects
- Attention to detail creativity that reflects cultural and aesthetic qualities
- And is related to different aspects of skills, methods, materials and proportions.

Al-Alwan, H. & Mahmood, Y. B. (2020). The Connotation of Tectonics in Architectural Theory. IOP Conference Series: Materials Science and Engineering, 2020. IOP Publishing, 012161.

Next in

TECTONIC THINKING

The remaining part of this material is to help to with your analysis. They serve as point of departure of your arguments.

In form of:

10 guiding questions

(but not limited to these)

Summary of 10 guiding questions

 # 1: Classical tectonics and digital tectonics
 # 2: Early theories of tectonics
 # 3: Architect as master of tectonic expression
 # 4: Stance on digital tectonics
 # 5: Core aspects of tectonics
 # 6: Tectonics as an artistic expression of mechanical functions
 # 7: Tectonics as an artistic expression of mechanical functions
 # 8: Tectonics as an artistic expression of spatial functions
 # 9: Views on tectonism
 # 10: Tectonic expression

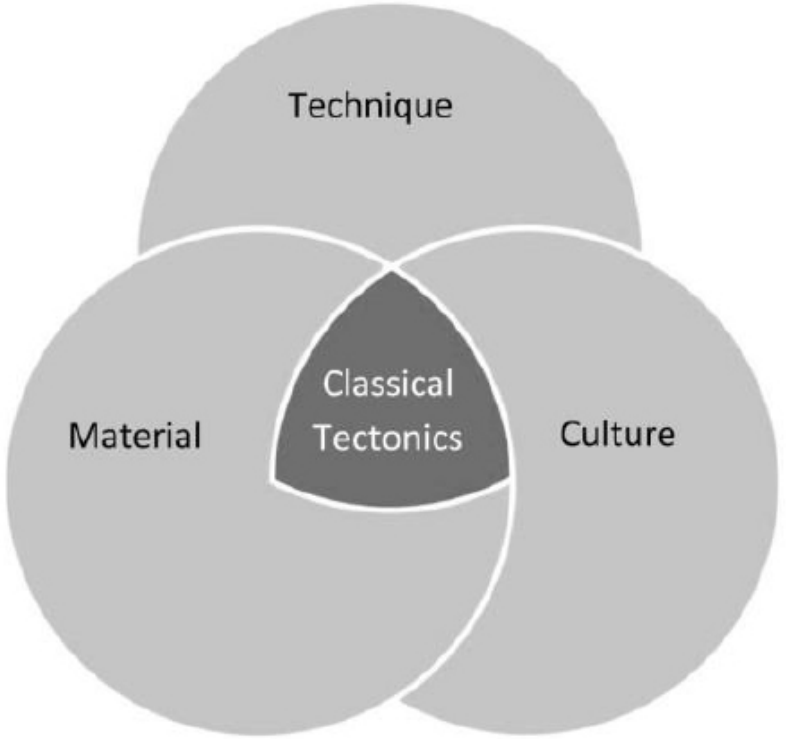
Question #1:

How does your tectonic thinking practice relate in terms of **classic tectonics** and **digital tectonics**?

Al-Alwan, H. & Mahmood, Y. B. (2020). The Connotation of Tectonics in Architectural Theory. IOP Conference Series: Materials Science and Engineering, 2020. IOP Publishing, 012161.

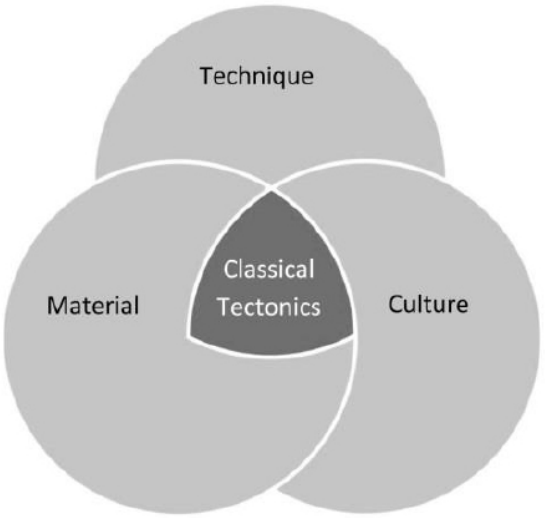
Classical tectonics (as opposed to digital tectonics)

*"**Tectonics** is the essence of architecture that deals with the **aesthetic aspects** of **structure, construction, and materials**. It tends to consider the handicrafts, **details and joints** as **an essential part of architectural practice** and as an important means of **showing cultural expression** by using the simplest techniques and materials. Tectonics creates emotional interaction between people, nature, and culture by its dependence on the human ability to understand the inspirational relations between the elements of the building."*



Al-Alwan, H. & Mahmood, Y. B. (2020). The Connotation of Tectonics in Architectural Theory. IOP Conference Series: Materials Science and Engineering, 2020. IOP Publishing, 012161.

Classical tectonics (as opposed to digital tectonics)



A.Palazzetto dello Sport, Rome, 1961, Pier Luigi Nervi. The perfect integration between structure and construction

B. Sagrada Familia, Rome, Antonio Gaudi Details enrich the architectural capacity; enhance it in artistic and decorative sense.

C. Notre Dame du Ronchamp, Paris, *Le Corbusier* 1950 The Ingenuity of joining

D. Waterfall House, Pennsylvania, F. L. Wright, 1935 Full interaction between architecture and environment

Figure 7. The embodiment of Tectonics essential elements.

Al-Alwan, H. & Mahmood, Y. B. (2020). The Connotation of Tectonics in Architectural Theory. IOP Conference Series: Materials Science and Engineering, 2020. IOP Publishing, 012161.

Previously in Week 1..

Classical tectonics: Essential factors

TECHNIQUE

Represented by:
construction, technology
and representation

CULTURE

Represented by art,
handcraft empathy

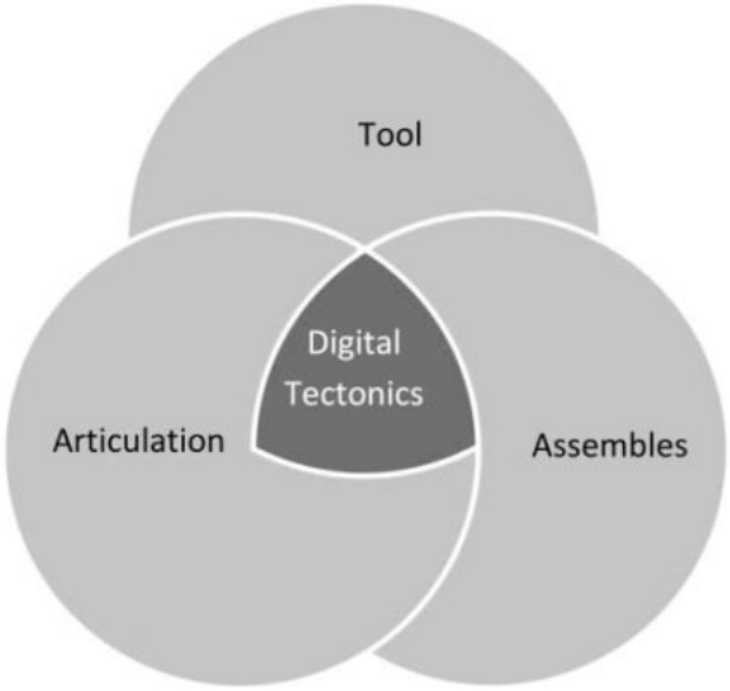
MATERIAL

Represented by structure,
science and ontology

Photo by Sigmund, Christopher Burns and Josue Isai Ramos Figueroa on Unsplash

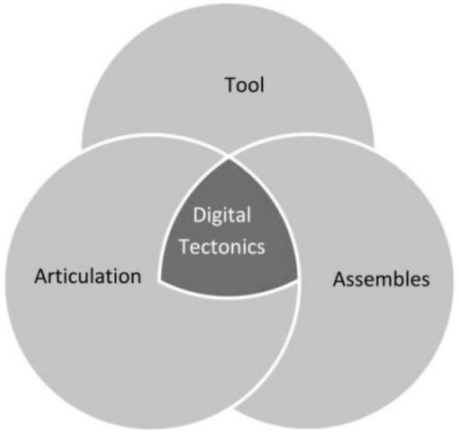
Digital tectonics (as opposed to classical tectonics)

"Digital Tectonics is a new methodology of architectural design that emphasizes the integration between aesthetic and technical aspects, or a mixture of the abstract and concrete. It is described as the poetics of the digitally conceived, structurally clarified and directly manufactured architecture. The Digital tectonics is a matter of an integrated process. It is not the inclusion of technology in architecture or an updating of a traditional term, but it is a new way of thinking about architecture.."



Al-Alwan, H. & Mahmood, Y. B. (2020). The Connotation of Tectonics in Architectural Theory. IOP Conference Series: Materials Science and Engineering, 2020. IOP Publishing, 012161.

Digital tectonics (as opposed to classical tectonics)



A. Soumaya Museum, Fernando Romero, Mexico (Represent form generation strategy)

B. Guangzhou Opera House, Zaha Hadid, China (Represent form optimization strategy)

C. US Embassy, Kieran Timberlake, London (Represent form fabrication strategy)

D. Florence New Station, Italy. (Represent form simulation strategy)

Al-Alwan, H. & Mahmood, Y. B. (2020). The Connotation of Tectonics in Architectural Theory. IOP Conference Series: Materials Science and Engineering, 2020. IOP Publishing, 012161.

Digital tectonics:
Essential factors

TOOL

Represented by:
sophisticated programs and technical aspects

ARTICULATION

Represented by poetic, aesthetic and cultural dimensions

ASSEMBLES

Represented by the way of assembling building elements

Photo by Sigmund, Christopher Burns and Josue Isai Ramos Figueroa on Unsplash

Question #2:

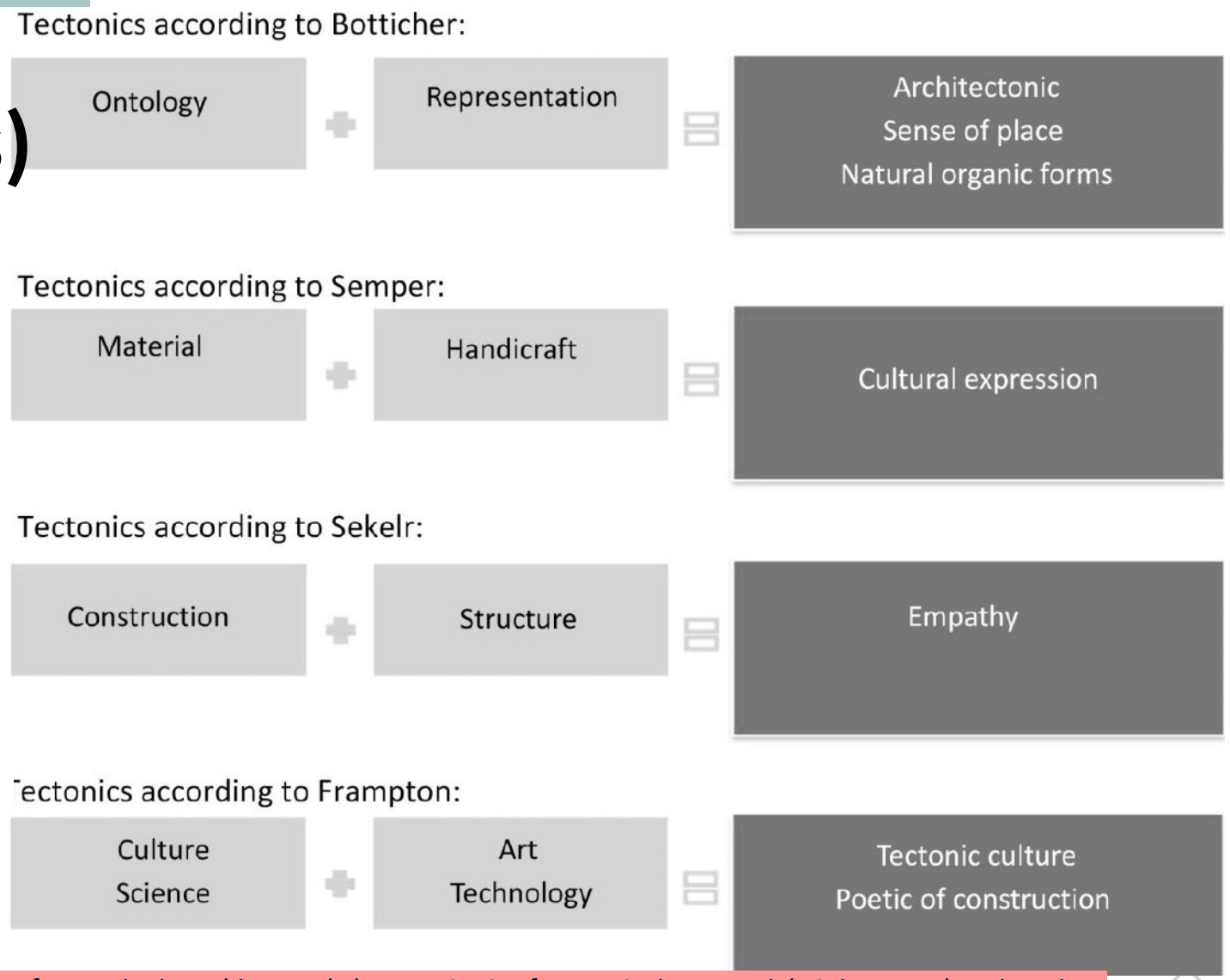
Which **early theorists** (classical tectonics) do you subscribe to? Elaborate based on the theories.

Al-Alwan, H. & Mahmood, Y. B. (2020). The Connotation of Tectonics in Architectural Theory. IOP Conference Series: Materials Science and Engineering, 2020. IOP Publishing, 012161.

Classical tectonics (as opposed to digital tectonics)

Theorists:

- **Karl Botticher (1806-1889)**
- **Gottfried Semper (1803-1879)**
- **Eduard Sekler (1920-2017)**
- **Kenneth Frampton (b1930)**



Al-Alwan, H. & Mahmood, Y. B. (2020). The Connotation of Tectonics in Architectural Theory. IOP Conference Series: Materials Science and Engineering, 2020. IOP Publishing, 012161.

Karl Botticher
(1806-1889)

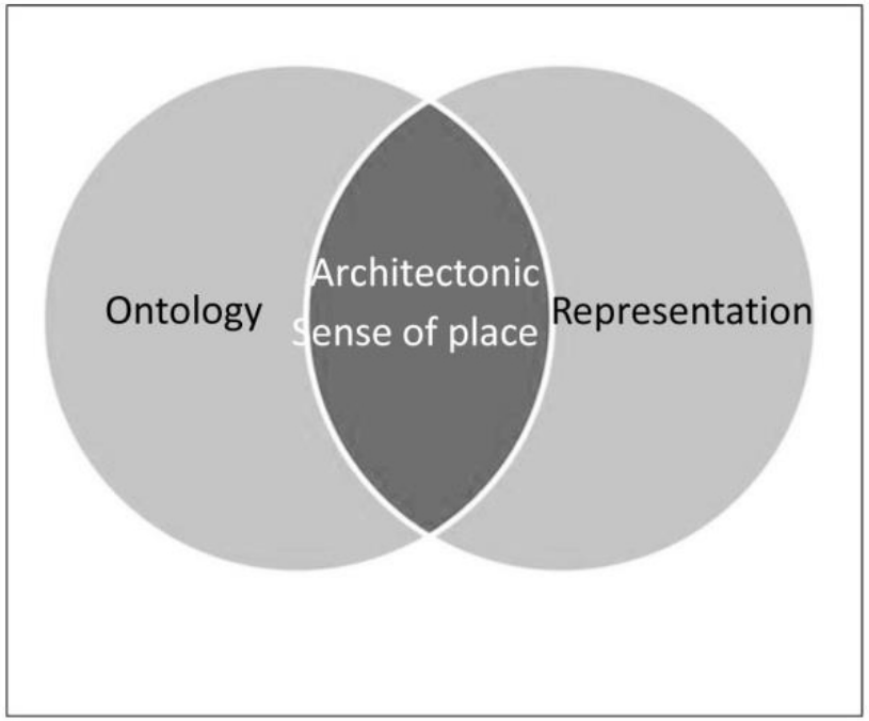
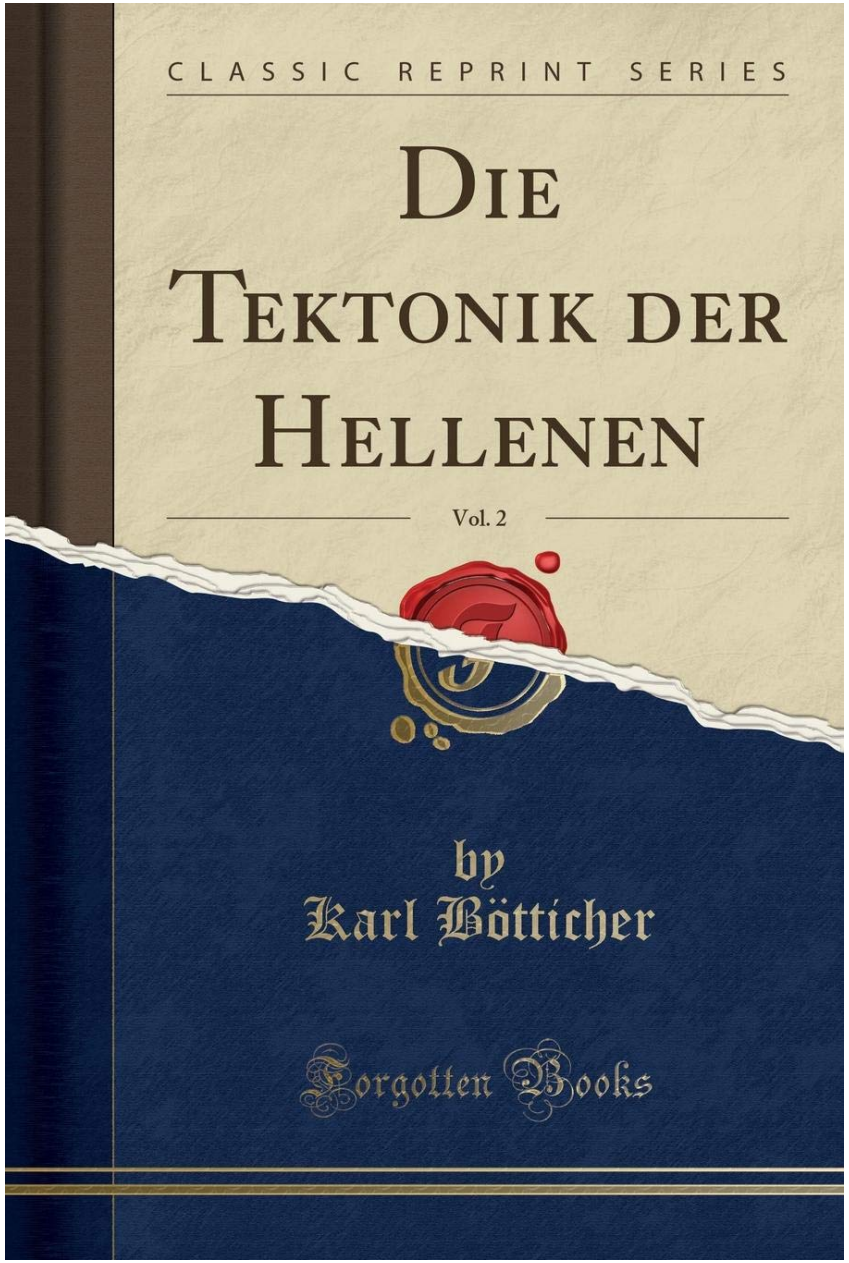


Figure 2. Tectonics from Botticher's perspective.



Karl Botticher
(1806-1889)

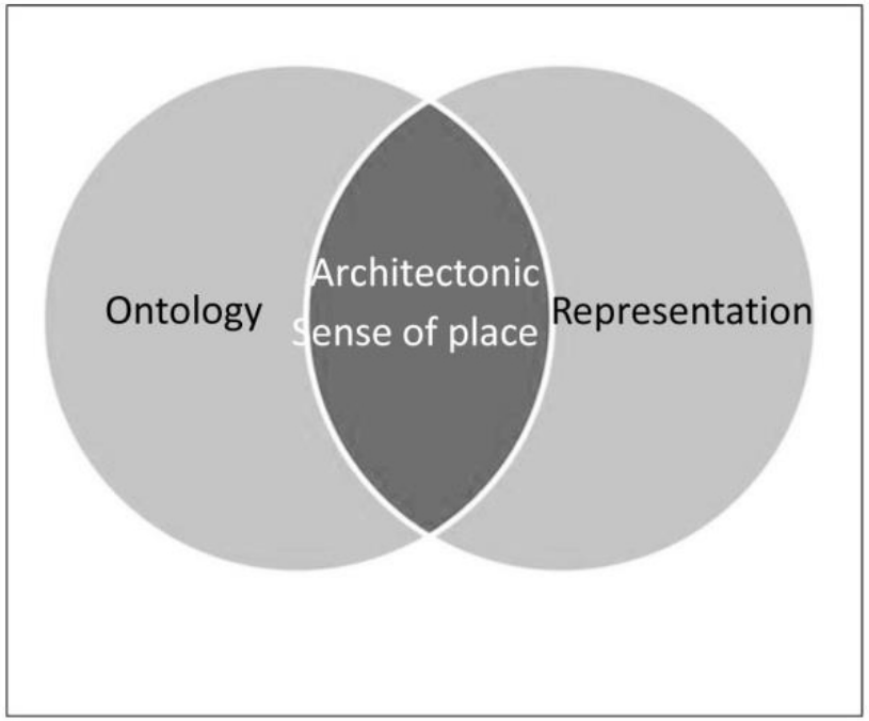


Figure 2. Tectonics from Botticher's perspective.

Ontology is related to functional, structural and cultural purpose. **Representation** is related to aesthetical and expressional purposes of the substance.

Interrelated relationship between the two creates **a sense of place**, the core of tectonics. **Tectonic** is the amount of cohesion between structural elements.

Al-Alwan, H. & Mahmood, Y. B. (2020). The Connotation of Tectonics in Architectural Theory. IOP Conference Series: Materials Science and Engineering, 2020. IOP Publishing, 012161.

Gottfried Semper (1803-1879)

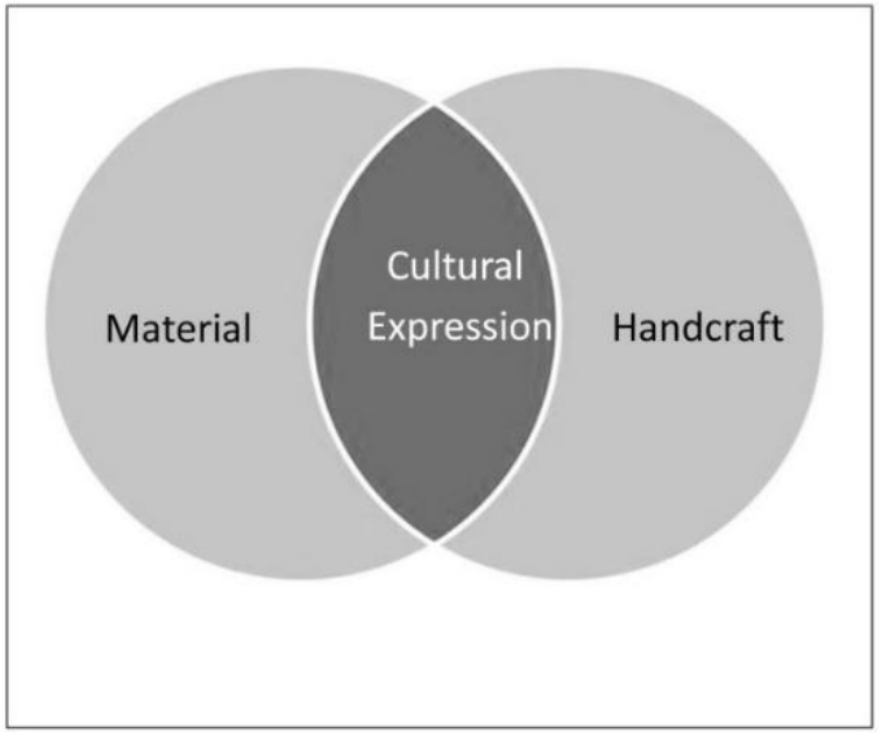
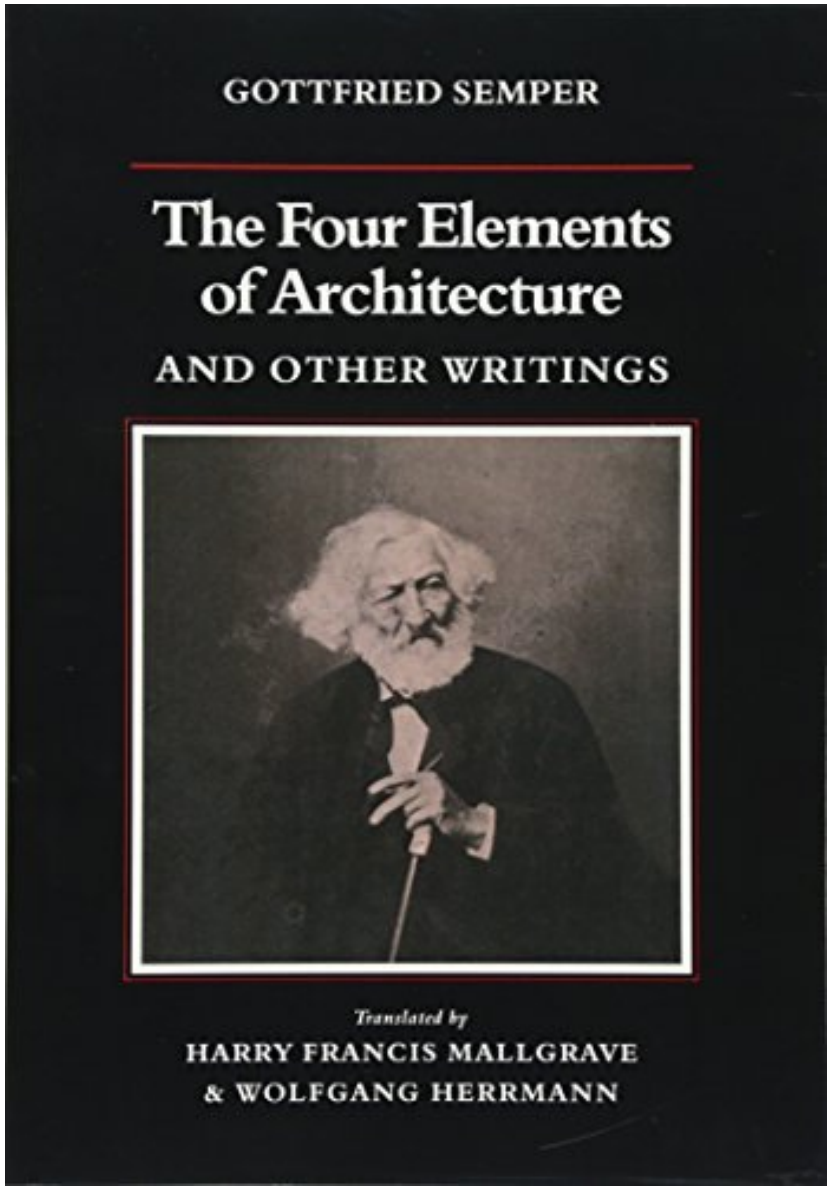


Figure 4. Tectonics from Semper's perspective.



Gottfried Semper (1803-1879)

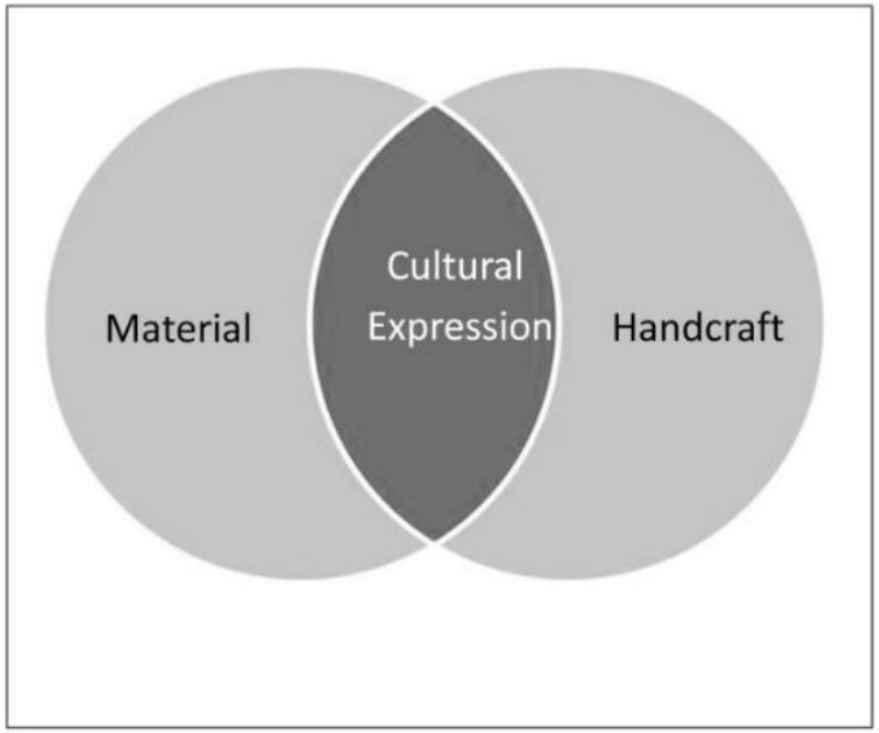


Figure 4. Tectonics from Semper's perspective.

According to Semper, the essence of tectonics was to grasp the use of different materials to create **cultural expression**.

Al-Alwan, H. & Mahmood, Y. B. (2020). The Connotation of Tectonics in Architectural Theory. IOP Conference Series: Materials Science and Engineering, 2020. IOP Publishing, 012161.

Eduard Sekler
(1920-2017)

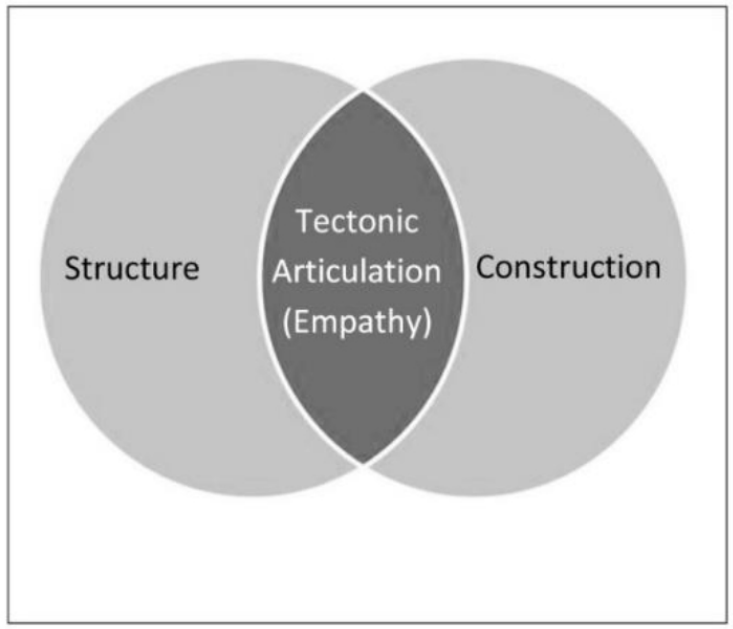


Figure 5. Tectonics from Sekler's perspective.

Structure is the ordering principle of a work.

Construction is a particular physical appearance of these principles.

Tectonics is an expressive value crystallised from the two modes.

Al-Alwan, H. & Mahmood, Y. B. (2020). The Connotation of Tectonics in Architectural Theory. IOP Conference Series: Materials Science and Engineering, 2020. IOP Publishing, 012161.

Kenneth Frampton (b1930)

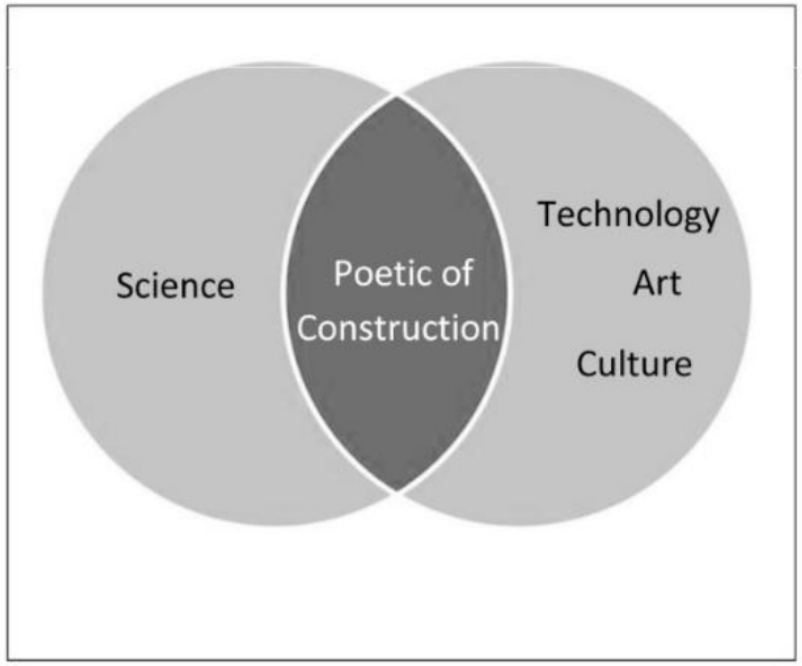
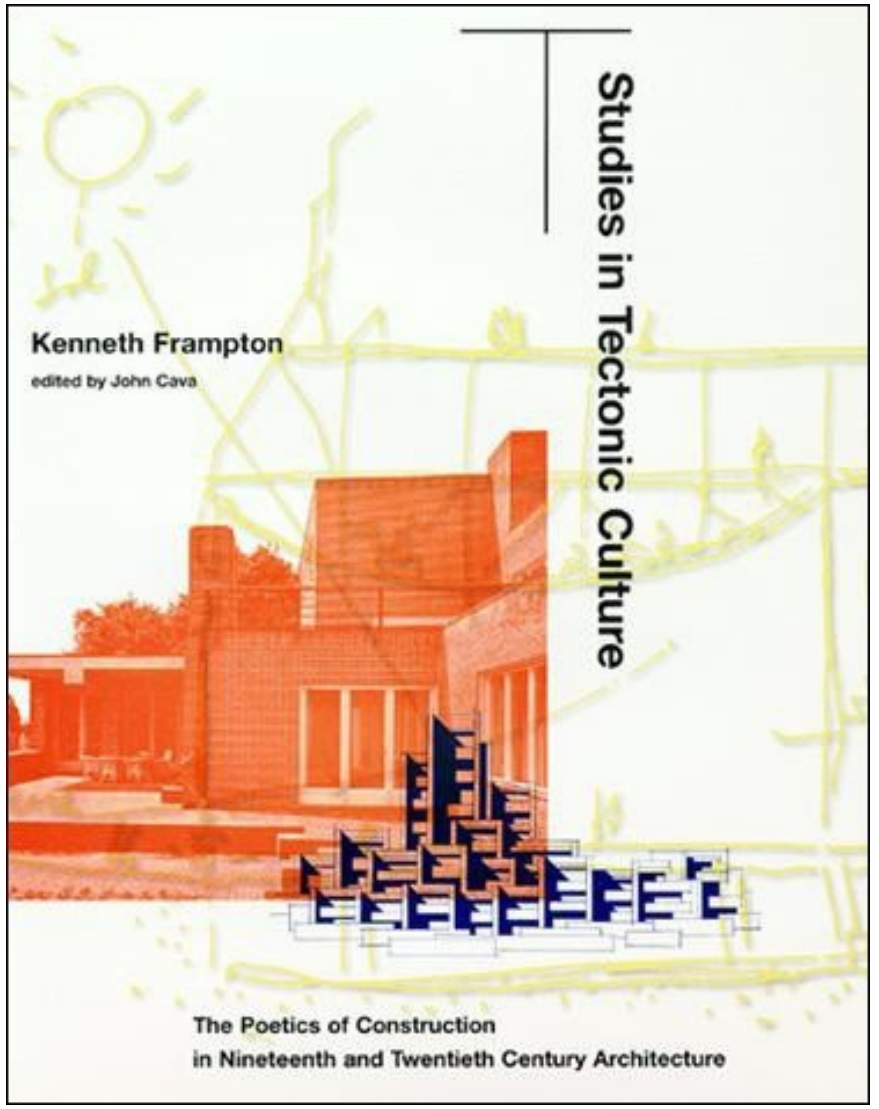
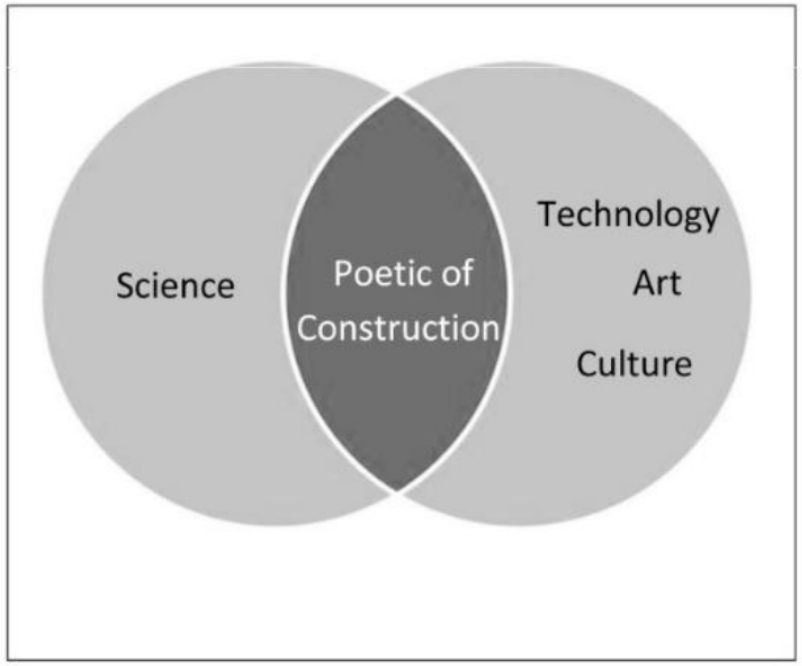


Figure 6. Tectonics from Framton's perspective.



Kenneth Frampton (b1930)



Tectonic as '**poetic of construction**'.

Tectonic factors in architecture (they are interrelated): object, details, joint, material, construction, structure and construction.

Frampton argues that **environmental issues** and **local culture** also need to be considered.

Figure 6. Tectonics from Framton's perspective.

Al-Alwan, H. & Mahmood, Y. B. (2020). The Connotation of Tectonics in Architectural Theory. IOP Conference Series: Materials Science and Engineering, 2020. IOP Publishing, 012161.

Question #3:

How do you illustrate the notion of '**architect as master of tectonic expression**' as illustrated by Eduard Sekler?

Al-Alwan, H. & Mahmood, Y. B. (2020). The Connotation of Tectonics in Architectural Theory. IOP Conference Series: Materials Science and Engineering, 2020. IOP Publishing, 012161.

Uploaded supplementary material

EDUARD F. SEKLER

STRUCTURE
CONSTRUCTION, TECTONICS

Sometimes we may be close to despair when trying to cope with the visual world through words: the harder we try the more we seem to get lost between shifting and elusive drifts of irrelevancy, inappropriateness or vacuity. Indeed an artist may feel that there is no place at all for verbal

arrangement of constituent parts in a much wider sense.

With regard to architecture the exact relationship between structure and construction now appears clear. Structure as the more general and abstract concept refers to a system or principle of arrangement destined to cope with

Architect as master of tectonic expression

As architects, we do not have control over **structure** and **construction** as it is common that the building is built by other parties (contractors).

However, we have the complete control over the **tectonic expression**. This is when appearance of building evokes emotional responses and motivates (empathy) through **tectonic articulation**.

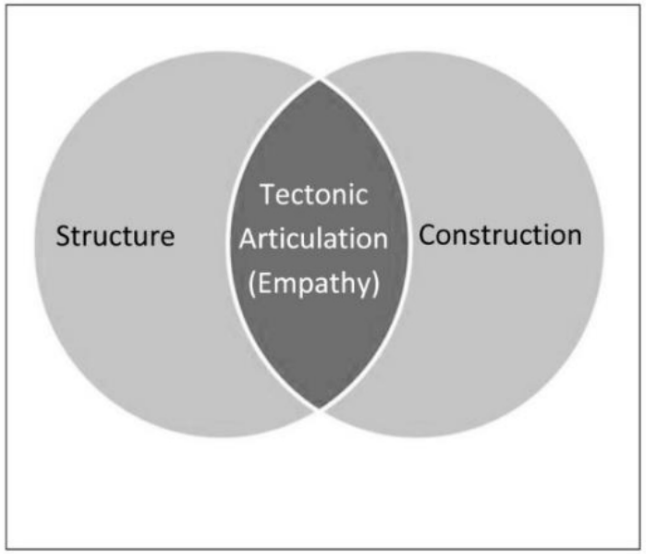


Figure 5. Tectonics from Sekler's perspective.

Question #4:

What is your stand on **‘digital tectonics**’? What is the role of digital tools in your tectonic thinking?

Lim, Y.-T. L. C.-K. (2010). New Tectonics: Towards a New Theory of Digital Architecture. *Urbanism and Architecture*, 06.

Classical vs digital tectonics

Table 3. Comparison between classical and digital tectonics.

	Classical Tectonics	**Digital Tectonics**	**Similarities**
Nature	More Tangible	More abstract	They both represent a clear way of expression
Case	Concrete	Process oriented	
Importance	Emphasis on aesthetic of detailing	Emphasis on sophisticated technique	
Focus	Stress on the relation between construction, material, and expression	Stress on the relation between aesthetic and technical aspects	They both reveal the truth of building
Factors or strategies	Analytical factors: Object, joint, details, material, structure, construction, interaction	Strategies: generation, fabrication, motion, information, simulation	
Essential elements	Culture, Material, and technique	Tool, articulation, assemblies	

Re-iterating from previous slide..

Digital tectonics: Essential factors

TOOL

Represented by: sophisticated programs and technical aspects

ARTICULATION

Represented by poetic, aesthetic and cultural dimensions

ASSEMBLES

Represented by the way of assembling building elements

Photo by Sigmund, Christopher Burns and Josue Isai Ramos Figueroa on Unsplash

(Free download) Digital Tectonics An e-book

https://issuu.com/arkitektskolenaarhus/docs/digital_tectonics_screen_01

Question #5:

There are different combinations of the '**essence of tectonics**' as been posited in theories. Which one do you ascribe to?

Al-Alwan, H. & Mahmood, Y. B. (2020). The Connotation of Tectonics in Architectural Theory. IOP Conference Series: Materials Science and Engineering, 2020. IOP Publishing, 012161.

Combinations of ‘essence of tectonics’ we have explored

01 Technique, Culture and Material

02 Tool, Articulation and Assembles

03 Context, Science and Forces

04 Construction, Material and Cultural Aspects

Question #6:

How do **‘transfer’** and **‘loads’** impact your design or form-generation process?

Yordanova, N. (2019). A new approach to the concept of tectonics.

Yordanova (2019)

Yordanova, N. (2019). A new approach to the concept of tectonics.

See the uploaded reference

Two levels of tectonics:

1. Micro-tectonics (*elemental* level)
2. Macro-tectonics (*structural* level)

Two scopes of tectonics:

1. Load-bearing elements
2. Non load-bearing elements

Structure of architectural form which is base of the tectonic expression:

1. Mechanical functions
2. Spatial functions

Yordanova (2019)

Yordanova, N. (2019). A new approach to the concept of tectonics.

See the uploaded reference

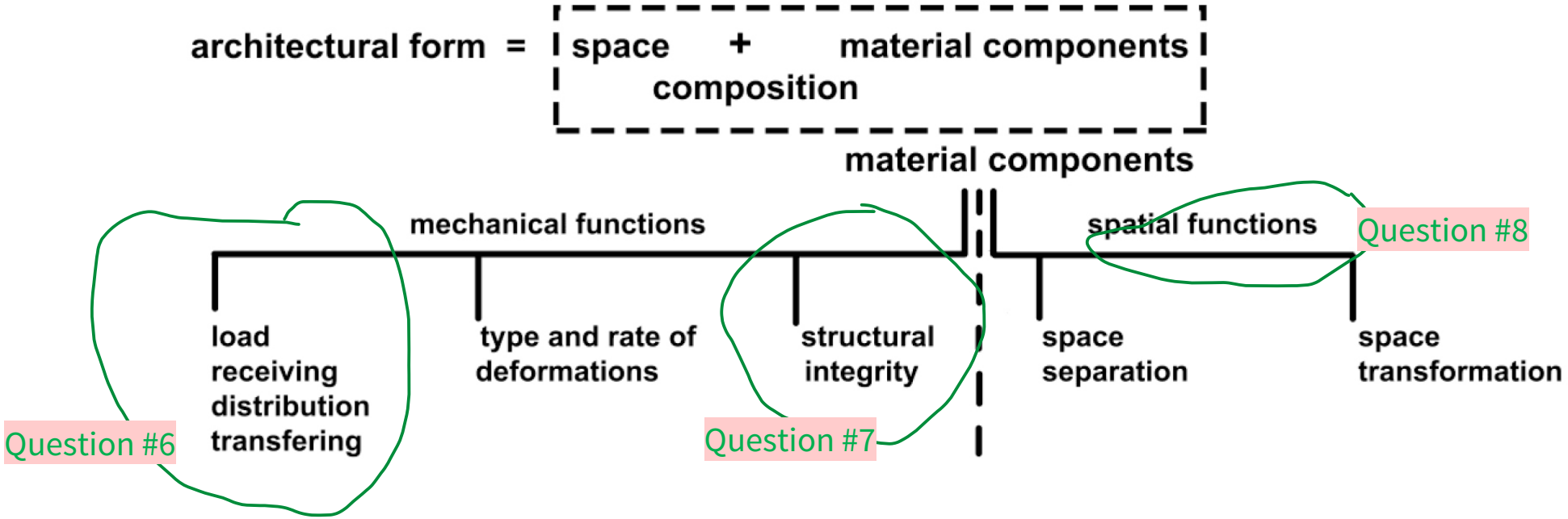


Figure 1 Structure of architectural form according to Tilev and a classification of mechanical and spatial functions which are bases for tectonic expressions. The taxonomy of mechanical functions is derived from Tilev's classification of architectural components' functions (Tilev 2013).

Mechanical functions

Tectonics as an artistic expression of mechanical functions

3 aspects to this:

1. Load transfer and distribution (Guiding Question **#6**)
2. Type and rate of deformation
3. Structural integrity (Guiding Question **#7**)

Question #7:

How do you consider **‘structural integrity’** in form finding process?

Yordanova, N. (2019). A new approach to the concept of tectonics.

Mechanical functions

Tectonics as an artistic expression of mechanical functions

3 aspects to this:

1. Load transfer and distribution (Guiding Question **#6**)
2. Type and rate of deformation
3. Structural integrity (Guiding Question **#7**)

Structural integrity includes:

- Rigidity: type of connections and position of elements can provide rigidity of the building
- Stability

Question #8:

How would you consider your **spatial functional** approach?

Yordanova, N. (2019). A new approach to the concept of tectonics.

Spatial functions

Yordanova, N. (2019). A new approach to the concept of tectonics.

Tectonics as an artistic expression of spatial functions

3 aspects to this:

1. Structural systems and elements with dominating space-separation function
2. Systems and elements with dominating space-transformation function
3. Systems and elements with balancing spatial features

Question #9:

To what extent do you agree on Patrick Schumacher on his view of **Tectonism**?

Schumacher, P. (2017). Tectonism in architecture, design and fashion: Innovations in digital fabrication as stylistic drivers. *Architectural Design,* 87**,** 106-113.

Tectonism

Schumacher, P. (2017). Tectonism in architecture, design and fashion: Innovations in digital fabrication as stylistic drivers. *Architectural Design,* 87**,** 106-113.

Tectonism is a stylistic heightening of engineering and fabrication based form finding and optimisation processes.

“Tectonism is embedding a series of ***technical rationalities*** *that secure both* ***greater efficiency*** *as well as* ***greater morphological rigour****, while maintaining sufficient degrees of design freedom to address programmatic and contextual contingencies.”*

Question #10:

What kind(s) of **tectonic expression** is illustrated in your design?

Maulden, R. (1986). *Tectonics in architecture: from the physical to the meta-physical.* Massachusetts Institute of Technology.

Tectonic expression

According to Maulden (1986), The range of tectonic expression can be thought in terms of the interplay of ***structure*** and ***enclosure***.

Example: New National Gallery in Berlin. Architect: Mies van der Rohe.

Tectonic expression

According to Maulden (1986), The range of tectonic expression can be thought in terms of the interplay of ***structure*** and ***enclosure***.

Example: Llyods's Building, London. Architect: Richard Rogers

OTHER SOURCES

Tectonic thinking in architecture:

https://issuu.com/cinark/docs/tectonic_thinking_in_architecture

Circular construction- materials architecture tectonics:

https://issuu.com/cinark/docs/circular_construction_080919_low

Re-iterating aims and objectives

- To expand on **Assessment 2**’s brief: rationale, aim and mapped learning objectives, timeline, etc
- **Assessment 2.1** and **Assessment 2.2**
- A recap on **Tectonic Thinking**, which we explored in Week 1
- To provide **supplementary materials** for Assignment 2 related to Tectonics