Between *Bild* and *Bildung*
A Sample of Re-reading the Making of Architectural Knowledge

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Abstract

This proposal relates to ongoing doctoral research, which discusses the making of architectural knowledge by theorizing the concepts of image and form regarding the German term *Bildung* (meaning culture, formation, education). *Bildung* is discussed with an apparent relation to the idea of "becoming". The etymology of the term is interpreted as closely related to architectural terms. Etymologically, *Bildung* is a derivation of *Bild,* and *Bild* is interpreted within its dual meaning as image and form. It means image, relating to imitation, and form relating to formation. The etymology of the term also refers to formative processes and static conditions (*bilden*: to form, to create, *Vorbild*: model, *Urbild*: origin). The concept of *Bildung* can be considered as existing between culture and enlightenment, practice and theory, society and individual, ontology and epistemology. Learning from the various definitions of *Bildung*, the relationship between *Bild* and *Bildung* gains significance in understanding the architectural knowledge within and between paradigms. The term is historical; therefore meaning of the term changes and recurs in time, since paradigms reverberate in a certain level of complexity that can redefine *Bild*, and thus, *Bildung*.
The theoretical-historical basis of the research expands from the nineteenth-century German architectural theory, institutions and production that can be considered as a transition from an ontological to an epistemological framework, defining architecture as knowledge (Schwarzer, 1995). Accordingly, the first step is to trace image/form double through the nineteenth-century German concepts of *Vorbilderbewegung*, which relates to singular and static images, and *Bildungsgesetze*, which are multiple form possibilities on the axis of tectonic theory. The intention is to trace *Bild* and *Bildung* as architectural concepts understood through their German meanings. However, learning from the productive tension between these two concepts, these words are interpreted beyond their etymologies to present a re-reading of the making of architectural knowledge. The proposal aims to expand the curation of objects related to the aforementioned double through architectural drawings. In so doing, the research aims to present different instances –especially drawings and representation modes- within architectural history. The image-form double is curated through drawings that can be a starting step for a speculative re-reading. This initial curation includes representational translations of image-form double as "pinned" and "iterated". The research follows the question: Can a framework be presented apart from the linearity of history, which depends on the concept of *Bildung* and its "double" references to *Bild* (image/form)?

Key words: *Bildung*, architectural knowledge, image, form, architectural drawing.

1. Introduction

This text relates to ongoing doctoral research, which discusses the making of architectural knowledge by theorizing the concepts of image and form regarding the German term *Bildung* (meaning culture, formation, education). *Bildung* is discussed with an apparent relation to the idea of "becoming". The etymology of the term is interpreted as closely related to architectural terms. Etymologically, *Bildung* is a derivation of *Bild,* and *Bild* is interpreted within its dual meaning as image and form. It originally means image, relating to imitation, and form relating to formation. [1] Its etymology also refers to formative processes and static conditions (*bilden*: to form, to create, *Vorbild*: model, *Urbild*: origin). The concept of *Bildung* can be considered as existing between culture and enlightenment, practice and theory, society and individual, ontology and epistemology. Learning from the various definitions of *Bildung*, the relationship between *Bild* and *Bildung* gains significance in understanding the architectural knowledge within and between paradigms. The term is historical; therefore meaning of the term changes and recurs in time, since paradigms reverberate in a certain level of complexity that can redefine *Bild*, and thus, *Bildung*. The ongoing research aims to re-read the development of the last two centuries' architectural knowledge (texts, drawings, buildings) within the framework of *Bild* and *Bildung*. In so doing, it attempts to collect and curate instances within architectural history that will be pursued to understand the architectural knowledge beyond the frameworks of paradigms. In this regard, this text aims to present a sample of the fore-mentioned re-reading.
The paper is structured in three parts: **"understanding words", "tracing words", and "curating words".** The first part presents the etymologies and histories of the **"words"** *Bild* and *Bildung*. Through an intellectual history of the words, their relationship has been expanded and understood beyond the German meanings and reflected in the doubles of image-form. Looking into the theoretical and historical strands of these words within architectural knowledge, **"traces"** are found within nineteenth-century German thought as the concepts *Vorbilderbewegung* and *Bildungsgesetze.* These concepts are illustrated through two prints; the book "*Vorbilder für Fabrikanten und Handwerker*" by Peter Wilhelm Beuth and Karl Friedrich Schinkel, within the Vorbilderbewegung (the modeling movement) and the article "*Die Bildungsgesetze der Formen in der Architektur: Ein Beitrag zur Kenntniss der Entwicklung architektonischer Kunstformen*", by Friedrich Heinzerling. The textual and graphical traces of *Vorbilderbewegung* and *Bildungsgesetze* form a framework to re-read the making of architectural knowledge. The image-form double exemplified within nineteenth-century knowledge can be expanded to –before and after – the nineteenth-century. In so doing, the last part focuses on these doubles and curates words through "drawings" that can be a start for a speculative re-reading. This initial curation includes several representational translations of image-form double as "pinned" and "iterated". The paper aims not to present the evolving meanings of the words, but to present a sample of a re-reading on the architectural knowledge that stems from the etymological relations of *Bild* and *Bildung*.

2. Understanding Words: *Bild* and *Bildung*
Etymologies, histories

Reading into the architectural theory and history (especially in the German-speaking context), one can frequently encounter the terms *Bild, Bilder, Vorbild, Urbild, and Bildung*. This research stems from the curiosity about the relations and plural meanings of these terms, which reveals exciting connections to re-think within architectural knowledge.

To understand the term *Bildung*, an etymological explanation is necessary. However, this explanation is not to propose a historical analysis, but to re-interpret the term within contemporary context. The term *Bildung*, is a derivation from *Bild*(image). *Bild* originally means the image, imitation, form, and formation.[2] Being a religious concept from the fourteenth-century, *Bildung* is defined as a process, which has in the center, "an image of the deity thought as modeling, according to which man should be shaped."[3]Since it refers to the religious delineations, the linguistic root and derivatives of the concept inevitably involve the act of creation. The etymology of the term refers to creative and "formative" processes (*bilden*: to form, to create; *Bild*: image, picture, *Vorbild*: model). After 1700s the concept is started to be defined within philosophical and pedagogical contexts of thought and it has an extensive use especially in the late eighteenth and early nineteenth century. In his text from 1784, Moses Mendelsohn underlines the words 'enlightenment' (*Aufklärung*), 'culture' (*Kultur*) and 'formation' (*Bildung*). According to Mendelssohn, *Bildung* breaks down into culture and enlightenment: one relating to the past, existing culture and the other relating to the change and formative processes.[4] The concept evolved through time, changing within *Aufklärung*, re-defined within politics, education, social studies and even natural studies. Therefore, *Bildung* is regarded as a combination of multidisciplinary thoughts and has a variety of meanings in different fields. The emphasis is on "becoming" is mutual for each definition. In twentieth-century, Hans Georg Gadamer includes the hermeneutic significance of work of art and cultivation. He mentions the terms *Urbild* (origin, origin-

form), *Abbild* (copy), *Vorbild* (ideal, model), *Gebilde* (structure, outline) and *Einbildungskraft* (imagination). He states that the unique relationship between these German terms cannot be reproduced in English.[5]

Within the intellectual history of the concept *Bildung*, we can mention a few scholars, who have an impact on the definition of modern idea of *Bildung*. To begin with, Johann Gottfried Herder is a significant figure. In the German historiography of pedagogical thought, he is seen as the founder of the secular ideal of *Bildung*, which is based on the interpretation of the concept within a broader field of thought. Herder adds the concept a critical value and relates it to an educational ideal that would have many projections on German thought and society.[6] He defines the historical process itself as the formation of humanity as a whole. Thus, the concept of *Bildung* can be defined as a part of his philosophy of history. The definition of *Bildung* within educational thought continued to be developed at the beginnings of the nineteenth-century. Philosopher Wilhelm von Humboldt, who co-founded University of Berlin in 1809, defines the concept within educational frameworks. He "advocates connecting 'objective knowledge/scholarship (*Wissenschaft*) with subjective cultivation (*Bildung*)'." [7] Humboldt defines the concept of *Bildung* included within the community of "university", an institution and a space in which individual and communal ideas can co-relate. Plural meanings of *Bildung* as culture and education can be followed by other definitions within history, including educational and psychological sciences. However, the details may be the focus of another work.[8]

Going back to Herder's understanding of *Bildung*, the twofold relationship between philosophical and natural theories can be underlined. According to Herder, "The individual is seen as a process of organic formation and growth and not as an atom of society or as an abstract generic, as in the naturalistic theories of the seventeenth and eighteenth centuries."[9] The idea of formation and growth as a part of *Bildung* concept has evident relation to the naturalistic theories especially culminated in the nineteenth-century. One of the Humboldt brothers, Alexander von Humboldt, has a specific interest in the idea of natural formation and growth in terms of geological and geographical knowledge. Another renowned scholar, Goethe, is also renowned for his ideas on natural history and *Bildung*. These juxtaposed relations within the framework of *Bildung* concept have an interesting quality, which has been deeply involved with architectural thinking. Barry Bergdoll also emphasizes "German integration of aesthetic and natural-historical research and thinking." [10]

Mostly elaborated within the nineteenth-century, the term *Bildung* with its modern connotation, is continued to be used within the following century as well. Tracing the nineteenth-century ideas, we can relate to the twentieth-century concept of *Bildung* re-defined within the hermeneutic philosophy. Hans Georg Gadamer's definition of *Bildung* is strongly dependent on the nineteenth-century ideas. In the twentieth-century, Gadamer worked on the aesthetic philosophy in a close relationship with hermeneutics. In his book, he refers to "*Bildung*" as a process of "forming the self in accordance with an ideal 'image' and he sees art as a crucial field within the conception of 'cultivation'".[11]He refers to Herder's definition, the etymology, translations, and ambiguity of the word. Grondin explains the plural meanings that Gadamer also refers:

> "The term "*Bildung*",… has several meanings in German so that it is impossible to give one single equivalent in translation: formation, culture, education." [12]

The translations of *Bildung* and *Bild* presents a plurality of meanings revealing a twofold structure for historical reflection: image and imitation vs. form and formation. In parallel to the intellectual ground of the nineteenth-century and its contemporary relations, in this work, the concept of *Bildung* is presented as a new definition for understanding architecture as knowledge and becoming associated with the changing concept of *Bild*. Here, "architectural knowledge" encompasses both theory and practice in architecture. Related to this idea, Schwarzer explains:

> "In contrast to architectural theory in the age of the classical treatise, there were in the nineteenth century both many more methods of argumentation and an undeniable rise in their level of complexity. With the demise of basic architectural concepts derived from ontological classicism - such as proportion, decoration, and propriety - architectural theorists were forced to approach architecture as knowledge and not essence, as becoming, not being."[13]

In this regard, the nineteenth-century gains significance in terms of its transitory position, which overlaps the double reference within the concept of *Bildung*. This double reference defines a framework for the understanding of the development of architectural knowledge through text, drawings, and buildings. Accordingly, in this work, an architectural curation between image and form is proposed as a historical reflection. On the one hand, *Bild* can be considered as a common and

immutable "image". When conceived as "image", the term *Bild* is defined by the rules and orders that dominated the classical paradigm. In other words, architectural formation based on "image" stands for the "imitation" of prior immutable images (*Vorbild, Urbild*), rather than any generative processes. Until the eighteenth-century, western architectural knowledge was dependent on the Vitruvian rules and proportional standards that are prior "images". Architects later improved and elaborated on these rules as part of the developments during the Renaissance. On the other hand, *Bild* can also be considered as flexible and mutable "form". When conceived as "form", the term includes the critique and interpretation of prior orders in the classical paradigm. In other words, architectural formation based on "form" stands for generative processes in which architectural elements are mutable and interpretable. After the eighteenth-century (including the late seventeenth-century), the prior immutable rules started to be critiqued and reinterpreted. Especially French thought started to question the validity of Vitruvian proportions and tried to understand the system in ways other than immutable images. The focus was on the architectural processes between geometrical figure and architectural form. Referring to post-eighteenth-century thought, this study uses the term "form" as its German meaning implies. However, according to the discursive translation between the languages, the study differentiates two "form"s. It is necessary to mention the difference between "form" and "*Form"*. The translation of "*Form*" from German is significant for the modern paradigm since it transformed the existing meaning of "form" in the English-speaking world. Adrian Forty states that:

> "The German language (which is where the modern concept of form was principally developed) has a slight advantage over English for thinking about the problem, for where English has only the single word "form", German has two, "*Gestalt*" and "*Form*": *Gestalt* generally refers to objects as they are perceived by senses (their shapes), whereas *Form* usually implies some degree of abstraction from the concrete particular."[14]

After the nineteenth-century and its complex intellectual developments, a period of theoretical and practical unity emerged in the early twentieth-century.[15] However, this was later followed by a renewed interest in the avant-garde ideas of the nineteenth century, and a re-establishment of the diverse approaches within architectural knowledge. [16] The plural strands within architectural knowledge, which had been overlooked since the nineteenth-century, were rediscovered and revived. Framing these under the relations of *Bild-Bildung*, the plural approaches within architectural theory are defined within the recurring flux of "image" and "*Form*" that surfaced/re-surfaced in different discussions. [17] Accordingly, this text presents introductory samples that follows historical traces of *Bild* and *Bildung* (reflects as doubles of image-form, scenographic-tectonic) before and after the nineteenth-century.[18]

3. Tracing Words: *Vorbilderbewegung* and *Bildungsgesetze*

Nineteenth-century, Tektonik, architectural translations, image-form double

The theoretical basis of this research draws upon nineteenth-century German architectural theory considering the diverse range of productive intellectual ideas that still resonate within contemporary theory. Barry Bergdoll defines nineteenth-century thought as the seeds of contemporary ideas. He argues that these theories, once recognized outside of the idea of the nation-state, can become interesting heterogeneities that provide a fertile ground for architectural theory. [19] According to Bergdoll, many attempts have been made to reshape nineteenth-century discourse with the concept of conservatism. However, he says that although it emerged in the early nineteenth-century, "avant-garde" is mostly associated with the twentieth-century. The nineteenth-century invention of the avant-garde invites us to rethink forgotten relationships. This reason inevitably reveals the renowned unique knowledge of architectural relations that was particularly addressed by scholars such as Karl Friedrich Schinkel, Karl Bötticher and Gottfried Semper on the axis of *Tektonik* theory. Contrary to the conventions, these architectural theories were highly influential for the philosophers in the nineteenth-century.[20] *Tektonik* theory and related nineteenth-century theories have been discussed extensively in different frameworks.[21] Within the nineteenth-century, *Tektonik* (tectonics) became "the technical redefinition of architectural styles as structural systems composed of elements that served pragmatic as well as aesthetic functions."[22] Related to the discussion on tectonics earlier in the nineteenth-century, Hübsch mentions "formative factors" (*Bildungsmomenten*) that define style as a system that can be varied and re-interpreted. [23] According to him, style is not a fixed term related to periods and *a priori* ideals, but rather an analytical concept defined by changing "formative factors". [24] The diversity of definitions within tectonic discourse, contributed not only to debates in the century of *Verstandesarbeit* (understanding), but also to recent architectural knowledge.[25] Tracing the "words" *Bild* and *Bildung*, the doubles: joint-disjoint, ornament-structure, technical-symbolic form, and/or ontological-representational form are revealed as the related doubles that correspond to discursive strands in terms of both philosophical and architectural frameworks.

Tracing these doubles, one distinction is especially significant in this work: that between ***Vorbild****erbewegung* (the modeling movement, *Vorbild*: model) and ***Bildung****sgesetze* (the laws of generation/formation, *Bildung*: formation). Initially, two printed works were studied to illustrate the varying range of terms and representations within these two concepts. The first, *Vorbilderbewegung*, is a movement including not only model collections but also pattern books, with detailed drawings of historical prototypes of art, industry, and architectural ornaments, and from which models of the prototypes were produced, collected, and became a part of the creative processes. The collection of physical models and drawings was a projection of the process of understanding in the arts, industry and, inevitably, architecture. The related focus is on drawings from the book "*Vorbilder für Fabrikanten und Handwerker*" by Peter Wilhelm Beuth and Karl Friedrich Schinkel, within the *Vorbilderbewegung* (the modeling movement) of the early nineteenth-century. The book includes a precise survey of specific historical prototypes. The other focus dwells on the relatively obscure work of Friedrich Heinzerling, his only work on the methodology of design: the article "*Die Bildungsgesetze der Formen in der Architektur: Ein Beitrag zur Kenntniss der Entwicklung architektonischer Kunstformen*", published in *Allgemeine Bauzeitung* in 1869.[26] The title can be translated as "Laws of the formation/generation of architectural forms: A contribution to the knowledge of the development of architectural art forms". The publication includes multiscalar "laws", presenting both conceptual frameworks and form-*giving* methods. Here, the aim is not to make a direct comparison between two printed works, but to understand the changing range of terms and representations between image and form.

The first focus, "*Vorbilder für Fabrikanten und Handwerker*" includes a detailed survey of specific historical prototypes including transitional architectural elements such as cornices and capitals as a part of the catalog of ornaments consisting vessels, chairs and textile patterns. The book's textual and visual structure presents architectural transitional elements as stacked and frozen fragmentary models that are in the same sequence with vessels, frames and knitting patterns. Drawings present an advanced level of detail showing each and every geometrical reference. For instance, the text provides a detailed explanation and a table for Blatt 1 – 1a (Fig. 1a). Blatt 1 includes a stacked composition of various drawings of "helper" architectural elements. Blatt 1a shows mathematical drawings of these elements with apsis and coordinates, which corresponds to each element in the Blatt 1. The table presents the list of "*Verzierungen* (ornaments)" and "from which monument or where these elements are taken".[27] For each fragment, the architectural monument it belongs is listed (Fig. 1 top right). These "*Vorbilder*" (which can be translated to 'pre-images' in English) reveal the limits of historical prototypes. They can be regarded as a physical expression that marks the transition point to the possibilities of invention: from *Vorbilder* as frozen images, to *Bildungsgesetze* (laws of formation) as multiple forms. In contrast to their frozen existence, collections of historical models and survey drawings guided the architects and artists to develop hermeneutic cycles of creation. This contrast gave rise to various textual and visual representations of architectural transitional elements, which became more prominent towards the end of the century.

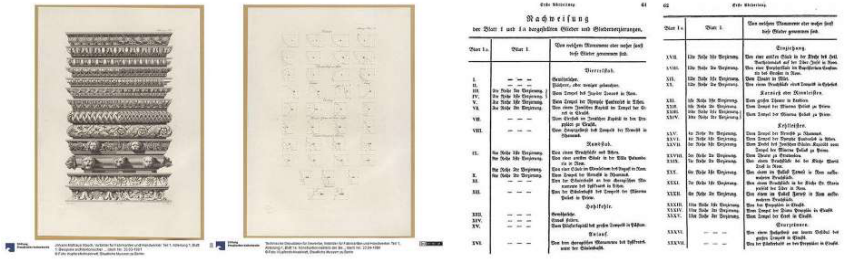

Fig. 1a.

The second focus, from the other end of the century, "*Die Bildungsgesetze der Formen in der Architektur*" is interesting in terms of its multiscalar "laws" presenting both conceptual frameworks and form-*giving* methods. The article presents an almost contemporary methodology on defining *Vermittlungsglied* and *Trennungsglied* (transition/mediation and separation elements). Heinzerling's representation emphasizes the geometrical formation of transition of parts. (Fig. 1b). He understood the development of tectonics under four acts: disposition, construction, composition, and artistic symbolism. Corresponding to these four concepts, he proposes four sub-forms: *Nutzform* (functional-form), *Werkform* (structural-form), *Begriffsform* (conceptual-form), and *Sinnform* (perceptual-form).[28]

These forms can appear independently, but only in their mutual amalgamation they reveal an architecturally perfect form.[29] The first stage (*Nutzform*) is related to the function and space definition. The second stage (*Werkform*) is related to the structure, to produce the greatest possible stability and resistance. The third stage (*Begriffsform*) is related to parts and their transitional relations. Lastly, the fourth stage (*Sinnform*) is the formation of these individual parts by means of essentially symbolic elements.[30] In terms of tectonics, Heinzerling not only presents a conceptual framework but also illustrates the physical development in scale of architectural line. After defining the function spatial necessities and structural composition, *Begriffsform* correlates with a twofold tectonic process: first, "the division of the building whole into its main parts or, the dissolution of the overall structural concept into its partial structural concepts" and second, "the mediation of those building parts into a building whole or, the combination of those building parts to form the overall building structure".[31] Heinzerling's twofold theory presents a design methodology on architectural transitions. The tectonic/formative transition in between two parts, Heinzerling defines "the law of separation/division (*Das Gesetz der Scheidung/Trennung*)" and "the law of relation/transition (*Das Gesetz der Beziehung/Vermittlung*)", which are based on same principles. Heinzerling explains the laws as: "the separation/division of any two adjacent structural form elements takes place either by creating a difference between them at the point of contact or, if they are identical at this point, by inserting a third form element that differs from them."[32] According to Heinzerling, "the relation/mediation of two different, architectural elements takes place through a partial similarity of their form."[33] He also illustrates and explains this "similarity" through drawings. These rules and related abstract illustrations (Fig. 1b) present possibilities of forms.

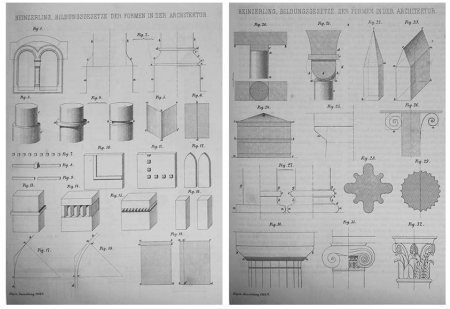

Fig. 1b.

The difference between *Vorbilder* as frozen images and *Bildungsgesetze* as multiple forms relate to a unique knowledge of dialectics of architectural thinking created within the same educational network. These concepts traced through the etymologies of *Bild* and *Bildung*, present a framework to look into image-form reflections. The following part will present samples of *Bild* as image and form; focusing on the representational translations as techniques/modes of drawing.

4. Curating words: *Bild*, pinned and iterated drawings
Representational translations

The etymology of the word *Bildung* and its historical traces *Vorbilderbewegung* and *Bildungsgesetze* helps to construct a framework to re-read the making of architectural knowledge. By comparing the specific works of Schinkel-Beuth and Heinzerling, we can identify similar examples and expand our understanding of the image-form relationship prevalent in the nineteenth-century. This allows us to explore the nineteenth-century and the periods immediately preceding and following it. This section presents an initial step in this speculative re-reading by examining several representational translations of the image-form relationship, specifically as "pinned" and "iterated". Following the concept of *Vorbild*, the representation modes that highlight the fixed conditions of *Bild* as image in "pinned" architectural drawings are collected. Accordingly, various sources including architectural drawings with scenographic emphasis are presented. Contrasting with the variety of the pinned set, following the concept of *Bildungsgesetze*, Redtenbacher's sequential diagrammatic drawings with tectonic emphasis are presented. The multiple conditions of *Bild* as form in iterated architectural drawings of possibilities/processes are collected.

4.1. *Bild* as image, *pinned* drawings
Tracing the inspirations of *Vorbilder*, in this part, the focus will be on the pre-nineteenth-century drawings to search for the definitions of *Bild* as (mostly) image. Architectural *Lehrbuch*-s inspired by

atlas, encyclopedia and lexicons as the methods and objects of storing knowledge present a variety of scenographic modes that “pins” architectural image.[34]

Christiane Salge has written a short article presenting the similarities between (renowned architect family/Bauakademie founders) Gillys’ drawings from the beginning of the nineteenth-century and examples from Europe in the seventeenth and eighteenth centuries. Since the main challenge of the German Enlightenment was to create their own “style” by learning from the past, these parallels are interesting yet understandable. The specific technique is called “quodlibet”- a type of *Trompe l’oeil.* As Salge mentions, the technique of drawing refers back to the seventeenth and eighteenth-century paintings; however, the application of the technique within architectural drawings has gained less attention.[35] This specific drawing technique presents an illusion that positions the architectural image as the finished and found object. Although they gained less attention, the architectural drawings created with this specific technique is closely related to this paper’s re-reading. The examples mentioned below are composed of drawings created by not only architects but also philosophers and scientists. These can be considered as representational translations of making of architectural knowledge.

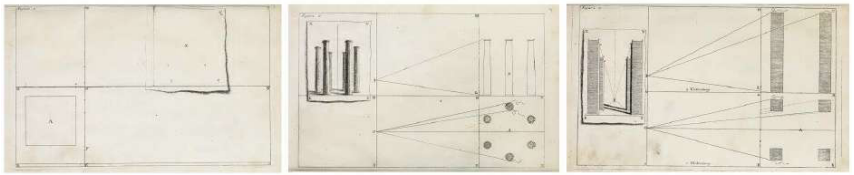

Fig. 2a.

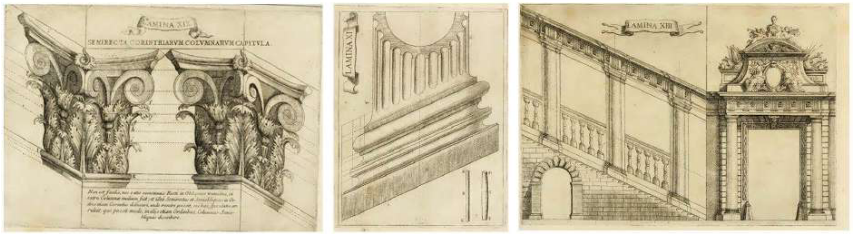

Fig. 2b.

One example is Andrea Pozzo’s book on perspective. He was one of the scholars Gilly and most German architects referred to. In Fig. 2a, there are three separate drawing sets from Pozzo’s book, which presents a template and two drawing sets, on which we encounter similar illusions that separate the end result as if it is an addition. Interestingly, although there is no drawing, the first plate presents a template that the forthcoming “image” is already separated and pinned on the underlying paper (Fig.2a left). On the second plate, in addition to the pinned paper, another illusion on the second plate presents the materiality of the guidelines to draw a perspectival projection of the vertical elements.The lines are drawn as if they were strings used in existing space to understand the perspectival structure (Fig. 2a). The third plate shows the same illusion in a perspectival system (Fig. 2a right). These illusions emphasize the presence of the images rather than the knowledge of design and building. The examples can be expanded since most German architects used these books as lecture books and created their *Lehrbuch* by referring to these inspirations.

In terms of the emphasis on the image, another interesting example is from the seventeenth-century, which is a book on oblique drawing written by a philosopher, J. Caramuel de Lobkowitz. The book gives information on the geometrical construction of the oblique. The interesting point is that the drawings present the renowned images of classical architecture as distorted surfaces within oblique representation system. In Fig. 2b, there are different classical parts; column base, façade detail and column capital, respectively. However, each detail drawing is re-located within the oblique system. Here, we see these classical images are not the components of design but the imagery that helps to illustrate the visual possibilities of the oblique system. Referring to the previous examples, the additional pinned page of the architectural image becomes a mutable surface, not a mutable design component. In Fig. 2b, the images of classical parts are projected to the oblique system. The

immutability of these classical parts reveals an interesting representational condition: the complex geometries become two-dimensional since they are operated only as surfaces to project. Although the intention is not to develop a new design idea, this experiment is an input to the ways of making within Baroque architecture.

Within the second half of the eighteenth-century, a mathematician and architectural theorist Johann Friedrich Penther published four volumes of “*Ausführliche Anweisung zur Bürgerlichen Baukunst* (Detailed Instruction on Civil Architecture)”, which includes an art and architecture lexicon, the documentation of residential and public buildings, and orders of columns. Like the previous examples, Penther’s work includes “instructions” on architectural drawing and a compilation of immutable images. Detailed documentation of various architectural parts, ornamental patterns and structural relations are categorized and presented within his work. He also uses representational illusions to include certain architectural parts and whole as pinned references. (Fig. 3).

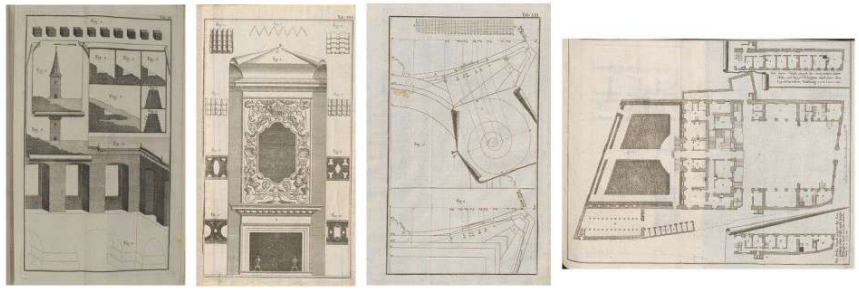

Fig.3.

In this part, a variety of scenographic modes that “pins” architectural images are presented. Without being limited to these examples, these drawings and the act of “pinning” illustrates the representational translation of *Bild* as image.

4.2. *Bild* as form, *iterated* drawings

In contrast to the previous part, “*Bild* as image, pinned”, here, instead of “pinning” a variety of examples, the focus will be on Redtenbacher's work. [36] Tracing the concept Heinzerling’s *Bildungsgesetze*, which is also used by Redtenbacher, representational translation of these “rules” are presented as the abstract iterated drawings of Redtenbacher.

The heterogeneous ground of architectural knowledge is reflected on the architectural representation and terminology of Bötticher, Semper, Schinkel, and Heinzerling. Related to these scholars' works, Rudolf Redtenbacher's work towards the end of the century can be considered as a transition that learns from these reflections and affects the following century. Redtenbacher also created a “*Vorbilder Sammlung* (Model compilation) for carpenters (*Vorbilder für Bautischler-Arbeiten*) in 1875. Similar to the other model compilations, there is detailed documentation of existing elements from specific locations. However, in this part, the focus will be on Redtenbacher’s later works, especially after the 1880s. The terminology in his work and his corresponding drawing technique will be highlighted.

In his book *Tektonik: Principien der künstlerischen Gestaltung der Gebilde und Gefüge von Menschenhand welche den Gebieten der Architektur der Ingenieurfächer und der Kunst-Industrie Angehören,* there are many chapters focusing on various design problems of changing scales of art to architecture. Here, mostly the terms and drawings focusing on architectural form and design will be underlined. In the book, Redtanbacher opens up the term “*Tektonik*” and presents rules and codes that are structured through clear categories in the design process. Each chapter presents different terms and related simple and abstract drawings, which are presented within the continuity of the text (Fig 4a). Fig. 4a shows two pages from two chapters *Aesthetische Principien* and das *Geometrische Element in der Tektonik*. On the first page from the “aesthetic principals” chapter, the squares are drawn and iterated in different positions to represent changing relationships of the same geometries (Fig.4a top left). The other page shows geometrical steps and references of linear division of a surface. The drawings are abstract and the basic lines are iterated to show various configurations of the same linear references.

Especially the chapter *"Die Formgebung"* is particularly noteworthy for its structure and definitions of form. The chapter comprises four parts: A. *Die Form an sich* (The form itself) B. *Ueber das Verhältniss von Form und Zweck* (On the relationship of form and purpose) 0 . *Ueber das Verhältniss von Stoff und Form* (On the relationship of form and material) D. *Symbolische Formen* (Symbolic forms).[37] Each part conveys knowledge on form and related concepts in definite categorizations with rules and codes. The chapter "*Die Formgebung*" presents theoretical and representational knowledge of architectural form – defined within doubles of artform and coreform; both representational and structural. Redtenbacher uses the term "*Bildungsgesetze*" as well, and presents related rules and codes on "form-giving".

In the first paragraph of *die Symbolische Formen* part, it says:

> "We have such forms which do not fulfill a purpose, but which are intended to illustrate the purposes through an *image*, called symbolic forms. They are divided into a) relational forms, b) ornamental forms. However, relational forms that characterize the parts of the structure and joints are 1. forms of limitation, as the beginning and end, core and framework, 2. forms of transition referring to operations of mediation, connection and structure."[38]

Like Heinzerling's separating and relating elements, Redtenbacher defines forms of limitation and transition. Rather than documentation of the existing architectural parts, guiding lines and geometrical references determine multiple solutions despite the "symbolic" purpose. For the forms of limitation, the two pages (Fig. 4a top right) present the rules with two basic drawings. The first is an abstract diagram showing the limits to extend or contract (Fig. 4a). After indicating the options of "ending", the other page shows abstract iterated options of ending in between different geometries. For the forms of transition, two pages present two geometries iterated within a process of geometrical formation (Fig.4a bottom left). Like the abstract drawings of Heinzerling, Redtenbacher also prioritizes the relationship of parts. His drawings present a process of understanding and steps of geometrical formation rather than documentation of the existing form of detail. In the Fig. 4a bottom left, we see multiple drawings for one connection between a prism and a cylinder, showing steps of combinations and transitions of elements. [39] Redtenbacher works with basic geometries and presents sequential diagrams to understand how they develop into complex mediating elements. In the part *Schmuckformen*, which can be considered as the definitional continuation of *Kunstform*-representational form; we see details of surface ornaments. We do not see a detailed ornament drawing; instead, there is an abstract direction diagram to locate lines that create the pattern's geometrical logic (Fig. 4a bottom right).

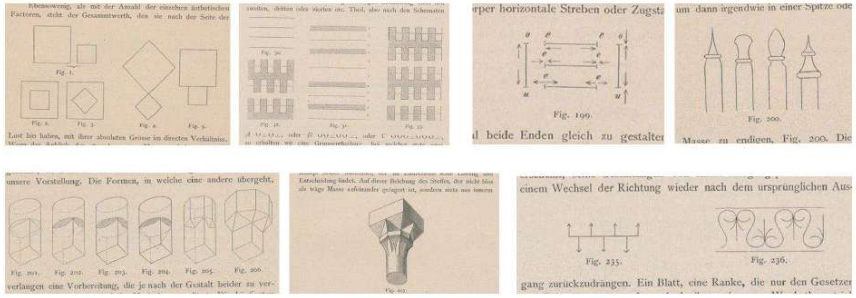

Fig.4a.

In Redtenbacher's other books, which can be a part of a more in-depth study, mathematical options and iterated processes of architectural elements are presented in small, rather abstract diagrams. One example shows the mathematical relations of one corner to a vault with changing cuts of diagonal and orthogonal elements (Fig. 4b).[40] The changing geometries shown are explained in terms of material and spatial needs.

In this part, various abstract drawings, iterated processes of drawings and possibilities of form are presented. Without being limited to these examples, these drawings and act of "iterating" illustrate the representational translation of *Bild* as form.

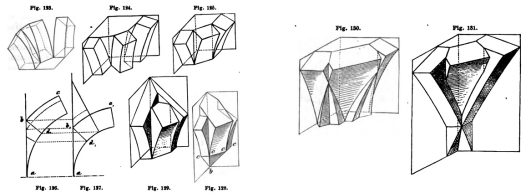

Fig.4b.

5. Concluding Notes

The ongoing doctoral research aims to re-read the development of the last two centuries' architectural knowledge (texts, drawings, buildings) through the etymological relations of words *Bild* and *Bildung*. The intention is to trace *Bild* and *Bildung* as architectural concepts, offer interpretations beyond their etymologies and present a re-reading of the making of architectural knowledge. This text, more specifically, presents a sample of this re-reading reflected on the doubles of image-form and .structured in three parts: **"understanding words", "tracing words",** and **"curating words".** Therefore, as a part of broader theoretical research, the paper focuses on several architectural drawings that could make an architectural statement visible.

To conclude, Angelo Poliziano's categorization of "*genera doctrinarum*" (possibilities/ways of knowing) in his "Panepistemon", is a precise reference to mention. According to Poliziano, there are three ways of knowing: the "*Inspiratum*" (inspiration), the "*Inventum*" (invention), and the "*Mixtum*" (mixed).[41] This three-partite definition of knowing can be related to the overall reading that also includes the relevance of *Bildung* in architectural knowledge. In this regard, *inspiratum* and *inventum* can be read parallel to image and form double. Tracing the image-form double within the recent architectural knowledge is a focus of the study that has yet to be elaborated. It is seen that the juxtaposed terms of image and form reflected as shape and formation as well as changing definition of image as a "statistical-electrical" notion within contemporary discourse.[42] Various projections of image and form double such as Robert Somol's distinction between shape and form -especially "shape architecture"-, Aureli's "form-object", Tschumi's diagrams and more recent works such as Office Kovacs's "Archive of Affinities", as well as recent definitions of tectonics, and the hermeneutic cycles that changes the conventional drawing techniques/modes, are also a part of this re-reading to be elaborated in the further steps.[43]

Notes

1 Alexandre Alves. "The German Tradition of Self-Cultivation (Bildung) and Its Historical Meaning." *Educação & Realidade* 44, (2019): 3, DOI:10.1590/2175-623683003
2 Ibid, 3.
3 Ibid, 3.
4 Moses Mendelssohn. Ueber die Frage: was heißt aufklären?, *Berlinische Monatsschrift*, Bd. 4, (1784): 194.
5 Hans-Georg Gadamer. *Truth and Method*, (1977): 12.
6 Alves, "The German Tradition of Self-Cultivation (Bildung) and Its Historical Meaning.", 4.
7 Tomislav Zelić."Bildung and The Historical and Genealogical Critique of Contemporary Culture: Wilhelm Von Humboldt's Neo-Humanistic Theory of Bildung and Nietzsche's Critique of Neo-Humanistic Ideas In Classical Philology and Education." *Educational Philosophy and Theory 50*, no. 6-7 (2018): 662. https://doi.org/10.1080/00131857.2017.1374841
8 Zeynep Çelik Alexander, refers to the definitions of *Bildung* and *Anschauung* in detail in her recent work "Kineasthetic Knowing".
9 Alves, "The German Tradition of Self-Cultivation (Bildung) and Its Historical Meaning.", 5.
10 Barry Bergdoll. "Of Crystals, Cells, and Strata: Natural History and Debates on the Form of A New Architecture In The Nineteenth Century." *Architectural History 50* (2007): 17. http://www.jstor.org/stable/40033846
"… Schinkel had been deeply involved not also with the natural historical researches of Alexander von Humboldt, a close friend, but also with the revival of interest in Goethe's natural historical studies, and in particular Goethe's interests in both crystal formation and in plant morphology, both in terms of the word and concept – which, indeed, were to have a powerful resonance throughout nineteenth-century German architectural theory…"
11 Gadamer, *Truth and Method*, 12.
12 Jean Grondin, and Kathryn Plant. *The Philosophy of Gadamer*. (Routledge, 2014): 24.
13 Mitchell Schwarzer. *German Architectural Theory and the Search for Modern Identity*. (Cambridge: Cambridge University Press, 1995): 262.
14 Adrian Forty. *Words and Buildings: A Vocabulary Of Modern Architecture*. Vol. 268. (London: Thames & Hudson, 2000): 149.
15 Mary McLeod, "Modernism." *Histories of Postwar Architecture*, 2017. https://doi.org/10.6092/issn.2611-0075/6726
"Modern" referring to Mary McLeod's article, in which she explains the various uses of "modern" although it has turned into a more homogeneous concept especially in mid-twentieth-century.
16 Avant-garde ideas are often associated with the twentieth-century. The change, especially after the 1960s, has parallels with the heterogeneity of the initial avant-garde in the nineteenth-century.
17 Here the apparent reference is to Robert Venturi and Denise Scott Brown's works, highlighting scenographic architectural reinterpretations and architectural imagery as tools of critique of the modern.
18 These doubles are traced through multiple sources that refer to the same theoretical network. Acknowledging various academic works adapting the double strands such as "rule and model," "type and model," or "technical and symbolical," the intention here is not to claim image-form double as a new terminological discovery but to define them as a conceptual framework.
19 , Barry Bergdoll. Presentation "Views across the Rhine: Interchanges in French and German architectural thought 1828-1879", March 2014, MAO Slovenia. Accessed from https://www.youtube.com/watch?v=pXcuy9bO7zQ on October, 15, 2021.
20 Harry Francis Mallgrave and E. Ikonomou.*Empathy, Form and Space: Problems in German Aesthetics 1873-1893*, (Getty Center for the History of Art and the Humanities, 1994).
21 Kenneth Frampton. *Introduction to Studies in Tectonic Culture: The Poetics of Construction in Nineteenth and Twentieth-Century Architecture*, (Cambridge and London: MIT Press, 1995); Heinrich Hübsch, Wolfgang Hermann, (trans.), *"In welchem Style sollen wir Bauen?", In What Style Should We Build?: The German Debate on Architectural Style*, (Getty Center for the History of Art and the Humanities, 1992); Harry F. Mallgrave, "Rise of German Theory", *Modern Architectural Theory: A Historical Survey 1673–1968*, (Cambridge: Cambridge University Press, 2009).
Mitchell Schwarzer, "Ontology and Representation in Karl Bötticher's Theory of Tectonics", *Journal of the Society of Architectural Historians 52*, no. 3, (1993): 267-280. https://doi.org/10.2307/990835; Mitchell Schwarzer, *German Architectural Theory and the Search for Modern Identity*, (Cambridge: Cambridge University Press, 1995);
Gottfried Semper, Harry Mallgrave and Wolfgang Hermann. (Trans.), *Four Elements of Architecture and Other Writings*, (Cambridge: Cambridge University Press, 1989).
22 Scott C. Wolf. The Metaphysical Foundations of Schinkel's Tectonics: Eine Spinne im eigenen Netz, Tectonic Unbound: Kernform and Kunstform Revisited *ANY: Architecture New York 14* (1996): 17. http://www.jstor.org/stable/41852137.
23 Heinrich Hübsch. *In welchem Style Sollen wir Bauen?*, (Karlsruhe: Müller, 1828): 13.
24 Barry Bergdoll, "Archaeology vs. History: Heinrich Hübsch's Critique of Neoclassicism and the Beginnings of Historicism in German Architectural Theory." *Oxford Art Journal 7*, (1983): 3. http://www.jstor.org/stable/1360230
For Hübsch, style is "an organically-developed and complete structural system". Bergdoll states that: "Hübsch's pamphlet was anything but an expression of uncertainty. He insisted that only one style could express the needs and aspirations of any society. In defining that style he established an analytical approach to history and a belief that a new style could evolve from the past, which were to be fundamental to later nineteenth- century architectural theories."
25 Schwarzer uses Muthesius' phrase: "*Verstandesarbeit*".
26 In 1893, F. Heinzerling, as rector, gave a speech on "*Die Vermittellungs-Gesetz*" (The Laws of Mediation/Transition) in the *Aula* of the *Kgl. Technischen Hochschule* of Aachen for the birthday of the King. Apart from the "national" and kingdom-related praises, the content of the speech was based on his 1869 article on *Bildungsgesetze*. Digitalarchiv Aachen: Publikationsserver der RWTH Aachen University.
27 Peter Caspar Wilhelm Beuth and Karl F. Schinkel. *Vorbilder für Fabrikanten und Handwerker*. *Vol. 1-2*. (Getsch, 1821:1837), 61. Public Domain Mark 1.0. https://archive.org/details/bub_gb_cWIXAAAAYAAJ
28 Friedrich Heinzerling. "Die Bildungsgesetze in der Architektural Formen", *Allgemeine Bauzeitung*, (1869): 292.
Parts from Heinzerling's article are translated by the author (corrections by German dictionaries).
29 Ibid, 292.
30 Ibid, 292.
31 Ibid, 292.
32 Ibid, 292.
33 Ibid, 292.
34 Although there is a difference between the level of interpretability, model and type are based on the "image" of the existing parts and wholes. While models (*Vorbilder*) refer to an archaeological documentation of existing fragments, type studies can be regarded as an analytical representation of the existing compositions. In both cases, the knowledge is presented as a compilation (*Zusammenstellung*34) that is a visual lexicon.

35 Christiane Salge. "Visualisierungsstrategien in der Architekturzeichnung um 1800: Friedrich Gilly und sein Entwurf für ein Theater in Stettin" in *Gilly-Weinbrenner-Schinkel-Baukunst auf Papier zwischen Gotik und Klassizismus*, Marion Hilliges,and Christian Scholl (eds.), (Universitätsverlag Göttingen, 2016): 17.
36 Rudolf Redtenbacher born in Zürich. He visited Berliner Bauakademie in 1862 and took courses from Bötticher and Adler. Afterward, he visited Dresden to develop his knowledge on Renaissance art. Following that, he travelled to Wien to study Gothic architecture. Especially three books he published can be emphasized: *Tektonik: Principien der künstlerischen Gestaltung der Gebilde und Gefüge von Menschenhand welche den Gebieten der Architektur der Ingenieurfächer und der Kunst-Industrie Angehören*, 1881, *Architektonik der modernen Baukunst*, 1883, *Äesthetik der modernen Architektur*, 1883.
37 Rudolf Redtenbacher, *Tektonik: Principien der künstlerischen Gestaltung der Gebilde und Gefüge von Menschenhand welche den Gebieten der Architektur der Ingenieurfächer und der Kunst-Industrie angehören*, (Wien: Waldheim, 1881).
38 Ibid, 192. *"Wir haben solche Formen, welche nicht zur Erfüllung eines Zweckes dienen, sondern welche die Zwecke veranschaulichen sollen durch ein Bild, symbolische Formen genannt und sie abgetheilt in a) Beziehungsformen , b) Schmuckformen . Die Beziehungsformen, welche die Theile der Gebilde und Gefüge charakterisieren sind aber 1. Begrenzungsformen als Beginn und Abschluss, Kern und Rahmen, 2. Uebergangsformen zur Vermittlung, Verbindung und Gliederung."* Translated by author (corrections by German dictionaries).
39 Ibid, 200.
40 Rudolf Redtenbacher, *Leitfaden zum Studium der mittelalterlichen Baukunst; Formenlehre der deutschen und französischen Baukunst des romanischen und gothischen Stiles auf Grundlage ihrer historischen Entwickelung*, (Leipzig, T.O. Weigel, 1881).
41 Werder Oechslin. "Reflections on the Ground Rules of Baroque" Mark Jarzombek (trans.), *Thresholds 28*, MIT Press, (2005): 117. http://www.jstor.org/stable/43876213.
Werder Oechslin refers to Poliziano's ways of knowing in his essay "Reflections on the Ground Rules of Baroque".
41 The references are John May's recent discussion on image, photograph and drawing. In addition, Robert Somol's and Hans Tursack's discussions on shape are referred.
41 Possible structure of the ongoing work may be focusing on four acts: thinking, learning, representing, making.

Image Captions

Fig. 1a: Left : *Teil I Abteilung 1, Blatt 1-1a* (Plate 1 and 1a), Right: Table for *Blatt 1-1a* (Plate 1 and 1a)
Sources: Kupferstichkabinett. "33.03-1991: Vorbilder für Fabrikanten und Handwerker. Teil 1, Abteilung 1, Blatt 1: Beispiele architektonischer Elemente antiker Bauwerke (Viertelstab, Rundstab, Hohlkehle, Anlauf, Einziehung, Karnieß oder Rinnleisten, Kehlleisten, Sturzrinnen)" last modified 2021-11-02. Creative Commons Lizenz 3.0, by-nc-sa. https://smb.museum-digital.de/object/90592
Kupferstichkabinett. "33.04-1991: Vorbilder für Fabrikanten und Handwerker. Teil 1, Abteilung 1, Blatt 1a: Konstruktionsdetails der Beispiele architektonischer Elemente antiker Bauwerke" last modified 2021-11-02. Creative Commons Lizenz 3.0, by-nc-sa. https://smb.museum-digital.de/object/90570
Harvard University Collection, Vorbilder für Fabrikanten und Handwerker, Karl Friedrich Schinkel and Peter Wilhelm Beuth, 1821. Public Domain Mark 1.0. https://archive.org/details/bub_gb_cWIXAAAAYAAJ
Fig. 1b: Heinzerling's drawings: *Vermittlungsglied* and *Trennungsglied*.
Source: Bayerische Stadtbibliothek. Die Bildungsgesetze der Formen in der Architektur, Allgemeine Bauzeitung, Friedrich Heinzerling, 1869. CC0 1.0 Universal (CC0 1.0) Public Domain Dedication https://www.digitale-sammlungen.de/view/bsb10479254?page=1
Fig. 2a: Andrea Pozzo's orthographic set drawings.
Source: Heidelberger historische Bestände – digital, Katalog für die Bibliotheken der Universität und Universitätsbibliographie, *Qua porro expeditissima methodus omnia, quae ad architecturam pertinent, optica ratione delineandi exhibetur* . Vol. 2. Perspectiva pictorum atque architectorum. Andrea Pozzo, 1709. Augsburg: Wolff. Public Domain Mark 1.0. https://doi.org/10.11588/diglit.1665
Fig 2b: Oblique drawings, J. Caramuel de Lobkowitz.
Source: Juan Caramuel Lobkowitz, Arquitectura Civil Recta Y Obliqua : Considerada Y Dibuxada En El Templo De Ierusalen ... Promovida a Suma Perfeccion En El Templo Y Palacio De S. Lorenço Cerca De Escurial. Spain: Editorial Maxtor, C2010, 2010. Public Domain in the United States, Google-digitized. https://archive.org/details/architecturacivi00cara/mode/2up
Fig.3: Details from drawings in Penther's books.
Sources: Heidelberger historische Bestände – digital, Katalog für die Bibliotheken der Universität und Universitätsbibliographie, Ausführliche Anleitung zur bürgerlichen Bau-Kunst, (Band 1-2-3-4): (Band 1) Enthaltend ein Lexicon Architectonicum oder Erklärungen der üblichsten Deutschen, Französischen, Italiänischen Kunst-Wörter der Bürgerlichen Bau-Kunst, Augsburg, 1744 ; (Band 2): Worin durch zwantzig Beyspiele gewiesen, wie die Erfindungen von allerhand Wohn-Gebäuden aus Stein und Holtz ... zu machen .., 1745 ; (Band 3): Worin von richtiger Kennung, genauer Einsicht, leichter Zeichnung, und endlich von sicherer Anwendung der Säulen-Ordnungen, und ihren Bey-Stücken, gehandelt wird .., 1746 ; (Band 4) : Worin von publiquen weltlichen Gebäuden, als von Fürstlichen Residenz-Schlössern samt darzu gehörigen Neben-Gebäuden ... gehandelt .., Johann Friedrich Penther, 1748, Augsburg, Public Domain Mark 1.0. https://doi.org/10.11588/diglit.1859
Fig.4a: Details from drawings in Redtenbacher's book.
Source: Redtenbacher, Rudolf. Tektonik: Principien der künstlerischen Gestaltung der Gebilde und Gefüge von Menschenhand welche den Gebieten der Architektur der Ingenieurfächer und der Kunst-Industrie angehören, Wien: Waldheim, 1881. Sources: ETH-Bibliothek Zürich, A 5009 Public Domain Mark https://doi.org/10.3931/e-rara-11789 /
Fig. 4b: Details from drawings in Redtenbacher's book.
Source: Harvard University Collection, Leitfaden zum Studium der mittelalterlichen Baukunst; Formenlehre der deutschen und französischen Baukunst des romanischen und gothischen Stiles auf Grundlage ihrer historischen Entwickelung, Leipzig, T.O. Weigel, Rudolf Redtenbacher, 1881, Public Domain Mark 1.0, https://archive.org/details/leitfadenzumstu00redtgoog

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Hübsch, Heinrich. Hermann, Wolfgang (trans.), "In welchem Style sollen wir Bauen?", *In What Style Should We Build?: The German Debate on Architectural Style*, Getty Center for the History of Art and the Humanities, 1992.
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Salge, Christiane, "Visualisierungsstrategien in der Architekturzeichnung um 1800: Friedrich Gilly und sein Entwurf für ein Theater in Stettin" *Gilly-Weinbrenner-Schinkel-Baukunst auf Papier zwischen Gotik und Klassizismus*, Marion Hilliges,and Christian Scholl (eds.), Universitätsverlag Göttingen, 2016.
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Acknowledgments and Funding
This text is a part of the ongoing doctoral research of the author, which is supervised by Prof. Dr. Ayşen Savaş. The theoretical and historical basis of the research refers to the nineteenth-century German architectural theory, institutions, and production. In the following steps of the research, as a part of Erasmus+ doctoral student mobility, Karlsruhe Institute of Technology and SAAI Archive in Germany will be visited in October in contact with Prof. Dr. Anna-Maria Meister. The proposed archival and theoretical research is expected to reinforce, structure, and transform the creative reading corresponding to the image/form duality. Another text based on the same doctoral research was presented at Foundations.Positions.Words Conference at Yeditepe University in May 2023.

Biography
Sezin Sarıca graduated from the METU Faculty of Architecture with the second-best degree and received her M.Arch degree from METU. Currently, she is a Ph.D. candidate and a research assistant at METU. Within the research project "Getty Foundation – Keeping It Modern", she worked in the curatorial team of the "Archive Exhibitions" that was on display in METU and TUDelft. In the previous years, she worked as a co-coordinator of drawing and design workshops "Curcuna", "Ankara: Disguised Landscapes" and "Atölye Yığın". She has participated in (inter)national conferences and published on several online architectural platforms and JoLA. She has also participated in DocTalks and EAHN Editorial Workshop for Young Scholars. Her master thesis focused on display environments and relief as an art medium and space definer. Her current research interests include the interaction of art and architecture, nineteenth-century German architectural theory, architectural image and form, and the concept of *Bildung*. She will be a visiting researcher at Karlsruhe Institute of Technology – Program in Architectural Theory in October 2023.

Space, Makan, Kūkan
Phenomenology of Space through Etymology

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Abstract

This paper explores the perception of architectural space through etymology, focusing on how languages and culture shape our cognition of space. It examines the semantic nuances of space in three cultures: Roman architecture with its relation to Latin and Greek, Islamic architecture and its roots in Arabic, and Japanese architecture via the kanji combination used to express space.
The study tackles the dominance of the Western school of thought in understanding space and gives an alternative approach to analyse spatial phenomena. Also, it provides insight into the unique ways spatial concepts are understood and how distinctive words can reveal much about a society's beliefs regarding architecture.
The comparison is based on the linguistic, geo-cultural, and philosophical origins of space in each of the mentioned cultures. It later extends the comparison to the etymology of architectural terms within the cultures, which supports how space is conceived within each language. Also, the concepts brought as reading keys are culturally conceived and translated.
The results suggest that Roman space (*Spatium*) is an interior space and derives its essence through physical objects. Islamic space (*Makan*) is dependent on actions inside the region and confined by the forces of the desert. Japanese space (*Kūkan*) is centred around the appreciation of time, which makes it temporal and merged with nature.
In Western philosophical thought, *Spatium* is existentialist, *Makan* is similar to some structuralist thoughts of interiorisation of space, and *Kūkan* is nihilist. From an Islamic philosophical perspective, *Spatium* is *Donyawi* (materialistic and hedonistic), *Makan* is *Bateni* (introverted) toward *Nafs* (soul), and *Kūkan* is *Zandaqa* (Islamic rejected pantheism). In Japanese philosophy, *Spatium* undermines the importance of time as a facilitator of space, *Kūkan* revolves around the concept of *Ma*, and *Makan* does not consider the intangible as a part of *Makan* but rather outside of it.

Key words: socio-spatial dialect, Roman architecture, Islamic architecture, Japanese architecture, comparative cultural studies.

1. Introduction

Space is the protagonist of architecture, and it stems from culture and language. Considering the dialectical relationship between objects, as conceived by scholars such as Strauss[1] and Lotman, space is perceived by cultures depending on the individual relationship and their interaction with the environment. The physical limitation of an individual existing within the environment leads to the act of demarcation of elements of the surrounding space through creative means such as architecture.

There is a universality of specific cultures and geographical details shaping the individual and, therefore, how they inscribe their identities into the depiction of space. However, the current literature is dominated by the Western philosophical approach to space, which makes the proximities, differences, and geo-cultural nuances rarely discussed. In the architectural literature, Soja discussed the influence of geography and social structure on the socio-spatial dialect of cities and architecture. Schulz investigated the genius loci of cities and buildings depending on Heidegger's philosophy. Zevi presented the dilemma of comprehending and visualising architectural space. In cultural studies literature, Thacker and Ingram used multiple theories including Heidegger's to discuss the implications and connections between culture and space. They focused on how language, culture, and identity inform our understanding of space. Similarly, Thornbury and Maeda studied the emergence of space as the subject of cultural analysis regarding its original culture and language as well as a Westernised modernised landscape. Fouad and Elmusa tackled the manifestation of the desert as a space of both physical significance and metaphysical within a cultural frame of language and identity. These discussions within comparative studies are skewed towards an East/West comparison.

This paper will add to the global dialogue about space by shifting the fulcrum of the usual comparative view of East/West, creating "asymmetry" as called for by scholar Miyoshi by shifting the locus of comparison through the expansion of the comparison to a West/Middle East/East scope towards an expansive global dialogue regarding the treatment of space beyond the usual dichotomy. It will focus on understanding space through etymology and within a geo-cultural context in architecture. By contextualising each of the readings within the school of thought of the culture of origin, the research will investigate how language affects space's phenomenology and vice versa, and how space is conceived geo-culturally and why. This study will provide insight into the unique ways spatial concepts are understood within a cultural context, as well as an appreciation for how distinctive words can reveal much about a society's values, history, cosmology, and beliefs regarding architecture.

The paper is divided into six sections, starting with this introduction. The following three sections present a literature review of the etymology, philosophy, geo-culture, and cosmology of space in Roman, Islamic, and Japanese cultures. These sections also present the significant characteristics of each culture's space within its own understanding. Section five compares the three cultures, emphasising the phenomenological differences. It also relates the concept of space to architectural terms used in each culture and the spatial formation of its architecture. Furthermore, it discusses the affinity and contradiction of space among the cultures. The last section concludes the research results and presents a future initiative.

2. Of *Spatium*

Space in the Oxford English Dictionary has 19 definitions that denote time, area, or attributive and in combination. These definitions capture the everyday understanding of the concept while also highlighting the intricacy of the idea and hinting at historical debates that continue to this day. Etymologically, space is an adaptation of the Old French *espace*, which is an adaptation of the Latin *Spatium*. Some linguistic resources suggest a relation between the Latin *Spatium* (area or extension) and the Greek *Stadion* (measurement unit). However, there is a difference in the conceptualisation of the word, as *Stadion* conveyed by the root '*sta*' implies a static meaning, and *Spatium* conveyed by the root '*spa*' implies a dynamic meaning. The Greeks used *Chora* (space) and *Topos* (place) to describe spatial phenomena. However, *Chora* is not a literal translation of *Spatium* but a less abstract concept of it[2]. Space also witnessed a change in definition in the late 19th century. This change is rather philological than etymological. The conceptualisation of space was influenced by German literature about *Raum* (space) and *Raumgestaltung* (spatial formation). This shift changed space into a relational element, which is the modern school of thought about space.

Historically, Sigfried Giedion identified three stages in how space was perceived in the history of Western architecture. In the first stage, as seen in ancient Greece, space in architecture was made through the interplay of volumes, with less regard for interior space. In the second stage, which began in the middle of the Roman period, space in architecture was equal to the hollowed-out space of the interior. The third stage began at the beginning of the twentieth century with the abolition of the single view of perspective, which crystallised later into relativity. This classification is parallel to the etymological description mentioned earlier of Greek's *Topos* and *Chora*, Latin's *Spatium*, and German's *Raum*. Therefore, associating space in its modern epistemology with an old term would lead to anachronism and methodological inconsistency. However, from a semantic point of view, the Latin term *Spatium* was open enough to accept within itself more complex meanings and connotations, which made the word space dominantly used to describe these wide ranges of phenomena.

We can classify these three stages of Western space with the Greek as an architecture of place, the Roman as an architecture of interior space, and modernism as an architecture of relativity. This section will focus on Roman space, or *Spatium,* for two reasons. First, Roman architecture concretised the Western world's critical cultural and social changes. Second, for comparison purposes with the other proposed languages, Roman architecture would be historically appropriate. At the time of Vitruvius, *Spatium* was mainly understood as a simple (linear) extension, a temporal extension, and a two-dimensional notion to define a region. Nevertheless, this does not mean the early Roman period had no cognition of reality in its three dimensions. However, their ideas were not communicated as our current understanding of space. In the middle Roman period, architectural space was conceptualised in its three dimensions.

The application of ordering rules, such as *Taxis*, made *Spatium* have identifying characteristics that are correlated to the semantics of *Spatium*. Roman architecture is usually organised on a strict (linear) axial basis that creates symmetry within the form. This axiality emphasises the linear extension of space and, later on, the emphasis on the one-way perspective of interior spaces. Also, the interior spaces were highly ornamented and sought perfection. A second attribute is its extensive and varied use of interior space, in contrast to its predecessor plastic architecture of classical Greece. *Spatium* becomes defined by walls and columns, which are intended to define a hollowed volume rather than masses. This appreciation of walls and columns is rooted in the cosmological understanding of the world and anthropomorphism. A third feature of Roman architecture is related to psychophysical isomorphism. The natural properties are reflected in the built spaces as an attempt to equate natural places with the built place. This isomorphism is represented by the importance of light coming from above, similar to the sky, and the expression of the world as oriented and round (the rotunda)[3].

Spatium main characteristics are axiality and symmetry, dependency on linear extension of interior spaces and appreciation of singular elements that define the space, such as walls and columns. The user in Roman architecture is attracted to the walls and columns, and light comes from above. The architecture resembles the natural habitat and anthropomorphism. *Spatium* is a three-dimensional hollowed volume defined by materialistic elements. Its phenomenology becomes an understanding *of* what makes space in the dimensions of length, width, and height. The *of* elements, *of* mass, and *of* space become the locus of attention in Western space. This approach is an existentialist view of space as it sees space as important through existence, which precedes essence.

3. In *Makan*

There is a feature in the Arabic language that is unique compared to other languages, making the approach to the etymological study of concepts different. Standard Arabic language, to a certain extent, was preserved for 1400 years, and the semantics and syntax of the language were kept intact. Hence, it became an influencer for other languages rather than influenced. Opposite to English, which was influenced by Latin, and Japanese, which was influenced by Chinese, most of the Arabic etymology and philology depend on the roots within the context of the language itself. For these purposes, when the term Islamic architecture is mentioned, it is implicitly (sometimes falsely) correlated with the Arab region, although its geographic location might be outside of it.

Faragh is translated to space*;* according to *Lisan Al-Arab*, the word literally means a place of emptiness. This word is a neologism with some contradicting implicit meanings. The semantics of the word denote the meaning of the impossibility of existing inside the space since if anything goes into *Faragh,* it becomes not empty anymore. The word was never used in pre-Islamic or early Islamic literature to describe an element with the attribute of location. Similar to *Raum* and space, *Faragh,* in modern literature, was influenced by German and Russian philosophies. On the other hand, the word *Makan* was historically used to describe spatial phenomena. *Makan* is translated to place, but this translation is deficient. Place usually implies a non-abstract concept, and space is an abstract concept; however, *Makan* is abstract. *Makan* comes from the root *Kan*, which means existed. *Makan* is the name of place of the root *Kan* or the name of time of the root *Kan*[4]. The word is usually used to describe the name of place of the word *Kan*, but in multiple cases, in the literature of the Quran and poetry, *Makan* is used to describe time. Native Arabic speakers can differentiate its usage based on context. However, in some literary sources, the word is left vague and open for hermeneutics to add

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eloquence to the text. Hence, *Makan* can be translated to the loci of existing objects or actions, the time of existing objects or actions, or both inexplicitly combined.

Geography was the nucleus of this abstract conception of *Makan*. Salah Salih described the desert as a place with specific geographic details that inform its inhabitants, who in turn inscribe their identities and values on the landscape. Arabic was born in the desert, a vast space that both represents the interior space of the mind and the exterior place of dwelling. It is in this intertextual space that the Arabs dominate by their mere existence. This was reflected architecturally through the building of the first mosque, where the prophet ordered his companions to lay out rocks to create a perimeter for the prayers. Also, the prophet said, "Wherever you pray, that place [*Makan*] is a mosque". This dictates that the physical objects that define space are unnecessary, as much as the people doing the acts of praying or the action itself in the space. Also, the word for mosque, *Masjid*, means the place to prostrate oneself, which describes the action inside the space. In this vein, the desert space aids in the concept of decentralising the self to allow it to recenter itself within the vast nothingness of the desert space and become part of a universal community. This supports the communal sense of religious community. Another purpose of the mosque is revealed when considering that the colloquial Arabic for mosque is *Jame' (*to congregate)[5].

Fig. 1

Another source of abstract conceptualisation of *Makan* occurred through Sufism, which had a major interest in space. Nader Ardalan[6] described how Sufism saw God through unity of existence or a modified version of pantheism to fit within Islam. Sufism identified people through *Jasad* (body), *Aqel* (mind), *Nafs* (soul), and *Rouh* (spirit). The body and mind exist in the realm of the world, and the spirit exists in the realm of heaven. *Nafs*, on the other hand, exists between the two and depends on the piety of the worshipper. If the person is hedonistic, their *Nafs* will move closer to the natural world, and if they are ascetic, the *Nafs* will move closer to the realm of heaven or God. Although *Nafs* is translated into soul, it actually means the interior of the mind or the driver of thoughts through emotions or beliefs. It is a layer deeper than the mind's rationale but drives the mind to do actions. Sufism understood space as a juxtaposition of body, mind, and *Nafs,* and it is intended to move the *Nafs* closer to the realm of God.

Therefore, spatial design within this period started abolishing any slight hint of anthropomorphism, and the focus was on the Islamic patterns or the surfaces rather than the columns or walls. Again, the vast, harsh open space of the desert challenges a sense of reality that creates a surface connecting place, memory, and human identity. Surfaces contain within themselves a *Makan,* as each dimension possesses a distinct purpose and symbolises a particular metaphysical concept. Light also came as a surface through a patterned opening and through the courtyard[7]. Spatial planning was introverted to express asceticism from the exterior and beauty from the inside, as the mosque is a house of God, the source of all beauty.

Makan stemmed from the abstract image of the desert, which is characterised by the appreciation of the action happening inside it. The etymology suggests an understanding of place and time separately and combined, emphasising the people's actions inside it. The desert is seen as a space that moulds its inhabitants and exists within many iterations, including the physical space, the existential space

that fuels identity, self, cultural imagination, and tradition, or the natural space, which exists independent of human annotation and denotation. Cosmologically, *Makan* affects the *Nafs,* and its object is to elevate *Nafs* into the realm of spirits. Spatially, it is introverted, based on surfaces, and intertwined together. Space in Islamic architecture is fundamentally understood through what is happening *in* space rather than *of* space. The phenomenology is also occurring *in* the *Nafs*, rather than *of* mind or *of* body. Islamic philosophy sees space as a *Bateni* (introverted) phenomenon. Hence, *Makan* is defined by XY and a constructed image *inside* the mind and of action and experience. The third dimension is interiorised rather than materialistic.

4. Within *Kūkan*

The word *Kūkan*, which translates to an interval of space, was introduced in the 1880s to describe the Western concept of space and has often been cited as evidence to suggest that Western space and *Ma* were fundamentally different. According to *Nihon Kokugo Daijiten*, *Kūkan* comes from two kanji characters, *Kū* (void) and *Kan* (interval or time). The second part of the word (*Kan*) has another reading, *Ma*, from which we can derive the etymology of space in Japanese literature. *Ma* was used as a suffix for different words to describe Japanese rooms, which were conceived as intervals. Roland Barthes argued about the relationship between myth and temporal meanings in traditional Japanese architecture through the analysis of the linguistics of *Ma*. Arata Isozaki defined *Ma* as "an empty place where various phenomena appear, pass by, and disappear." Isozaki also wrote articles about Japanness in architecture; the book's name in Japanese is translated to "the thing" in Japanese architecture. The notion of "the thing" is similar to Heidegger's philosophical investigation of life's paraphernalia published in 1951. Metabolist architect Kikutake expanded on the etymology of ideas and space through *Ka* (hypothesis), *Kata* (form), and *Katachi* (shape). The epistemology of the physicist Mitsu Taketani inspired Kikutake and resulted in a turn from Western epistemological concepts such as Plato's theory of poiesis[8].

Mitsuo Inoue documented the evolution and features of Japanese space. The expression of time in space was not only confined by architectural space but also through art. Japanese art deduces the masses into isometric forms with events happening between them. Also, it omits unnecessary details unrelated to events from the drawing. The omission happens through natural elements, such as trees or clouds. This enclosure of time within nature is the second spatial feature of Japanese architecture. There is no delineation between time and nature; they are seen as expressions of time and space. Therefore, ancient Japanese texts included nature-based poetry since nature was seen as a part of the chronotope, not apart from it. As Fumihiko Maki describes, the shrine in Japan is not iconic by itself or detached from nature, but it is an extension of nature. This is rooted in Japanese cosmology, as the Japanese sought symbols and divine images in all forms of nature; hence, the shrine must be part of nature and not on top of it or louder than it.

Fig. 2

The third spatial feature of Japanese space is horizontality[9]. The floor in Japanese space is the most important, as the user is attracted to the floor where more events occur. Also, light comes from the reflection of light from the floor. Darkness in Japanese architecture is symbolic, and light comes indirectly through the reflection of the *Tatami* (traditional Japanese flooring). Horizontality is also expressed in the exterior spaces. The buildings in Japan are surrounded by a wall called *Kairo*. It was not simply an entrance but a place of mediation between spaces and a node between two spaces. This node is entirely horizontal and derives its spatial quality from a stop in time. The worshippers approach the gate, stop, pray, and enter, although nothing physical is preventing them from continuing walking except a spatial transition that creates a stop in time. A similar phenomenon also occurs in *Himorogi*, which is a simple form of a sacred space in Shinto. *Himorogi* translates into a place of purity or a fence for gods. The *Himorogi* depends on the presence of invisible spirits known as *Kami*, and

their arrival and departure are signified through the events of movements of leaves of a sacred branch in the centre. The *Himorogi* is an overtly temporary space, and its structure is not sacred, but the invisible events within it are what is sacred[10].

The forms of horizontality are also linked to the importance of pillars. In Japanese mythology[11], the pillars resembled a connection to heaven and were used to count human beings and later extended to apply to gods. The strong anthropomorphism of the gods of ancient Japan makes this quite conceivable. The pagoda is an extension of the idea of a freestanding pillar. The first Buddhist tower in Japan, built by Soga no Umako, is said to have been a single wood pillar (*Satchū*). There are no clear-cut distinctions among gods, humans, beings, and objects, as evidenced by texts such as the *Nihon Shoki*[12], which begins from the creation myths as part of history. This pantheistic worldview was the philosophical foundation of forming space. Later, Pure Land Buddhism influenced the architecture of Japan and led to the frontal pictorial type of formal composition. The pictorial form developed spatially into movement-oriented architectural spaces similar to a bead layout with extrusions in roofs and forms. This progressive fragmentation of space led to a scattered spatial layout.

Kūkan is based on the idea of emptiness and nothingness, which was influenced through the cosmological doctrine essentially by Shinto and later by Buddhism. This was expressed architecturally through the temporality of the space, the darkness in spaces through the reflection of light from the *Tatami*, and the pillar as invisible gods holding the roof. Also, the gate is a mental and spiritual transition between realities. This worldview made Japanese architecture not fascinated by the ornamentation of interior space but by focusing on time *within* space. Hence, the concept of *Ma* was the core phenomenological basis of *Kūkan,* as time is the driver of space. Japanese philosophy sees the three-dimensionality of space as not occurring in the mass (or XYZ) but in XY and time since time has more value than Z, and the experience happens *within Kūkan*.

5. Among the *of*, *in*, and *within*

This section will delve into a comparative analysis of space among Roman, Islamic, and Japanese architecture within the schools of thought and contexts of their cultures and languages of origin. In this way, the comparative fulcrum does not skew towards the paradigm of a dominant against which the other is weighed, but rather an analysis of how each is presented within their spheres of origins, bridging the gap between cultures that are rarely held in dialogue.

Space in the three cultures originated from the definition of space as an enclosure of a two-dimensional region. *Spatium* sought this enclosure with a physical and visual barrier. Hence, the dividing objects of walls and columns became central in the creation of *Spatium*. Also, it became a natural progression to fully enclose this two-dimensional region with a physical ceiling, which made space an interior three-dimensional entity in XYZ. In *Spatium*, the ceiling became an extension of the walls and columns, a continuous cave built within the city. This was reflected within the city context of the iconism of buildings within the city. The buildings became on top of nature and challenged its context. The Roman space developed a sense of perspective to understand space. The importance of the Z axis in the interior space was emphasised through light, as light comes from the top of the space.

Makan takes the notion of region enclosure into the existence of action within this region. *Makan* is an organic, biomorphic shape with interiorised spaces dependent on action or the assembly of actions. Therefore, *Makan* will have stationary spaces within this undefined open region resembling an open desert. Moving from the stationary spaces will take the user among in-between spaces. *Makan*'s three-dimensionality comes from the XY and the interiorization[13] of this region or action within the area. There is a synonymity between the action and the region in *Makan*; without the region, the action cannot exist, and vice versa. In *Makan*, neither the physical building nor the physical existence of people matters, as the desert is a stronger and harsher landscape that devours everything. Jasper[14] describes the desert as an interior space of the mind and an archetype of the imagination. Therefore, the building does not challenge the desert and almost does not exist, but assimilates into its existence and defines its sub-regions through action. Also, light comes from the surfaces, penetrating and dominating the space rather than emphasising its existence.

Kūkan sees regions as independent instances connected through time. The regions, in a different sense, can be seen as memories; when a person exits a space, they go from a memory to a future memory, making continuous movement through time[15]. *Kūkan's dependency on regions within time* makes time the third dimension of *Kūkan* (or the first dimension before XY). This unseen nothingness is symbolic in *Kūkan* more than the existence of volumes such as *Spatium*. Hence, darkness has a deeper meaning in space than light, which makes light exist as a secondary reflection element through

the floor. Tectonically, Japanese space is appreciated through the flooring, where most events happen and people are attracted.

The concept of time in Western space came as a fourth dimension and was related to theories of relativity. It is also related to the conceptualisation of space through *Raum* rather than *Spatium*. Time in Western space comes as a supplementary layer of relations of interiorised space. It is an advancement upon the three-dimensionality of interior space and its configuration, or XYZ and t. Japanese architecture sees time as the essence of the definition of the regions of space or tXY and Z. This led to an intellectual affinity among multiple modern movements between Japan and the West, such as Le Corbusier and Kenzo Tange or structuralism and metabolism. *Makan* collided with Western philosophy and became a spatial centaur that lost its identity and was portrayed in Arabic prose as a cause for insanity[16]. A similar collision happened in a different sense in Japan during the Meiji era, which resulted in new types of cities and architecture and caused societal anxiety[17].

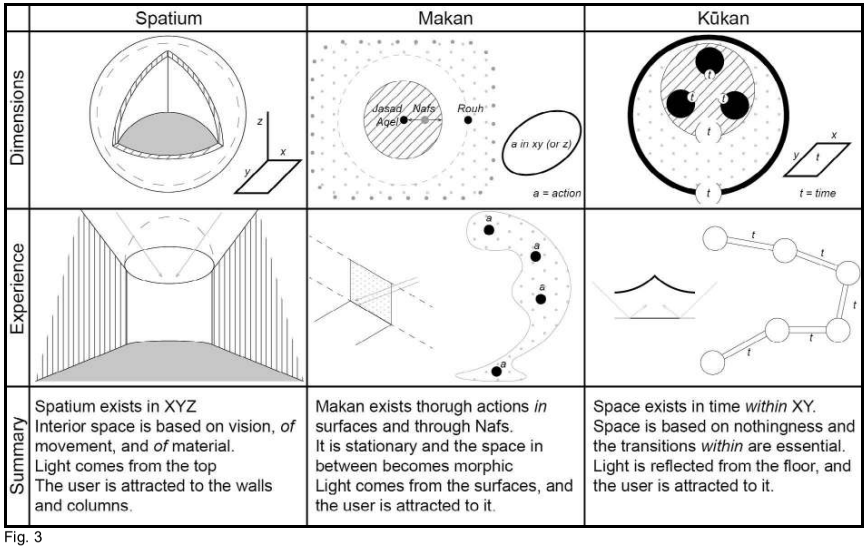

Fig. 3

Extending the etymological analysis to architectural terms in each of the cultures, we can elicit the different approaches to understanding the tectonics of architecture. One of the most important features of Roman architecture, and Greek before it, is the orders. The orders of columns were given names, such as the Corinthian, which is related to the Greek city-state of Corinth. This shows the importance of the element of columns. On the other side, Islamic architecture focused on naming patterns and Islamic arches, which were given names based on their function. For example, the *Makhmoos* is the Islamic pointed arch, and it translates into the element based on fives since its proportion is divided into five equal pieces. Japanese architectural orders are based on the design of the roof, which was seen as a floating object. One of the most famous Japanese gabled roof orders is called *kirizuma-zukuri*, which was originally named *Maya,* which means the true roof or, implicitly, the true realm. This etymology suggests the transcendence between the real and the memory.

The spatial formation of the three cultures is also rooted in the etymological roots. The Pantheon, which is the most celebrated rotunda, is based on axiality, focality of the dome, and detailing of the interior. The word Pantheon meant most holy, or the [house] of all gods, which was represented in the sculptures on the walls. The Pantheon is similar to a cave within the city, with its deep entrance and light penetrating the dome. This natural inclination also extends to domestic architecture. The *Domus*, which is a house in Greek and later borrowed by Latin, was a residence for the upper class and has been traditionally presented as a bucolic idyll, where all you do is serve the *Phusis* (the natural order) and place yourself at the service of its urge.

Islamic architecture, religious and domestic, is centred around a courtyard. The courtyard is described in the literature as a means of *Taqwa*, an Islamic moral which means to protect and preserve oneself. The hierarchy of spatial formation from public to private spaces in the planning and experience of Islamic architecture conveys this sense of covering, concealing and sequential revealing. At the same time, the courtyard is outside the building but inside the perimeter of the property. In many cases, such as in the Umayyad mosque, the orientation of the movement is right to left, but the praying orientation is top to bottom. This combination distorts the axiality and makes it ambiguous, similar to a desert. In Arabic, the word for dwelling is *Maskan*, which means a place for practising calmness and is linked to security and comfort; this states the function of a house in the Arabian mindset[18]. Moreover, Islamic patterns followed their internal logic as if they were a cloak draped over the body of the building, often ignoring breaks and junctions in the underlying surfaces and volumes. The "clothing" of wall surfaces, as the poet Ibn Zamrak described Alhambra palace, was seen as a layer to cover and protect the *Makan*, not only for the purposes of beauty[19].

Japanese religious architecture, such as Ise Shrine, has a composition of multiple spaces inside each other, with each transitional gate with its unique name. The *Sai-mon* (purification gate) has purification pools to signify a transition and purification into the altered space. With each gate the prayers pass, they move closer to the realm of spirits, and reality becomes a memory. Also, the shrine itself is hugged by nature, and today, visitors cannot enter the building itself or take pictures. The movement in time is what makes Ise Shrine's space rather than entering and sensing the interior physical space. Another aspect of the temporality of the buildings of the shrine is that every 20 years, the shrine is torn down by locals to rebuild a new one on the other side. This temporal approach is a layer of emphasis on the time in the creation of space rather than the physicality of the space. The shrine exists in a unique state of being a space that is always both new and ancient. This is seen as part of the Japanese belief of *wabi-sabi,* where nothing is finished, nothing is permanent, and nothing is perfect. In domestic architecture, *Kaoku*, which is usually translated into house, consists of two words, home and roof, which shows the importance of the roof in the conception of dwellings. The roof and gate are a depiction of the transition from one realm into another.

6. Conclusion

This research presented a comparative etymological and geo-cultural analysis of space among Roman, Islamic, and Japanese architecture. The research concluded with the importance of the physical interior approach of *Spatium*, the importance of action within an infinite undefined region of *Makan*, and the existence of time within a region in *Kūkan*. Also, *Spatium* challenges nature, *Makan* is confined in nature, and *Kūkan* merges with nature. In Western philosophical thought, *Spatium* is existentialist, *Makan* is similar to some structuralist thoughts, and *Kūkan* is nihilist. From an Islamic philosophical perspective, *Spatium* is *Donyawi* (materialistic and hedonistic) and pushes the *Nafs* to the physical world rather than the spiritual world, *Makan* is *Bateni* (introverted) toward *Nafs,* and *Kūkan* is *Zandaqa* (Islamic rejected pantheism) and equates man and gods, which defies the purpose of space as means for man to reach a monotheistic God. In Japanese philosophy, *Spatium* undermines the importance of time as a facilitator of space, *Makan* does not consider the spirits as a part of *Makan* but rather outside of it, and *Kūkan* revolves around the concept of *Ma.*

The research gave insights into the conceptualisation of space in relation to etymology, geography, culture, and cosmology. A future initiative of this research would be to highlight the contemporary spatial intricacies of space among multiple cultures regarding post-colonialism and globalism, expanding the scope of research beyond the East/West paradigm towards a broader global dialogue.

Notes

1. Pierre Miranda offers a comprehensive review of Strauss' structuralism in addition to other theorists within the scope of cultural anthropology and structuralism. Pierre Maranda. "Structuralism in Cultural Anthropology," *Annual Review of Anthropology* 1 (1972): 329–48, http://www.jstor.org/stable/2949247.
2. Heidegger explicitly said that the Greeks had no word for space. *Chōra* means neither place nor space but what is taken up and occupied by and what stands there. Martin Heidegger, *Introduction to Metaphysics* (London, Yale University Press, 2000), 69.
3. The mentioned characteristics are extracted from the following sources: Christian Norberg-Schulz, *Meaning in Western Architecture* (New York: Rizzoli, 1980) 42-57. Alexander Tzonis and Liane Lefaivre, *Classical Architecture: The Poetics of Order* (Cambridge, MA: MIT Press, 1986), 9-18.
4. The Arabic language is based on roots and derived nouns or verbs that follow the basis of the root. A name of place is a derived noun that indicates this attribute. For example, "to eat" means *akal,* and a place to eat in is *Ma'kal*. Through changing the structure of the word, it gives another meaning. Hence, *Makan* means the place where people exist or the time people exist.
5. Robert Hillenbrand, *Islamic Architecture: Form, Function, and Meaning* (Edinburgh: Edinburgh University Press, 2000), 42-44.
6. The following source was also used to support Ardalan's arguments: Samer Akkach, *Cosmology and Architecture in Premodern Islam: An Architectural Reading of Mystical Ideas* (New York: State University of New York Press, 2012).
7. Light coming from domes was introduced later in Islamic architecture and influenced by Western architecture. This is evident as early mosques' domes were small and non-focal in spatial design.
8. This information is also mentioned in Isozaki, *Japan-Ness in Architecture*, 65.
9. Chen-Yu Chiu, Philip Goad, Peter Myers, and Nur Yıldız Kılınçerm, "Jørn Utzon's Synthesis of Chinese and Japanese Architecture in the Design for Bagsværd Church," *Architectural Research Quarterly* 22, no. 4 (February 2019): 1-22, https://doi.org/10.1017/S1359135518000696.
10. Kevin Nute, "Time in the Traditional Japanese Room," *The International Journal of Architectonic, Spatial, and Environmental Design* 16, no. 2 (October 2021): 15-24, https://doi.org/10.18848/2325-1662/CGP/v16i02/15-24.
11. A well-known Japanese myth of how Izanagi no Mikota and Izanami no Mikota, primal male and female deities, circled the Pillar of Heaven (Ame no Mihashira) and created the land of Yamato. Inoue, *Space in Japanese Architecture*, 7-8.
12. *Nihon Shoki* was written in 720 and is often referred to as *The Chronicles of Japan*, which is the second oldest Japanese historical text.
13. The notion of interiorisation in *Makan* was foreign to Western philosophy until the 1960s, which was introduced by Aldo van Eyck. The word interiorisation of space was confusing to many Western thinkers, and van Eyck depended on the Dutch word *Gemoed*. Although he translated it to mind, its semantics dictate the interior of the mind, similar to *Nafs*. Van Eyck's conceptualisation of interiorisation and in-between space came after his trips to Africa, namely Algeria and the Dogon village in Mali, where both are Muslim-dominant countries, and Algeria is an Arabic-speaking country. This similarity between van Eyck's in-between and interiorisation with Islamic *Makan* suggests further proof of his inspiration.
14. Jasper describes, "The desert is seen as a complex locus of experience and reflection; it is simultaneously an interior space of the mind; an exterior place where pilgrims, adventurers, and travellers can visit and dwell; and an intertextual space produced by cross-references among cultural creations dealing with the desert as archetype or icon of the imagination." David Jasper, *The Sacred Desert: Religion, Literature, Art, and Culture* (Oxford, Blackwell Publishing, 2006), xii.
15. An example of this transcendence from reality into memory occurs in the Noh theatre in Japan, where the performers walk across a bridge (hashigakari), which symbolises crossing into the spiritual realm where time is no longer linear. The space before the bridge is hidden, and no one can see it. The construction of the play, in conjunction with the structure of the Noh theatre, adds a sense of nothingness within the space, as tradition dictates that the performance will always begin with an empty stage where there is no one and no objects in the space, and must end in the same way.
16. Abdel Rahman Munif's *Cities of Salt* writes of an Emir who is driven to madness by the marvels of Western living within the Western mansion built for him by the Westerns who have come to the land, a clear indication of separation and anxiety when the desert floor is covered by the concrete of a modern city. The name of the novel itself is an example of the results of such a collision, indicating that a city built with no origins or means of sustainability and glass cities are reduced to dust. This is an allegory of the sudden and rapid changes that occurred as modern Western philosophy encroached on the ideology. Abdel Rahman Munif, *Cities of Salt*, trans. Peter Theroux (New York, Vintage International, 1989).
17. Natsume Sōseki, in his essay, *The Civilization of Modern Day Japan*, comments on the rapid changes brought about by Japan's sudden and rapid modernisation as it opened its borders at the advent of Meiji and warned against an imminent nervous breakdown. The rise of the city and apartment living not only brought about a new type of architecture but a new type of individual living and sense of isolation, which added to the anxiety of the modern individual within society as they navigated this new urban landscape and a new sense of self-attached to it. With the rise of modernity and increased interaction with the West, *bunka seikatsu* (cultural life) arose, which was associated with efficient in-town living and suburban residences. The first display of model homes exhibited at the Peace Exposition at Ueno (1922) was a massive success and was marketed as *bunka jutaku* or *Kultur* (from German) houses. The resulting expansion and growth of Tokyo became a space for personal exploration and anxiety with a sense of anonymity within a large city away from traditional living and family constraints. This became the urban space of (*toshi kūkan*). Natsume Soseki, "The Civilization of Modern-Day Japan," trans. Jay Rubin, in *Kokoro: A Novel and Selected Essays* (Lanham, Md.: Madison Books, 1992), 281. William J. Tyler, *Modanizumu: Modernist Fiction from Japan, 1913–1938*, (Hawaii, University of Hawaii Press, 2017).
18. Mustapha Hashem El Moussaoui, "Rethinking Heidegger's Dwelling Through Arabic Linguistics," *Journal of Islamic Architecture* 6, no. 2 (2020), http://dx.doi.org/10.18860/jia.v6i2.8454.
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Image Captions

Fig. 1. Man praying next to his camel in the desert. From the collection of Dr. Paula Sanders, Rice University.
Fig. 2. Rakuchu rakugai zu byobu. Momoyama period (1568-1615). Scenes in and around the Capital, pair of six-fold byobu. Attributed to Kano Takanobu, Fukuoka City Museum.
Fig. 3. Comparison of spatial attributes among cultures. By authors.

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Biography

Mohammad Sayed Ahmad is an architect and a PhD holder in architecture and urban design from Tohoku University, Sendai, Japan. His research theme revolves around place-making for children, where he studies the socio-spatial formation of children’s spaces. The research questions how spaces are conceptualised and designed and how different planning methods can affect the socio-spatial experience. The research is interdisciplinary in nature; it combines architectural design and planning with sociology and pedagogy through a mathematical analysis model. In the practical field, he previously worked at Kengo Kuma and Associates and Shigeru Ban Architects.

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Vulnerable architecture as a/n (im)material assemblage

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Abstract

This paper aims to challenge architecture’s conventional conceptualizations as unwoundable autonomous entities which prioritize certain concepts such as stability, durability, unity, or completeness. It argues that these conceptualizations lead to exclusive approaches of it through binary understandings. For that, the paper carries out a discussion through the term *vulnerability* which Western understandings of architecture commonly avoid. The term *vulnerable* which is derived from the Latin word *vulnerare* means “to wound” and in the dictionary, it is defined as *capable of being physically or emotionally wounded* (Merriam-Webster, 2023). Yet, it is reconceptualized by feminist posthuman theorists (Tsing 2015; Butler 2016) as being inherent to all kinds of bodies (both living/nonliving or human/nonhuman) instead of attributing it to specific groups (e.g., women, animals, children). This inherent vulnerability of all kinds of bodies -including architecture, makes it impossible for any-body to stand alone and positions bodies entangled with other bodies.
As a method, starting from the conceptions of matter and materiality, this paper follows vulnerability in architectural theory and practice through several concepts such as autonomy, singularity, bigness; dependency, openness, and temporality. Through these concepts, it aims to expose several problems related to vulnerability to retool it in a critical way.
Vulnerability of architecture which preconditions a radical relationality requires to rethink conventional conceptualizations of architecture as well as design process which are keen to exclude many others through deeming architectures autonomous.
Vulnerable architecture proposed by the paper through several discussions interrogates the possibility of using vulnerability as a critical tool in the pursuit of a reconceptualization of architecture that does not exclude. It unfolds many discussions around theory, practice, and understanding of architecture-always-in-relation instead of positioning it among dualities such as human-nonhuman, living-nonliving, or material-immaterial.

Key words: vulnerability, materiality, relationality, assemblage, resistance.

1. Introduction

The term *vulnerable* is derived from the Latin word “vulnus” which means “wound.” While in the dictionary, it is defined as “capable of being physically or emotionally wounded,” originally the term was used to explain physical wounds only. However, since the late 1600s it has been used to also suggest defenselessness against non-physical attacks. [1] Besides its etymological and dictionary definitions, in feminist-posthuman theories, the term is reconceptualized affirmatively through the notion of relationality. In these theories, vulnerability, rather than being accepted as an essential quality of certain bodies, is acknowledged as inherent to bodies of any kind –both human and nonhuman or living and nonliving. It is underlined as the first condition of forming relations between multiple bodies. Conception of vulnerability as a common feature of any-body, questions many related concepts such as agency or resistance as well as ontological understanding of the embodied subject and its so-called static boundaries.

Feminist philosopher Judith Butler rethinks the relationships between vulnerability and resistance: Contrary to reductive and essentialist conceptualizations that attribute vulnerability to certain groups (e.g., women, nonhumans, animals, etc.) that are *only* acted on or affected by; and agency to another group that *only* act on or affect others, she underlines the ambiguous territory between vulnerability and agency. According to Butler, we are all vulnerable creatures, however, our vulnerability comes to the fore only when an infrastructure that supports us fails.[2] Not only this understanding defines body as a relation rather than an entity, but also it enables us to interrogate the position of architecture or architectural supports among these vulnerable bodies. However, as I will detail in the following chapters, the uncertainty of what this “body” Butler refers is, also bears the risk of acknowledging the architectural body outside of the domain of vulnerability as a mere background.

In a similar vein with Butler, Leticia Sabsay also defines one of the conventional meanings of vulnerability as “unwanted permeability” and claims that permeability exposes the relational character of vulnerability by highlighting the impossibility of stable boundaries of the vulnerable “I.”[3] Moreover, anthropologist Anna Tsing takes this notion of radical relationality further and preoccupies the relationships between vulnerability, precarity, and resistance through more-than-human assemblages which we are all thrown due to our inherent vulnerability. According to Tsing, precarity is the circumstance of being vulnerable to others and it is the very first condition of our coming together in different assemblages.[4] Basically, it is our vulnerability and need for care that throw us into shifting and unstable assemblages and we as well as our others are remade through the unpredictable encounters of them.

Similar to common definitions of vulnerability, it might be said that conventional Western conceptualizations of architecture are also keen to avoid vulnerability by attributing it a similar negative meaning. In theory and practice, architecture is usually conceptualized as an unwoundable material object which is articulated and designed through some internal rules that make sure of its so-called autonomy. While this approach dates back to the time of Vitruvius with a search for unity and harmony; it is the time of the Renaissance through Leonardo da Vinci’s Vitruvian Man when a proper definitive role for the “architect” proposed: Vitruvian Man located at the center of the life with his ideal body and proportions while separated from all of his earthly relations, depicts architect as a creator or a form-giver. It can be said that from that time, architecture is to be produced through this privileged man’s biological and political existence and aims to provide a specific way of life that takes care of this person’s continuity. For example, Catherine Ingraham in her book *Architecture, Animal, Human: The Asymmetrical Condition* follows this tradition through several examples from architectural history. Through Colin Rowe’s reading of Palladio’s Villa Capra-Rotondo and Palladio’s positioning of the user according to his own point of view, Ingraham argues that there is an asymmetrical condition between architecture and life. According to Ingraham, the architect’s point of view shapes the occupant’s way of coming and going, entering and exiting, standing and moving, owning and operating, seeing and being seen, framing and being framed way before the life that it will inhabit occurs. [5] In other words, architecture puts restrictions on the life it inhabits and proposes a specific way of life that guarantees the asymmetrical condition or in other words, its autonomy. In the end, architecture is conceptualized and designed as an unwoundable material object. Later, this idea of autonomy is taken forward by the architect Peter Eisenman (which I will detail below) and in other discussions extended in a critical way through a discussion of nature in architecture (e.g., Mostafavi and Leatherbarrow, 1993; Gissen, 2009). However, here it might be summarized that these conventional Western conceptualizations of architecture that this paper refers to, is architecture’s or architect’s long-term search for the autonomy of an unwoundable material object. As I indicated above, this material object stands there to propose certain ways of life or simply aims to make the privileged human subject aware of this way of life without actually being informed by the bodies circulate. It can be said that these conceptualizations prioritize certain concepts such as stability, durability, unity, or completeness.

Moreover, these invulnerable conceptions of theory and practice that promote such concepts, also produce dichotomies that exclude many others who are positioned against the absolute “one:” A completed whole, with its fixed boundaries, inevitably produces binaries such as inside/outside, material/immaterial, or body/space. A thing can be either the “one” or the opposite to the “one.” Jane Rendell argues that in conventional architectural practice to position a building as a “methodology” instead of an end product of a method or process that makes a building is to hold a radical position.[6] In an environment where architecture is conceived as autonomous material objects, Rendell, as an alternative to this conventional architectural practice, proposes the term “critical spatial practices” influenced by the discussions of Henri Lefebvre and Michel de Certeau on spatial practices. She uses this term to define both everyday activities and creative practices which are the field of resistance against the dominant social order of global corporate capitalism. From this point of view, she proposes to transcend the boundaries of “architecture.”[7] Similarly, vulnerability, through being inherent to bodies of any kind (including architecture) and its material, immaterial and discursive dimensions, penetrates the everyday. In this sense, it can be said that the concept has the potential to transcend the dual practices of thinking and making in architecture through the radical relationality it bears (or the impossibility of creating a finished whole). I argue that architecture’s, architect’s, or any body’s impossibility of standing alone in an entangled world, should be proposing another way of thinking and doing.

In this paper, I follow the term vulnerable in architectural theory and practice (both through its presence and absence) in order to expose the intrinsic problems in Western humanist conceptualizations and propose an alternative to it. I research whether such an alternative bears the potential to transcend the above-mentioned dualities or boundaries that prevent a reconceptualization of inclusive architecture.

I position myself among feminist posthuman theories which pay regard to relationalities instead of heroic autonomous objects or architects. Starting from the conceptions of matter and materiality, I unveil many vulnerability-related concepts in architecture such as relationality, dependency, openness, simultaneity, temporality; autonomy, singularity, and bigness. My reason for choosing the subject of matter and materiality as my starting point and through that rethinking the entanglement of material and immaterial, is vulnerable architecture’s critical position in those assemblages which are heterogenous in kind –both material and immaterial. This research aims to interrogate the possibility of using vulnerability as a critical tool in pursuit of a reconceptualization of architecture that does not exclude.

2. Matter and materiality in architecture

The stories of vulnerability in architecture can be traced back to the scale of matter and discussions of materiality that arise from different conceptualizations of it. The relationships that architectural body establishes in multiple scales, make it possible to discuss vulnerability that is usually neglected in theory and practice.

Conventional conceptualizations of architecture that date back to Vitruvius, evaluate “matter” as singular; separated from its relations and temporalities. Inert and passive conceptualizations of matter that separate it from its processes entail a bifurcation between material and immaterial. While in the process of the (re)production of architectural space, both material and immaterial qualities bear importance; immaterial is commonly excluded because of being fluid and uncontrollable in favor of the material which is solid and stable. This bifurcation of material-immaterial induces many other dualities including interior-exterior, body-space, body-mind, or container-contained. Moreover, the duality of material and immaterial also conceptualizes architecture as an autonomous material object which is not affected by immaterial qualities of space and leads to an asymmetrical condition between body and space, or between architecture and life in Catherine Ingraham’s words.[8] As Hill argues that the purpose of home is to keep the inside inside and the outside outside since home is associated with material as being solid and stable while the exterior world is associated with immaterial as being fluid.[9] Similarly, Adrian Forty states that “design” creates an opposition between “building” and everything in architecture that is immaterial, in other words, “design” concerns what is not construction.[10] It may be said that there is a relationship between material-immaterial duality that results from matter’s inert and passive conceptualizations and approaches that portray a hero architect excluding immaterial due to its uncontrollability. Considering that, in order to establish a relationship between the vulnerability of architecture and the entanglement of material and immaterial, it seems necessary to discuss what is deemed as “matter” in architecture and what is not.

Katie Lloyd Thomas, starting from the matter-form relationship, examines the occurrences of matter in architecture; and through materiality, she questions the possibility to rethink the relationships between architecture and the social and political.[11] In Aristotle’s understanding of hylomorphism, matter is conceptualized as singular and undifferentiated. It is not conceptualized to have an impact on the determination of the form, on the contrary form is what differentiates matter. Thus, Aristotle’s depiction of bronze as primary matter stems from its specific properties: Bronze, through its ability to be liquid and molded as well as its own formlessness, can protect the shape that it is given. In this understanding, charcoal cannot be accepted as primary matter; because if you try to change its shape it turns into dust. According to Thomas, Aristotle’s depiction of matter as singular and undifferentiated

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restricts primary matter to specific properties and excludes multiple materialities.[12] Matter prioritized in these conceptions can be said to be invulnerable since its reduction to specific properties positions it abstracted from its relations with other matters as well as their affects: Any differentiation on the matter can only occur through a transcendent and intentional act (e.g., architect giving form to undifferentiated matter) and the matter proceeds to protect its given form. This understanding ignores contingencies of matter's further encounters.

Materiality is constructed through matter which is controllable, passive, and indifferent to contingent encounters. Immaterial which is uncontrollable and related to terms such as permeability, porosity, or fluidity is excluded on behalf of the material. As I briefly indicated above, this exclusion of immaterial proposes a whole whose so-called static boundaries exclude contingent encounters and possibilities or simply the relations that matter builds: With the definition of what is counted as material; immaterial occurs as anything that promises to transcend the boundaries of the whole. Greg Lynn, through his discussion of "whole" concept of architecture, argues that architecture's dependence on the model of a unified body since the time of Vitruvius ignores intricate local behaviors of matter and their contribution to the composition of bodies. According to Lynn, architecture's fundamental quest for a unified body as a completed whole proposes a closed system whose parts are organized with top-down methods. Ultimately, this top-down approach ignores matter's entangled local relations.[13]

Sanford Kwinter, in a similar approach to Lynn, comprehends matter through its encounters and gives an example of tree: According to Kwinter, when a tree is organized to function as a column or a beam, what is chosen for "expression" is a set of properties of cellulose. On the other hand, when a tree is organized as a log for burning, what is chosen for "expression" is the fire which already exists in the tree as dormant.[14] Here, matter's expressions are chosen by contingent encounters as only one possibility of multiple possibilities. Thus, unlike invulnerable conceptions of matter that assume it to protect its given form, here it is vulnerable to encounters and entangled relations through which the new is produced. Yet, what both Kwinter and Lynn forget or intentionally undermine is that these encounters that render the tree as a log or a column are not "innocent"[15] encounters; rather they are social, political, and situated. As Douglas Spencer argues these comprehensions of matter leaves no room for contradictions and only cares about differentiation that comes with the inclusion of the harmonious.[16] Where there is no contradiction or incompatibility, it can be said that it is not possible to talk about the existence of a criticism or critical architecture. Thus, it becomes clear that these approaches have no social-political concerns.

2.1. Deconstructivist Architecture: "innocent" encounters of matter

The exhibition *Deconstructivist Architecture* organized by Philip Johnson and Mark Wigley in MoMA in 1988 may be a good example to discuss above mentioned so-called innocent encounters. The announced aim of this exhibition was to challenge the very values of conventional architecture such as harmony, unity, and stability and expose the wounds intrinsic to the building. Thus, the exhibition through its several participants whose approaches differentiate on a wide spectrum, raises important questions on vulnerability of architecture. Here, I briefly aim to preoccupy these questions through several concepts exposed in the exhibition such as autonomy, singularity, and bigness.

Although not directly, the exhibition *Deconstructivist Architecture* points out the vulnerability avoided in architecture through several concepts. One of the curators Mark Wigley argues that architect's pursuit of pure form excludes instabilities and disorders: Buildings are produced with simple geometric forms (cube, cylinder, sphere, cone, pyramid, etc.) through compositional rules that prevent any form to contradict another. Any deviation from this order threatens architecture's formal values of harmony, unity, and stability. In other words, pure form is there to protect architecture from contamination. According to Wigley, this is what all the different approaches included in the exhibition criticize in common. Different participants in different ways declare that the pure form is contaminated. Here their aim is not to dismantle the architectural object; rather to expose architecture's inherent wounds and flaws; and destroy its formal economy.[17] However, even though the exhibition started taking a critical position against the ignored vulnerability of architecture, it can be said that the initial critical ground is destroyed due to the relationships established with the notion of autonomy as well as discussions solely carried out on form. Wigley establishes a relationship between purity of form and architecture's conventional tendencies; however, as Jeremy Till states this new formal complexity turns out to be as conservative as the stability that it aimed to destroy. The autonomy of the architecture is reinforced with formalist concerns and the manipulation of form is glorified as architecture's fundamental interest.[18]

For example, one of the participants Peter Eisenman proposes the term "singularity" following Krauss' proposed relationship between an object's singularity and its relationship with previous modes of legitimation: Singularity does not aim to take the position of a thing (e.g., a column) or does not reject its benefit; yet it denies the sign function (e.g., the sign of the column's structuring function).[19] Disjunction from the sign function –or in other words architecture's semiotic and functional history, proposes a singularity which is in a way the manifest of architecture's autonomy. In other words, it might be said that Eisenman founds the critical again inside architecture; in the difference between the thing and the sign. However, at the same time or on the contrary, his denial of any legitimate system (historical, semiotic, or functional) and disregarding the continuity between past-present-future destroy the critical ground. An architecture that is self-reflected and denies any legitimate system can only be produced through coherent parts coming together while ignoring anything that seems incompatible or uncontrollable. At the end, stability and harmony which are criticized at the beginning, are produced with Eisenman's project of autonomy.

Similarly, another participant of the exhibition Rem Koolhaas gets involved in the discussion of autonomy through the term "bigness" in his article *Bigness, or the Problem of Large* that he wrote a few years after the exhibition. According to Koolhaas, beyond a certain scale, architecture obtains the properties of bigness and that bigness proposes an ideological program beyond the will of its architects; only because of its dimensions. "Big Building's" impossibility of being controlled by a single architectural gesture triggers the autonomy of its parts. The distance between the core and the envelope increases to the point where the façade cannot uncover what happens inside. Bigness is no longer stands there as a part of urban texture; it exists at most it coexists. Context disappears.[20] Koolhaas does not take bigness in a critical way; on contrary, he accepts it as a reality that should be faced and utilized. It might be said that Koolhaas' bigness, just like Eisenman's singularity, ends up with architecture's reconceptualization as autonomous static objects. Their loss of the critical attitude that they aimed at first, leads them to reproduce what they criticize: conventional conceptualization of architecture as autonomous entities.

Here through the concepts of autonomy, singularity, and bigness, it becomes clear that the exclusion of the social and political (immaterial) from matter and materiality, necessarily connects with the notion of harmony or consistency. The search for harmony neglects both the inconsistencies and temporalities since what is deemed as consistent is already included in the proposed architectural object. In the end, one more time architecture is conceptualized as an invulnerable autonomous material object.

3. (Im)material assemblages of contradictions

The discussion of consistencies and contradictions is important to rethink architecture as vulnerable since these two are what define how the assemblages of vulnerable architecture are established and destroyed. Returning to the discussion of vulnerability and resistance, more-than-human assemblages that we are all thrown into due to our vulnerabilities seem critical. Here the question emerges as whether it is possible to go beyond understandings of architecture as autonomous material objects by rethinking it as a form of resistance that emerges from these assemblages.

Taking a way more critical position than the participants of *Deconstructivist Architecture*, Jill Stoner refers to contradictions while she discusses the relationship between power and vulnerability through the practices she calls "minor architecture." While Stoner explains minor architectures as "opportunistic events that undo the structures of power;" she redefines architecture as "making of spaces within the already built" instead of "making of buildings with materials of nature."[21] Top-down power structures build major architectures and minor ones are derived from these architectures by dismantling and rebuilding them in different ways. Minor architectures are temporary and incomplete as well as vulnerable, permeable, and unstable. Moreover, as Bremner and Till argue, these minor architectures weaken architecture's status as a visible object while necessarily proposing a deconstruction of the architect/subject.[22] It can be said that while Stoner starts her discussion with the notion of permanence that historically means stability, she exposes the vulnerability of major architectures: Minor architectures can emerge because major architectures are also flawed, permeable and vulnerable.

However, even though Stoner's discussion is developed around several examples of minor actions, her acceptance of major architectures as preconditions for the minor architectures to emerge reduces the discussion of vulnerability solely to function. For instance, both of Stoner's example of Torre de David which is a semi-finished tower in Caracas that was converted into a vertical favela and the example of the roof of PG&E building that was occupied by falcons, discuss minor architectures only through the occupation of buildings in different ways that were built for a specific group of people and usage. Here the critical question seems to be whether major architectures precede minor ones or these two are created simultaneously. Can simultaneity and vulnerability's common and relational dimensions propose a conceptualization of architecture of support systems or resistances rather than of autonomous objects?

Here, in order to reveal the problems of major architecture's positioning as a starting point, the concept of assemblage should be detailed. Assemblages may be defined as open-ended temporal gatherings of all kinds –both human and nonhuman or living and nonliving. They are unstable, contaminated and always shifting. They work through various scales: each assemblage is entangled with other assemblages of different scales. In architectural theory, the term assemblage often refers to Deleuze and Guattari's usage of the term in *Thousand Plateaus: Capitalism and Schizophrenia*.[23] Yet,

feminist posthuman theories use it to preoccupy resistance emerging from the gatherings of simultaneous multiple ways of beings. For instance, Anna Tsing underlines the potential of more-than-human assemblages for collaborative survival due to their indeterminate and multidirectional multiplicities contrary to linear stories of progress. According to Tsing, dreams of progress and modernization "drop out" many others which seem to be trivial and they only sort out the parts of the present that might lead to the future. This means dropping out of the precarity or precarious situations as exceptions which are actually on Tsing's account the very condition of our coming together in these assemblages.[24]

Yet, what is critical for my argument is that besides our vulnerability that throws us into unstable assemblages, these assemblages themselves are actually vulnerable since they are temporal due to their inherent relationality with other assemblages. Moreover, these assemblages are also supportive because of this vulnerability since after certain assemblages are destroyed new ones are produced to deal with other precarious situations. Tsing's qualifier "polyphonic" to Deleuzian assemblage seems relevant here. Polyphonic assemblages are not ensembles of harmonic unities rather they are simultaneous melodies or temporal interwoven rhythms that are created by both harmony and dissonance.[25]

In a similar vein, feminist philosopher Donna Haraway refers to this dissonance through the openness of assemblages due to their relations with different scales of space and time. Haraway through referring individual animals –human and nonhuman, as entangled assemblages of relatings knotted at many scales and time with other assemblages, underlines their varying degrees of openness to attachments and other assemblages.[26] It might be said that there is an obvious consonance between Tsing's idea of harmony and dissonance and Haraway's degrees of openness which is a matter of scale. It is informed by multiple relations of assemblages with whatever scale of space or time, and this relation brings different scales into the discussion: from molecules to architectures. Each intervention re-establishes certain assemblages, and their affect to these assemblages is only a matter of scale.

At this point, if we return to the discussion of minor architectures, it seems clear that with the idea of minor architectures emerging after major ones are built, it is not possible to talk about assemblages that are produced simultaneously with different scales of space and time whose parts (things, acts, or relations) are not prior to these assemblages. In other words, assemblages (including major architectures) are not produced in autonomous ways. Instead, they always exist entangled with previous and future assemblages. Thus, instead of looking for minor architectures inside the major ones, it seems critical to focus on minor architectures' own vulnerabilities that are based on contingencies and bottom-up support systems' uncategorized-unpredictable strategies.

3.1 Vulnerable architecture's position in (im)material assemblages

As I briefly indicated in *Introduction*, rethinking architecture as parts of assemblages bears the risk of rendering them as mere backgrounds. Butler, through an example of the city street and the protest, acknowledges the necessity of knowing what supports a body or what this body's relation to that support might be, to be able to talk about that body. She states that the pavement and the street are the requirements of the body to be able to exercise its right of mobility. When these environments start to fail or to become unsupportive, we are left to fall and our capacity to exercise our most basic rights is put at risk.[27] Moreover, feminist theorist and architect Helene Frichot, with a reference to Butler, underlines that when we protest, we also protest for the street itself since contrary to what is commonly assumed it is not there as an invulnerable infrastructure waiting ready in every occasion.[28]

In my opinion both Butler's and Frichot's emphasis on the material extent of vulnerability among its immaterialities, draws attention to the relational and ubiquitous domain of vulnerability that penetrates all aspects of everyday life –both public and private. It is obvious that the position of architectural supports in these relations is critical. However, I argue that it is not only because they provide the material conditions through which vulnerabilities are converted into forms of resistance against precarious situations, but also because these architectural supports themselves last or fail. In other words, the ubiquitous understanding of vulnerability that circulates through any kind of body is not always meant to lead to a reconceptualization of architecture as one of these bodies that are also affected by besides affecting them. It might be said that even though Frichot points out the vulnerability of street, both her and Butler's taking of failure of the supportive environment as a given situation or a starting point bears the risk of acknowledging architectural supports outside the domain of relational or shared vulnerability and positioning them as scenes for actions to take place without actually being affected by these actions.

3.2 A thing among other things (or not): Passage 56

Vulnerable architecture, instead of being conceptualized as a mere background, stands there as *a thing among other things,*[29] which both affects and is affected by the acts of other human and nonhuman bodies. One of the ways to avoid deeming it as a background could be to discuss design process instead of an end product as a starting point. Moreover, once rethought as a process, vulnerable architecture unveils one last important concept of this paper which is temporality. For that, the project Passage 56 which was started in 2006 by atelier d'architecture autogérée (aaa - studio for self-managed architecture) can be a good example to discuss the above-mentioned relations between vulnerability, resistance, and more-than-human assemblages as well as to unveil problems inherent to the project's design process.

Passage 56 is a transformation project of an empty plot to a self-managed vegetable garden in a high-density residential area in Paris. As a microscale project enabling site-specific interventions, through several tactics that aim to unveil site characteristics, it can be read as a trial of rendering architecture vulnerable: Several acts including project meetings with local people, open construction site, or welcoming people with everyday activities such as cleaning or gardening for which no specific skill or knowledge is required, enable simultaneous ways of beings come together and transform the project as well as each other. Emphasizing the act of doing through participating in the construction site, feminist architect and theorist Doina Petrescu who is the co-founder of atelier d'architecture autogérée states that any "guest" through being covered by the project insurance, was able to participate in activities on site during the construction of Passage 56, leading the construction site to be the actual social activity of the project.[30] However, here underlining the construction site as the actual social activity while referring to a specific period of time seems problematic when the reciprocal relationships are rethought: What does generate contradictions when an open process ends up being a static material object?

Although the self-management strategy of Passage 56, could be discussed as an architecture of resistance since it enables several assemblages to be built and destroyed with the simultaneous interference of different people, its way of narrowing down the open construction site to the fixed function of gardening can be seen as moving away from generating contradictions in the two-years period. In this sense, it might be said that ignoring temporalities and planning design process as a preformed period of occupation, construction, and gardening leaves no room for contingencies that could be used as a strategy to escape from stability. A reconsideration of this "single plot" in relation to a broader network could open up this closed static system through thinking the project with different assemblages of many scales.

4. Vulnerability in search of inclusive architecture

The term *vulnerable*, once conceptualized as a critical tool in architecture, bears the potential to expose many problems inherent to conventional conceptualization of architecture as well as design process. For that, through the paper, several terms were followed in architectural theory and practice. It might be said that all these discussions and concepts lead to a radical relationality that eventually requires to position architecture among many living and nonliving bodies. Thus, the idea is not to make a proper definition of vulnerable architecture or to create a checklist showing how to rethink and design architectures rendered vulnerable, rather to go on to discussion.

Notes

1. Merriam-Webster Dictionary. https://www.merriam-webster.com/dictionary/vulnerable
2. Judith Butler, "Rethinking Vulnerability and Resistance," in *Vulnerability in Resistance,* ed. Judith Butler, Zeynep Gambetti, Leticia Sabsay (London: Duke University Press, 2016), 13.
3. Leticia Sabsay, "Permeable Bodies: Vulnerability, Affective Powers, Hegemony" in *Vulnerability in Resistance,* ed. Judith Butler, Zeynep Gambetti, Leticia Sabsay (London: Duke University Press, 2016), 285-286.
4. Anna Tsing, *The Mushroom at the End of the World: On the Possibility of Life in Capitalist Ruins.* (New Jersey: Princeton University Press, 2015), 20-23.
5. Catherine Ingraham, *Architecture, Animal, Human: The Asymmetrical Condition.* (London: Routledge, 2006), 116.
6. Jane Rendell, "Critical Spatial Practices: Setting Out a Feminist Approach to some Modes and what Matters in Architecture" in *Feminist Practices: Interdisciplinary Approaches to Women in Architecture,* ed. Lori Brown (London: Routledge, 2011), 24-27.
7. Ibid.
8. Catherine Ingraham, *Architecture, Animal, Human: The Asymmetrical Condition.* (London: Routledge, 2006), 1:
Through several examples Ingraham argues that autonomous conceptualizations of architecture create an asymmetrical condition between architecture and life and claims that even though biological and psychological life are necessary preconditions for architecture, it must always be, at some level, indifferent to life within it.
9 Jonathan Hill, *Immaterial Architecture.* (London: Routledge, 2006).
10 Adrian Forty*, Words and Buildings: A Vocabulary of Modern Architecture.* (London: Thames & Hudson, 2000).
11. Katie Lloyd Thomas, "Architecture and Material Practice" in *Material Matters: Architecture and Material Practice,* ed. Katie Lloyd Thomas (London, Routledge, 2007), 2-4.
12. Ibid.
13. Greg Lynn, "Body Matters" in *Folds, Bodies and Blobs: Collected Essays*, ed. Michele Lachowsky, Joel Benzakin (Bruxelles: La Lettre Volee, 1998), 135-140.
14. Sanford Kwinter, "The Judo of Cold Combustion" in *Atlas of Novel Tectonics*, Jesse Reiser (New Jersey: Princeton University Press, 2006).
15. Donna Haraway, "Situated Knowledges: The Science Question in Feminism and the Privilege of Partial Perspective," *Feminist Studies* 14, no.3 (Autumn, 1998): 584:
Haraway argues that contrary to assumed, the positions of subjugated are not "innocent" positions, rather they are partial, situated and always constructed. Here I use the term "innocent" with a reference to Haraway, however slightly different: Matter's encounters are not neutral, innocent or unknowable at all, but they are always situated in social and political contexts. By doing that I aim to preoccupy our own responsibilities in these encounters.
16. Douglas Spencer, *The Architecture of Neoliberalism: How Contemporary Architecture Became an Instrument of Control and Compliance.* (London: Bloomsbury Publishing, 2016).
17. Mark Wigley, "Deconstructivist Architecture" in Deconstructivist Architecture, ed. James Leggio (New York: New York Graphic Society Books, 1988), 10-20.
18. Jeremy Till, *Architecture Depends.* (Cambridge: MIT Press, 2009), 21.
19. Peter Eisenman, "Autonomy and the Will to the Critical" *Assemblage,* no. 41 (April, 2000): 90-91.
20. Rem Koolhaas, "Bigness or the Problem of Large" in *Small, Medium, Large, Extra-Large* (New York: Monacelli Press, 1995).
21. Jill Stoner, *Toward A Minor Architecture.* (Cambridge: MIT Press, 2012), 16.
22. Lindsay Bremner, and Jeremy Till, "A Cracking Read: Toward a Minor Architecture by Jill Stoner" *The Architectural Review*, 2012.
23. Gilles Deleuze, and Felix Guattari, *A Thousand Plateaus: Capitalism and Schizophrenia*, trans. Brian Massumi (Minneapolis: University of Minnesota Press, 2005).
24. Anna Tsing, *The Mushroom at the End of the World: On the Possibility of Life in Capitalist Ruins.* (New Jersey: Princeton University Press, 2015).
25 Ibid.
26. Donna Haraway, *Staying with the Trouble: Making Kin in the Chthulucene.* (Durham: Duke University Press, 2016).
27. Judith Butler, "Rethinking Vulnerability and Resistance," in *Vulnerability in Resistance,* ed. Judith Butler, Zeynep Gambetti, Leticia Sabsay (London: Duke University Press, 2016), 13-19.
28. Helene Frichot, "Infrastructural affects: Challenging the autonomy of architecture" in *Architectural Affects after Deleuze and Guattari*, ed. Marko Jobst and Helene Frichot (London: Routledge, 2021), 7.
29. Helene Frichot, *Creative Ecologies: Theorizing the practice of architecture*. (London: Bloomsbury Visual Arts, 2019):
The phrase "a thing among other things" is used by Helene Frichot against the habit of understanding architecture as autonomous objects in theory and practice. Instead of the "object" which is often supposed to present architecture and its formal autonomy, she describes architecture as a thing among other things in terms of relationality.
30 . Doina Petrescu, Constantin Petcou, "Tactics for a Transgressive Practice" *Architectural Design* 83, no. 6 (November/December), 64.

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Acknowledgments
This text is produced from the ongoing thesis supervised by Assoc. Prof. Dr. Aslıhan Şenel at Architectural Design Master's Program at Istanbul Technical University.

Biography

Öykü Şimşek is an Istanbul-based architect and research assistant at Istanbul Technical University (ITU) where she is also working on her thesis at Architectural Design Master of Science Program. She took her bachelor's degree in architecture from ITU. During her undergraduate education, she spent 2017-2018 academic year at Politecnico di Milano with Erasmus+ scholarship. She has participated in several national and international competitions and has been a part of different biennale working groups including A School of Unknowables within the frame of 4th Istanbul Design Biennale and Informal Parking Lots of Istanbul within the frame of XII. Sao Paulo Architecture Biennale. She was one of the co-organizers of the international workshop "Speculative Nematode: Oddly Possible Narratives for Living Together" in September 2022. She is a researcher at "Socially Situated Architectural Pedagogies –SArPe" which is supported as Erasmus+ programme. Her research focuses on feminist-posthuman theories and collective ways of making-space.

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Platform
As an Architectural Ecotone

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Abstract

Platform is an architectural element which can be studied both in terms of its physicality and its metaphorical implications. The main aim of this research is to reintroduce the term as an anachronical architectural element, which forms a “ground” and thus reinforces the production of architectural knowledge in relation to ecological issues. The word “platform” itself could be traced to sixteenth-century French, *plateforme* which could directly be translated to English as “ground plan” and “flat shape.” As a surface, flatness is inherent in relationships platform form with the ground. In this sense, platform as a surface has the capacity to define complex volumetric architectural relations. However, an ecological approach to platform cannot be defined by only one flat surface, but rather through a set of intricately related layers. Thus, platform as an intermediary architectural element implies an intensity of relations that is formed through the modification of ground. When defined as such, platform offers a possibility for architecture to relate to ground in multiple scales and layers such as infrastructural, environmental, social, and cultural. Parallel to this, Ernst Haeckel defines the term ‘ecology’ as “the science of ‘the household of nature’.” (Rawes 2013). With reference to this definition, the architecture of the Anthropocene, can be considered as ‘ecological’ in terms of reflecting the complexity of relationships between what is material, cultural, social, and political (Rawes 2013). In relation to ecology, platform can possibly be redefined together with the term ecotone. When defined by ecological terms “an ecotone refers to any transitional area between two ecosystems, such as grassland and forest or forest and river edge” (Kahn 2021). When platform is defined through an ecotone, it becomes possible to investigate platform as a dynamic interface which embodies such interactions and relations in environmental, social, cultural, and functional narratives simultaneously.

Key words: platform, ground, ecology, ecotone.

1. Introduction: Why, How, Which Platform?

Platform is an architectural element which can be studied both in terms of its physicality and its metaphorical implications. The main aim of this research is to reintroduce the term as an anachronical architectural element, which forms a “ground” and thus reinforces the production of architectural knowledge in relation to ecological issues. With each reinterpretation, it makes new connections and directly relates itself to the former knowledge of architecture by being both a foundational and historical element. In terms of the way it replicates itself in different contexts, a platform could imply a terrace and through expansion become a public square. Etymologically, the word platform is derived from sixteenth-century French *plateforme*[1]. The direct translation to English is “ground plan” and “flat shape.”[2] Through both physical and etymological references flatness is inevitably inherent in platform. However, this work attempts to formulate platform from a wider perspective in which depth becomes a significant attribute. Pier Vittorio Aureli and Martino Tattara in their “Platforms: Architecture and the Use of the Ground,” argues that, physically, platform could simply be seen as a manipulation of the ground. It becomes a form of human domestication in which the land is perceived as a surface which is gradually manipulated and controlled.[3] They construct their argument by initially dwelling on sedentary domestic space. In this sense, the platform can simply be defined as “a raised level surface.”[4] Furthermore, with reference to the anthropologist Tim Ingold, they argue that

> “With the gradual passage to semisedentary and sedentary life, permanence become more an issue of domesticating land as a “surface.” If the rise of domestic space predates the rise of agriculture, then leveling the ground for the sake of inhabitation can be seen as the earliest form of permanent living.”[5]

With reference to Çatalhöyük, they elaborate the use of elevation to differentiate the functions within the early dwelling.[6] In this sense, Aureli and Tattara reinterprets the elevations in early dwellings as a stage. Thus, the elevated floor of the house becomes a stage in which the everyday life is ritualized.[7] After introducing the platform in domestic space, with the examples of Mesopotamian settlements, platform is reintroduced as a communal space in which the ground is controlled. Platform in this context becomes a “public archetype.”[8] Through the threshing of the floors, by paving the ground, platform becomes a place for encounter, witness, and transformation.[9]

Another reference can be Jørn Utzon’s “Platforms and Plateaus: Ideas of a Danish Architect,” where he defines platform as an “artificial ground” in which the human regulation and adaptation of nature puts greater emphasis on a spiritual content.[10] His excursion in Mexico is a significant example which introduces a different geographical context for tracing the early emergence of symbolic plateaus. Utzon’s description of the large platforms built by Mayan civilization in Mexico is significant in terms of the symbolic character of the platform. He describes his experience by stating that “[t]he feeling under your feet is the same as the firmness you experience when standing on a large rock.”[11] Utzon’s description implies the stereotomic aspect of the platform together with its massiveness and its relationship with nature. The boundary created through the platform is also evident in the feeling of firmness. This is also evident in Utzon’s sketches. His lines depict the relationship between the built platform and the topography, and how the platform dominates the hill and creates a physical boundary. He also introduces his own work with reference to different uses of platform and how the use of platform enhances the presence of architectural object. Aureli and Tattara also refers to Utzon by stating that “[Utzon] put forward an idea of architecture that defines space without enclosing it.”[12]

Another example of a platform can be the Greek temple which is earthbound in terms of its relationship with the ground. This relationship could also be traced in Vitruvius’ writing. For the placement and the construction of the temples he states that;

> “While transmitting to us the proper arrangements for buildings of all kinds, they were particularly careful to do so in the case of temples of the gods, buildings in which merits and faults usually last forever.”[13]

In a way, this could be interpreted as the counter-play between what is man-made and what is natural, and the result is the balance of these two distinct elements through architecture.[14]The general configuration of the Greek temple is significant. In a Greek temple, a large platform is raised on a stone structure, and it is reached through steps that surround the whole platform. This stone structure is usually a *crepidoma* which ascends through three-steps. *Crepidoma* is rather an artificial intervention which mimics the landscape, the mountains. The temple is artificially raised by a masonry structure. This stone structure creates a sharp contrast between the temple and the landscape. Vincent Scully defines this relationship as an opposition between landscape and the built environment[15] However, instead of being just a self-contained architectural element, steps are rather more relational forms.[16] Thus, they acquire meaning through their relationship with the surrounding built environment. In such context processions become important acts which shaped and were shaped by human movement.

> "Processions were used to resolve problems of identity and territory between communities with pre-existing sanctuaries and centers, as in the case of the famous sanctuary dedicated to Demeter in Eleusis. This was linked to that in Athens in the vicinity of the Agora through the famous Sacred Way, and by the ritual of the Eleusinian procession."[17]

These monumental steps suggest different uses in terms of their placement and length. Mary B. Hollinshead in her book, *Shaping Ceremony: Monumental Steps and Greek Architecture,* puts forward three different uses for the monumental steps together with possible human behaviors they enhanced. The three uses suggested by Hollinshead include retaining walls, routes of access and grandstands for viewing events.[18] With reference to these uses, she states that

> "[s]teps make uneven terrain convenient for humans. They are pathways and destinations for climbing and descending, for sitting and standing. As pathways, steps create processional routes toward and within cities and sanctuaries; as destinations, they serve as grandstands for viewing and participating in communal events. Some steps imply movement, while others suggest static behavior. In fact, the dimensions of steps express a direct relation to body posture, so that we can often tell whether their users are sitting, standing, or walking. By examining monumental steps in Greek architecture, we can derive behavior from architectural form, and trace interactions between human activities and the built environment."[19]

Hollinshead's work becomes a significant departure point in order to put forward possible implications of the *crepidoma* beyond its self-contained formal attributes. Thus, steps become an important element which both control access and frame space.[20] The steps become substantial extensions which control the overall regulation of the built environment. In addition to these attributes, through social patterns, monumental steps acquire inclusive functions and public role.[21] In this sense, temples are used as demarcating the circulation networks within the *polis*, a way to elaborate and control identities and processions.[22] Hence, the temple platform becomes a part of a communal tradition.
To further the discussion on platform, in addition to above mentioned social relationships it is necessary to introduce non-human conditions. Therefore, this text introduces platform as a possible architectural ecotone to expand its definition. However, it does not claim to make a rigid definition rather it claims to expand the ways in which platform can be defined in different contexts. In order to expand the definition of platform, this research initially mobilizes itself anachronically. The next part of this text focuses on platform as a deep surface before introducing it as an ecotone. Third part focuses on platform as an ecotone and relies on the possibility to define the campus of Middle East Technical University as an ecotone. Finally, in concluding remarks it speculates on the possibility of platform to be an ecotone.

2. Platform: as a Deep Surface
Prior to framing platform as a "deep surface" it is significant to expand the definition of the term surface by attributing depth to it. Initially, the word, surface, comes from 1610s French, *surface,* defined as "an outermost boundary, outside part."[23] The word consists of "sur" and "face." *Sur* meaning above while *face* is derived from Latin *facia,* which could be translated as "form imposed on something."[24] Moving beyond etymological context, Benjamin Blackwell defines surface by stating that:

> "Through attempts to outline a comprehensive definition of the term 'surface' almost always appear futile, the surface is often the point at which a material or a body is able to come into contact with others: surfaces usually occur at a point at which bodies meet."[25]

Instead of a rigid definition in which surface is defined only through what is above, Blackwell offers a definition that presents a rather interactive approach. With this surface becomes a place of multiple occurrences. Another significant approach that Blackwell offers is that the surface he defines is multiple.[26] However, he refers to the term not as multiplicity but as *manyfoldedness.*[27] Taking this definition together with ground and platform it offers a range of possibilities to speculate on the nature of relationships platform forms with/within, above and below ground. Thus, a holistic approach to platform becomes possible by defining it as a deep surface that contains manifolded inter/relations.
Another approach to ground could be taken from the anthropologist Tim Ingold. In his essay, "The Earth, the Sky and the Ground in Between," in Metode's *Deep Surface*[28] issue, he dwells on two figures to draw parallels between their stand on which to comprehend the ground. One of them is James Gibson who wrote *The Ecological Approach to Visual Perception* and the other is Nan Shepherd, who wrote *The Living Mountain* in 1977. While Gibson views ground as an interface, Shepherd views it as a palimpsest. Even though, these two approaches do not seem to come together, they form a coherent frame in which the ground is revealed as a deep surface. In this sense, "[f]or Gibson, it is the ground, conceived as a solid platform of support that separates the air above from the earth below."[29] In such, solid separation, what is above and below ground is only exposed through the cracks and moments

which only allow certain instances to be revealed. Here, flatness which can be taken as one of the attributes of a surface becomes significant. Bernard Cache states that:

> "In the flatness of the stage that make choreography probable, just as it is the flatness of the stadium that increases the probability of athletics. The ground plane rarefies the surface of the earth in order to allow human activities to take shape."[30]

Flatness, then, offers a possibility of different narratives to occur above ground. However, what ground accommodates cannot be limited to a flatness and what is above.

> "Thus, in the land just as on parchment, the past is not buried under the present but actually closest to the surface, while the present, undercutting the past, digs deepest. The past comes up as the present goes down. This is not a layering so much as a *turning over."*[31]

Defining ground with a metaphor of palimpsest offers a depth that embody inter/relations in different layers and scales. When defined as such, platform offers a possibility for architecture to relate to ground in multiple scales and layers such as infrastructural, environmental, social, and cultural. It is also parallel with the shift to the concept of ground as a continuous horizontal surface. This allows city's operative ground to be formed in relation to different levels and scales that define an infrastructural system.[32] Thus, in relation to an operative ground, platform can also be defined as an ecotone in ecological terms.

3. Platform: as an Ecotone
In relation to ecology, platform can possibly be redefined together with the term ecotone. When defined by ecological terms "an ecotone refers to any transitional area between two ecosystems, such as grassland and forest or forest and river edge."[33] With reference to ecological definition of ecotone Kahn states that

> "As places of transition, ecotones are essentially spatial relational constructs wherein one system impacts, influences, animates change to another. As a zone of interface, an ecotone attains its specific set of ecological features by the force of interactions among the adjacent ecological systems. The distinctiveness of any one ecotone gains definition from the unique interactions between systems, rather than by traits associated with a "place in and of itself." Ecotones have dynamic qualities, altering in width and position over time, responding to changes in the environment."[34]

In this sense, it is possible to investigate platform as a dynamic interface which embodies such interactions and relations in environmental, social, cultural, and functional narratives simultaneously. Such reading offers a possibility to look further into architectural platform in relation to environmental issues. Thus, platform can be read as an ecotone. When taken as such, platform can be a dynamic edge in which networks and connections are defined. With reference to edges, Robin Dripps argues that

> "In nature, edges are never thin and unambiguous, but instead thick, overlapping, and even generative. For instance, the ecotone where 'two ecosystems' combines one of the richest locations for finding a broad diversity of organisms."[35]

Furthermore, such edge has a possibility to be both a separator and a connector.[36] This inherent generativeness offers a wide range of qualities to be simultaneously defined and put forward.
Parallel to this, Chris Reed dwells on *hybrid ecologies* which puts human and nonhuman systems into dialogue. He defines *hybrid ecologies* as "strategies of conflation of social/ecological realms that reveal both their interdependence and their individuality."[37] Platform offers a possibility to become such an interface to create an interactive and responsive surface of multi-layered relationships. When taken as such, platform can form openings and produce interruptions as illustrated by Verena Andermatt Conley in "Urban Ecological Practices: Felix Guattari's *Three Ecologies*" in *Ecological Urbanism*? Producing openings and making interruptions in this sense leads to other ways of feeling, perceiving, and conceiving which in turn leads to disruption of current profit-based relations between natural, material, and cultural goods.[38] In this sense, METU Campus located in Ankara, in the capital of Turkey and its formation is a significant example to further this discussion.

3.1. METU Campus: as an Architectural Ecotone
The formation of METU campus is both socially and environmentally significant. In their article, "'A University is a society': an environmental history of the METU 'campus'," Ayşen Savaş and Güven Arif Sargın present the campus and its formation through an environmental historiography.

> "It was clear from the very beginning that the environment would form a large part of the university's character; and that the created environment would accommodate the newly constructed social life."[39]

The vast land in the middle of Anatolia was environmentally transformed. This transformation also accommodated a new modern social construct.[40] METU as a 'society,' had an immense capacity to form a set of social values in relation to environmental transformation. Over the years, as a part of the main planning decision, the campus was planted with thousands of trees which are mostly pine-trees.[41] The human-made forest[42] transformed the barren landscape by appropriating the ground. In a sense, the soil was mobilized and formed a *living volume* (Fig. 1).[43] Also, as a part of the main planning decision (Fig. 2), the campus grew around the formation of the main pedestrian path, the *alley*[44] (Fig. 2).

> "Through the creation of an almost three-dimensional network the alley was to regulate and to indicate where the teaching facilities and amenities had to be located. It also served to regulate over an intense landscape supported by a variety of architectural elements such as arcades to connect the facilities, pools for recreating and lawns for gathering, all of which regarded as a prerequisite for a desirable community."[45]

Thus, the *alley,* which is a primary spine that regulates the overall trans/formation of the built environment is more than just a flat surface. Taken as a platform, it is a multi-layered element that can be read as a hybrid ecology parallel to Reed's take on hybrid ecologies. It becomes an assemblage of three-dimensional relations. As a platform, it contains infrastructural elements, it continuously relates itself to the soft ground and built environment of the campus; and forms its own ecology beyond human condition.

Fig. 1

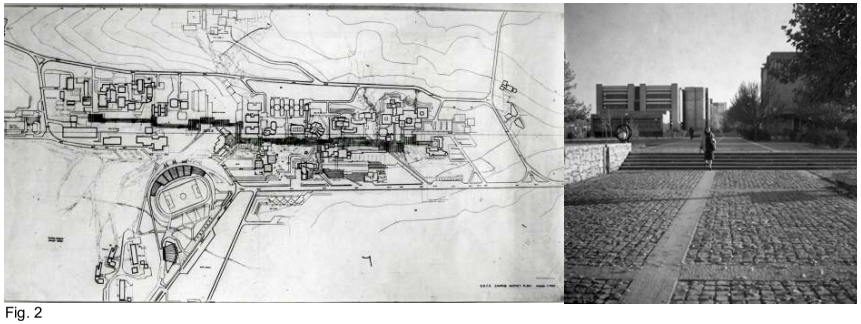

Fig. 2

At its current state the campus could be defined as a gated community. However, it is in a flux which continuously impacts and transforms its surrounding environment beyond its borders. It operates in different scales such as social, political, and environmental; and in return it is affected by outside forces and systems. It can be defined as a dynamic edge in which includes different three-dimensional networks. Constructed and planted ground of the campus itself can also be defined as a platform. It is both dynamic and porous not just environmentally but also socially. Thus, the campus can be defined as an ecotone. In this sense, the formation of the campus can be considered as "weaving together of political and ecological structure"[46] as Dripps suggests in her article "Groundworks."

4. Concluding Remarks

Defining platform as an ecotone opens possibilities for it to construe three-dimensional networks. This text attempts to redefine it as such and draw parallels between the two terms both metaphorically and physically. Ernst Haeckel's definition of the term 'ecology' as "the science of 'the household of nature'"[47] which was also referred to in the introduction of *Relational Architectural Ecologies* is significant. The architecture of the Anthropocene, then, can be considered as 'ecological' in terms of reflecting the complexity of the relationships between what is material, cultural, social, and political.[48] In this sense, platform as a deep surface has the capacity to define complex volumetric architectural relations. Thus, the platform as an intermediary architectural element implies an intensity of relations that is formed through the modification of ground. A plural definition of ecology can be taken from Stan Allen: "Ecologies are complex assemblages of resources, species, and climates in dynamic interaction."[49] With reference to Allen's description of ecologies, the ground can be read as an embodiment of ecological relationships. Thus, an ecological reading offers a formation of exchange beyond human interaction. As an anachronical architectural element, platform forms a "ground," a pattern in which architectural knowledge is produced in relation to ecological issues. When platform is defined through an ecotone, it becomes possible to investigate platform as a dynamic interface which embodies such interactions and relations in environmental, social, cultural, and functional narratives simultaneously.

Notes

1. French plateforme – originated from Greek platús which could be translated as “flat” and Latin fôrma which is “shape, figure, from” (Online Etymology Dictionary, 2020).
2. “Platform (n.),” Online Etymology Dictionary, accessed May 29, 2023, https://www.etymonline.com/word/platform.
3. Pier Vittorio Aureli and Martino Tattara, “Platforms: Architecture and the Use of the Ground,” e-Flux, Last modified 2019, https://www.e-flux.com/architecture/conditions/287876/platforms-architecture-and-the-use-of-the-ground/.
4. Ibid.
5. Ibid.
6. Ibid.
7. Ibid.
8. Ibid.
9. Ibid.
10. Jørn Utzon, “Platforms and Plateaus: Ideas of a Danish Architect,” *Zodiac* 10 (1962): 113-140, 116.
11. Ibid.
12. Op. Cit.
13. Vitruvius, *Ten Books of Architecture*, trans. Morris Hicky Morgan New York: Dover Publications, 1960, 95.
14. Vincent Scully, “The Earth, the Temple, and the Gods: Greek Sacred Architecture,” *Journal of the Society of Architectural Historians* 23, no. 2 (1964): 89–99, doi:10.2307/988163, 89.
15. Vincent Scully, *The Earth, the Temple, and the Gods: Greek Sacred Architecture* New York: Praeger, 1969, 6.
16. Mary B. Hollinshead, *Shaping Ceremony Monumental Steps and Greek Architecture* Madison, Wis: The University of Wisconsin Press, 2015, 82.
17. Alexander Tzonis and Phoebe Giannisi, *Classical Greek Architecture: The Construction of the Modern* Paris: Flammarion, 2004, 164.
18. Op. cit., 84.
19. Ibid., 3.
20. Ibid., 4.
21. Ibid., 81.
22. Tzonis and Giannisi, Classical Greek Architecture, 164.
23. “Surface (n.),” Online Etymology Dictionary, accessed May 29, 2023, https://www.etymonline.com/word/surface.
24. Primary definition of the word facia is “appearance, form, figure” whereas the secondary is “visage, countenance,” (Online Etymology Dictionary, 2023).
25. Benjamin Blackwell, “Deep Layers of ‘Flatland’: Scaling up Nanomaterials,” *Metode* 1 (2023): 1–19, 15.
26. Ibid.
27. Blackwell refers to anthropologist Annmarie Mol while introducing the term ‘manyfoldedness’.
28. First volumen of Metode journal is shaped around the theme of *Deep Surface*
29. Tim Ingold, “The Earth, the Sky and the Ground in Between,” *Metode* 1 (2023): 1–10, 3.
30. Bernard Cache, *Earth Moves the Furnishing of Territories*, trans. Anne Boyman and Michael Speaks Cambridge, Mass: The MIT Press, 1995, 25.
31. Ingold, “The Earth, the Sky,” 6.
32. Ayşen Savaş et al., “Projecting the Deep Ground,” *Journal of Landscape Architecture* 17, no. 3 (2022): 6–19, doi:10.1080/18626033.2022.2195224, 8.
33. Andrea Kahn, “Defining Urban Sites: Toward Ecotone-Thinking for an Urbanizing World,” essay, in *Site Matters Strategies for Uncertainty through Planning and Design*, ed. Andrea Kahn and Carol J. Burns New York: Routledge, Taylor & Francis Group, 2021, 189–203, 201.
34. Ibid.
35. Robin Dripps, “Groundwork,” essay, in *Site Matters Strategies for Uncertainty through Planning and Design*, ed. Andrea Kahn and Carol J. Burns New York: Routledge, Taylor & Francis Group, 2021, 76–100, 97.
36. Ibid.
37. Chris Reed, “The Agency of Ecology,” essay, in *Ecological Urbanism*, ed. Mohsen Mostafavi and Gareth Doherty Zurich: Lars Muller, 2016, 328.
38. Verena Andermatt Conley, “Urban Ecological Practices: Felix Guattari’s Three Ecologies,” essay, in *Ecological Urbanism*, ed. Mohsen Mostafavi and Gareth Doherty Zurich: Lars Muller, 2016, 139.
39. Güven Arif Sargın and Ayşen Savaş, “‘A University Is a Society’: An Environmental History of the Metu ‘Campus,’” *The Journal of Architecture* 21, no. 4 (2016): 602–29, doi:10.1080/13602365.2016.1192429, 617.
40. Ibid., 603
41. Ibid., 616.
42. For more expanded research on METU forest: Master’s thesis by Rraja, Sara. “Gated Landscapes METU Forest and the Formation of a Topological Ground ,” 2022, supervised by Prof. Dr. Ayşen Savaş.
43. Peleman et. al. in their article “Exploring the Soil: Not a Sentimental Journey,” (*OASE 110,* 2022) refer to the mobilization of soil as a ground being a living thickness. With reference to this, ground as a living volume is introduced as another possibility to understand platform as a deep surface in which to illustrate the relationships it forms with/within, above and below ground.
44. For more expanded research on the alley of METU: Master’s thesis by Doğan, Ege. “Volumetric Reading of the Middle East Technical University Campus’ Alley,” 2023, supervised by Prof. Dr. Ayşen Savaş and master’s thesis by Akman, Sıla. “Conserving and Managing Modern Campus Heritage: ”alley” as the Spine of METU Campus,” 2016, supervised by Prof. Dr. A. Güliz Bilgin Altınöz.
45. Sargın and Savaş, “‘A University Is a Society’,” 620.
46. Dripps, “Groundwork,” 96.
47. Peg Rawes, "Introduction", in *Relational Architectural Ecologies: Architecture, nature and subjectivity* (New York: Routledge, 2013), 1.
48. Ibid., 10.
49. Stan Allen, "Artificial Ecology", in *Reading MVRDV* (Rotterdam: NAI Publishers, 2003), 87.

Image Captions

Fig. 1. Instances from METU forest (Caner Arıkboğa’s archive).
Fig. 2. Left. Site plan of the METU Campus by Altuğ-Behruz Çinici. Right. An instance from the alley. (Salt Research, Altuğ-Behruz Çinici Archive).

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Acknowledgments

This text is part of an ongoing PhD thesis research of the author, supervised by Prof. Dr. Ayşen Savaş in Middle East Technical University. It is also part of a wider work that expands to Campus Utopias research project and 4th year studios conducted by Ayşen Savaş at METU. As a part of this research, another text titled as “Platform as a Volumetric and Earthly Ground: The Case of Çatalhöyük,” was presented at AHRA Climate Collectivism Conference in November 2022 and will be published as a book chapter in Building Ground for Climate Collectivism dedicated to conference in November 2023.

Biography

Zeynep Soysal is graduated from Bilkent University, Department of Architecture in 2016. She received her M.Arch degree from METU, Department of Architecture in 2019. She is currently a PhD candidate at METU and working as a research assistant at Atılım University. She participated in international conferences. She has been part of the organization committee of Archiprix Turkey competition since 2020. Her master’s research has focused on the relations between architecture and urban design. Her current research interests include the relationship between architecture, ground, and ecology.

Industrial Pastoralism

Post-productive arcadias in machine-modified landscapes

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Abstract
The term “Industrial Pastoralism” concerns the process of industrial civilisation’s acquisition of values previously attributed to the picturesque rural world, destroyed or lost in industrialisation.
In 1964, Leo Marx’s ‘The Machine in the Garden’ describes the upheaval of the pastoral idyll as a result of industrialisation not only to the suburbs but also to the remote and pristine ecologies of the American Midwest and the prairies. Provocatively, we can observe the explosion of 19th-century pastoralism as a critical reaction to the picturesque: pastoralism warns against the dangers of modernity and invites the reader to seek a minimal and personal idyll, separated from the outside world. In the contemporary world, on the other hand, the values of knowledge and competence, of self-preservation, of rejection of the world hyper-technologization are no longer found in lonely experience (which after the pandemic has become dominant), but in the choral wisdom of the industrial world, criticised for its ecological and environmental aspects, but praised for the ethical dimension of working together.
We intend to study the relationship between the representation of the rural and the industrial environment in the processes of recovery and reuse of post-industrial landscapes. The process starts with the study of artistic representations of post-industrial society. Specifically, the study will compare pastoral paintings of XVII and XIX century (William Wyld and Hubert Robert) to contemporary photography (Edward Burtynsky and Lewis Baltz).
Through paintings and photographic representations, we will identify the transition of values and cultures towards the idea of an industrial civilisation, shifting from terms as “ruin porn” and “post-industrial” towards an Industrial Pastoralism.
This process is intended to establish a continuity between worlds hitherto represented as conflicting. Is it finally possible to find Thoreau’s Walden in the Ruhr, or in the coalfields of Wales?

Key words: Pastoralism, Industrial Architecture, Picturesque, Architecture, Sustainability.

1. Introduction – Pastoral, Picturesque, Productive

See there the cottage, labour’s own abode,
The pleasant doorway on the cheerful road,
The airy floor, the roof from storms secure,
The merry fireside and the shelter sure,
And, dearest charm of all, the grateful soil,
That bears its produce for the hands that toil.
Northern Star, 22 August 1846[1].

If the unfortunate reader of the following text is an opera enthusiast, they would easily understand the meaning of this odd introduction. We are about to enter the realm of representation and conflict between images and narratives. And who better than the romantic composers to describe the major historical changes, hiding them behind melodramatic love stories? So, imagine yourself at Covent Garden, at the Opéra Garnier, or at La Scala tonight. The performance is Il Trovatore, composed by Giuseppe Verdi in 1853. Expect great choirs and epic *acuti*. The most exceptional of the choirs is that of the Gypsies (“Chi del Gitano?”), characterized by the frantic rhythm of hammers on anvils, a crescendo of industrial camaraderie[2] in 15th-century Spain. Let’s make a big leap forward, and we are still at the theatre. On stage is Tosca by Giacomo Puccini, which premiered in 1900. At the beginning of the third act, before the tragedy, with the lights dimmed in the theatre, the voice of the *pastorello* (shepherd boy, “Io de’ Sospiri”), an impossible-love aria, that embodies the idea of nature’s indifference to human dramas, eternal in its idyllic detachment[3].
Pastoralism and Industrialization have a complicated relationship that touches on issues of identity, ecology, and culture. We want to introduce here the term “Industrial Pastoralism”, an apparent oxymoron, as the keyword to describe the shift in cultures and values that led to the idea of a romantic post-industrial civilization, as well as how post-industrial societies have redefined values that were once associated with the idyllic rural world.
In Nic Clear’s “The Persistence of Pastoral”[4], the author points out the two fallacies of the Neo Pastoral approach, exemplified in the opening Ceremony of the London Olympic Games in 2012; the first is related to the representation of the landscape, reimagined as a contemporary arcadia wholly detached from the reality of the modern urban landscape, the second is the representation of the “Happy and smiling peasant”, a simplistic portrait of a pre-working class Briton.
This representation of the countryside is impactful because it contrasts with the negative view of the industrial past, often regarded as polluting, unfair, and deprived. However, in the pursuit of identifying an “enemy” condition, the Olympic Ceremony and other new pastoralism approaches fall into two further fallacies. The first is the recognition of industrial civilization as the historical place[5] where collective memory started to acquire political and social dignity. The second is the disappearance of mass industrialization (not only in terms of production but also in terms of politics, philosophy, and ethical values) in favour of a hyper-financialized society where the individual, rather than a group, is the leading actor. This individual can potentially survive and thrive without the emotional and mature links necessary in a complex society.
However, this faux portrayal of a Neo Pastoral idyll reinforces collective solitude rather than critiques it.
In this paper we will look, through the comparison of artwork and photography, at how the representation of rural and industrial areas in creative works has changed over time, from 17th and 19th century pastoral paintings to contemporary photographs of post-industrial landscapes. We will look at how these works represent changing values and cultural norms in post-industrial countries, and how they might help us understand the transition to Industrial Pastoralism. Furthermore, this presentation will look at how Industrial Pastoralism might help with the restoration and reuse of post-industrial landscapes.

2. Industrial Civilization and the search for a Pastoral Idyll

2.1. On the theory of Pastoralism

The pastoral idyll of the nineteenth century is an umbrella term for a movement, style and theoretical approach, grown in the laps of the picturesque[6], warning against the pitfalls of modernity and tempting the viewer to seek a minimum and personal paradise, secluded from the outside world, via the lens of artistic depiction. As industry evolved, the ideals of knowledge and competence, self-preservation, and rejection of hyper-technologization were found in the choral wisdom of the industrial world rather than in isolated experience. This has given rise to this new idea known as Industrial Pastoralism, which strives to blend rather than oppose the natural and industrial worlds, defined both as an artistic movement[7] but also as political regime characteristics[8].
The concept of pastoral tradition has long been used to illustrate the tension between the opposing forces of nature and culture in contemporary society. These two elements are inherently antithetical, and humanity has been attempting to find a synthesis between them for centuries. The quest to

reconcile the chaos of a universe where culture and imagination seem irrelevant with the Faustian urge to categorize and taxonomize reality has been a constant theme throughout human history.
The presence of the 'pastoral' as a stylistic manifestation emerges in conjunction with moments of political, economic, and social upheaval, signifying its association with times of crisis. This trend, or ideology, has its roots in the classic tradition, and is discernible in various historical instances, such as the Virgilian pastoral depicted in the Bucolics, the French Romantic pastoral that emerged towards the latter part of the 18th century, right before the Revolution, or the Victorian pastoral which emerged during a pivotal period of profound social and productive system disarray within the Empire. Furthermore, in the contemporary era, the pastoral theme continues to resurface amidst the ongoing transition from an economy primarily centred on the production of goods and services to one largely characterized by the predominance of self-sufficient and semi-sentient machines.
In modern times, starting with Alexander Pope, the first to create an architectural representation of the semi-idyllic hermitage in his own "grotto" in Twickenham[9], romantic painters and court architects sought to create an "Emotional Arcadia" that eliminated the temporal dimension[10], emphasizing the contrast between this idealized realm and the industrialized landscape that existed in its absence. The ideal Arcadia, masterfully represented by the mock village of 'Hameau de la Reine' designed for Marie Antoinette by Richard Mique in 1775-84[11] is a place where innocence, eroticism, and nature coexist, and where individuals, depicted as the ideal shepherds, live in a state of dreamy happiness while ignoring the existence of injustice, coal and steam. However, the traditional misplay of pastoralism lies in the fact that although the subject of the pastoral is ignorant of morality, culture, and tradition, it is the observer who acts as the active agent of classic pastoral realm. The observer, being aware of the moral limits of society, looks benevolently and enviously at a world where these rules are subverted, where nakedness is the natural state, and where social conventions or classes are meaningless.
Repton's Red Books provide an example of how attempts to harmonize nature and culture in a direct or pedantic manner can be awkward. As Stephen Daniel notes in his work, "Landscaping for a Manufacturer: Humphry Repton's Commission for Benjamin Gott at Armley in 1809-10," when Repton found himself working with factories on an unexpected scale and dimension, he lost contact with the multisensory reality of space[12]. In his watercolours, he "washed" the critical or conflicting aspects of architectural space, creating a sanitized image that ignored the industrial reality of the landscape.
The picturesque landscape, as defined by William Gilpin, has a divine quality that speaks directly to the observer. However, the pastoral landscape, a sub-category of the picturesque, adds a unique element. In the pastoral landscape, the human element of the shepherd mediates between the divine and human dimensions, expressing the human ambition towards a lost innocence in naïve terms. This polysemanticity adds complex narratives to the picturesque representation, activating a continuous mechanism of repulsion and interest.
The pastoral landscape was born at a time when the industrial dimension was not yet fully mature, and the factory as a building dedicated entirely to production was still a rare object. Instead, the more common system was that of the cottage-factories, where working conditions and child exploitation were more severe than factory life. The scale of the cottage/mill did not yet have the impact of the factory, but already presented the social demands of French and English social utopians. The contrast defined by the picturesque was, therefore, not between factory and nature but between industrialized society and nature, at a time when the violence of early capitalism, precisely through the cottage mills, was directed at agricultural nature and its naive and exploited inhabitants.
This idyllic – and for this reason unreal – landscape, with its emphasis on the human element, expresses a desire for a lost innocence that is threatened by the violence of early capitalism. The shepherd, representing innocent humanity, becomes a mediator between the divine and human dimensions of the observer. The pastoral landscape presents a complex interplay between the observer's aspirations towards Arcadian peace and the chaotic society of the Industrial Revolution. This interplay creates a mechanism of repulsion and interest that adds depth to the picturesque representation. Gilpin's emphasis on the divine message[13] in the picturesque landscape and the human element in the pastoral landscape presents a tension between the natural and human worlds. The pastoral landscape's prominence on the human element represents a desire for a lost innocence that is threatened by the violence of early capitalism. The pastoral landscape thus becomes a commentary on the Industrial Revolution, where the violence of early capitalism directed towards agricultural nature and its naive inhabitants threatened to destroy the innocence of humanity.
The pastoral landscape's unique polysemanticity creates a complex narrative that adds depth to the picturesque representation. The observer's aspirations towards Arcadian peace, the shepherd's representation of innocent humanity, and the violence of early capitalism create a continuous mechanism of repulsion and interest. The pastoral landscape presents a nuanced commentary on the Industrial Revolution, where the violence of early capitalism threatened to destroy the innocence of humanity.
Within pastoral painting and representation, the architectonic object assumes a fundamental role, imbued with nuanced significance. While preserving the metaphysical essence of Giorgione's

Tempest, it is the ruin itself that epitomizes the synchronicity of the pastoral message. It signifies not an idealized utopia or an idyllic existence detached from historical context, but rather the manifestation of a 'state' juxtaposed against a preceding nature.

2.2. Architecture visions of unsung utopias

In the realm of architecture, the ruin, which gained prominence with the Frontispiece to the "Essai Sur L'Architecture" by the Abbot Laugier[14] and attained popular recognition through the Neapolitan 'presepi' that ingeniously staged the Nativity of Christ amidst the remnants of Pagan Rome, assumes a dual role within the pastoral domain. On one hand, it serves as an explicit warning, cautioning against the perils of avarice and the accompanying consequences of progress. On the other hand, it possesses an esoteric nature, representing the encroachment of urbanity upon the rural idyll, serving as a lived and experiential alternative.
As noted by John Ruskin, the ruin holds significance beyond its function as a mere memento of past glory. It establishes a dynamic and active relationship, engaging in a dialogue with history and inviting the innocent community to spatially appropriate the vestiges of the past. This is particularly evident in cases such as the Tower of Calais, as highlighted by Ruskin in "Modern Painters"[15], where the civilization that constructed the now-ruined structure has dissipated, and the edifice has relinquished its original purposes of defence or representation.
In the 18th century, Hubert Robert's ruins (Fig. 1) adhered to this very logic, as elucidated by Jones and Ryu[16]. The ruin was employed with a dual purpose, portraying both its fragmented state and its inherent unity. It stands fragmented in relation to its former complete structure, while simultaneously embodying unity within the new landscape. In this context, the ruin's role amplifies and imparts significance to the notions of temporal detachment and the anthropic geography of the past, with the same action of the Neapolitan 'presepi' staged asynchronously among the Romans ruins.
Robert's portrayal of the pastoral landscape, therefore, assumes the nature of an imaginative fabrication, adhering to the conventions of classical pastoral traditions. It situates the viewer betwixt the city, which the observer deliberately averts their gaze from, and the remnants of previous civilizations, now assimilated into the rural expanse. Robert's Agricultural Ruin encounters a stylistic reversal through the brushwork of William Wyld in his work "Manchester from Kersal Moor, with rustic figures and goats" (Fig.2) currently held by the Royal Collection Trust. Executed following Queen Victoria's 1851 visit to Manchester, a visit historically associated with her reputed remark, "in the midst of so much wealth, there seems to be nothing but chimneys, flaming furnaces... with wretched cottages around them."[17], Wyld undertakes a departure from the moralizing tendencies of the preceding era, crafting a masterpiece that embodies Victorian ethics. In this rendition, the observer no longer represents an intellectual seeking refuge from the corrupt city in the solace of the countryside—a symbolically apparent presence of God. Instead, the observer materializes as a traveller arriving in the city from the rural realms, yet to encounter the plight of working-class neighbourhoods, suffering, and injustice. Positioned atop the privileged vantage point of Kersal Moor in Salford, the observer beholds the foregrounded scene of a 'romantically Arcadian' nature, thus displacing the sublime spectacle of the industrial city to the background.


Fig.1


Fig. 2

In “Victorian Visions of Suburban Utopia”, the author posits that the selection of Kersal Moor carries not only stylistic implications but also political connotations. The site had been witness to significant workers’ mass demonstrations, including the Chartist Rally of 1838, and as such, it might have assumed a critical undertone towards the exploitative politics of the time. The unresolved tension between the idyllic countryside, home to contented English commoners who were forcefully uprooted from their lands, and the rapacious city driven by capitalistic consumption finds expression in this artwork, in the author’s words: “… there was unresolved business between the Edenic countryside and the Satanic Mills – between the common, happy Englishman who were being ripped from the land and the capitalistic city that voraciously consumed them.”
With this painting, the pastoral sensibility definitively sheds its paternalistic, puritanical, and moralizing traits, culminating in its metamorphosis into a mature socio-political manifesto. God is finally excluded from the equation, and the shepherd has irrevocably left Pope’s Grotto to join the rally.

3. Landscapes of Decay and Dereliction

3.1. Between Arcadia and Stahlstadt – the Ideal Industrial Landscape

The previous analysis, though, reveals that beyond the immediate aesthetic and stylistic considerations of the pastoral approach, exists a series of nuanced aspects that are less obvious compared to the classical message of pastoral representation. This is particularly evident in English, Italian, and French pastoral traditions, as defined by Alexander Pope in the 17th century. Two key points emerge upon closer examination. Firstly, the notion of a golden age characterized by a bountiful earth that provides the necessities for a happy existence. Secondly, the constant dialogue between an innocent (yet not naive) participant and the boundless dimensions of the Universe. Giacomo Leopardi vividly portrays this dialogue in his *Canto notturno di un pastore errante dell’Asia* (the least pastoral of Leopardi’s pastoral poems)[18], where the exchange is unidirectional, and the shepherd is acutely aware of his mortal, finite, and inherently unhappy nature.
Even working in harmony with nature, which should ideally bring joy and satisfaction in a life aligned with the divine plan, devolves into monotonous servitude, a state of dependency on the whims of a harsh environment, resembling a confining prison that one yearns to escape. It is within this context that we can reinterpret the lament of the Bukhara shepherd. While rural seclusion does allow for meditation and contemplation of the divine plan, it also condemns individuals to solitude, tradition, and the stifling of ambition and intellectual pursuits.
Herein lies the pastoral trap, a construct that emerged during the Industrial Revolution to caution against the perils of modernity. However, it fails to acknowledge the changing ethical landscape. As François Roche[19] astutely observes, it simultaneously promotes a “post-puritanical capitalism” by commodifying both local and global aspects while denying or feigning ignorance towards the emergence of new communitarian values associated with the industrial experience. These values include the interdependence of workers, which emphasizes collaboration, solidarity, and respect for individuals involved in production, recognizing the fundamental role each person plays in the assembly line. Additionally, these values emphasize the worth of an individual irrespective of their initial social condition or status.
Released from moralistic or formal constraints, pastoral aesthetics are deeply intertwined with the ethics of work, albeit with constructs and dichotomies that are not always explicitly articulated. While the solitude/mutual support relationship readily constructs a narrative illustrating the connection

between pastoral vision and labour, other, less immediate considerations contribute to framing the concept of Post- Industrial Pastoralism within a philosophical perspective.
Within the medieval theological perspective, the concept of a philosophy of work is determined by the relationship between nature intrinsically linked to divine creation. This links the shepherd (symbolizing the generic labourer in the fields, as opposed to the aristocratic warrior) to the whims of the seasons, fluctuations in temperature, and the consistent forces of climate. However, when the perspective shifts and God is replaced by production, which remains constant over time regardless of rain, snow, or sunshine, the philosophical perspective shifts to the individual. In this context, we can discern the difference between the exclusionist views of Locke and the Catholic perspective of Pope. Both acknowledge the dehumanizing and alienating trajectory of modernity, yet whereas Locke views it as a necessary consequence of a society in the process of settling, Pope sees it as a symptom of humanity’s betrayal of God[20].
An aporia emerges when contemplating the contrasting concepts of the pastoral past and the industrial present. On one hand, the pastoral past is idealized as a beautiful and harmonious existence, also if it reveals an intrinsic unfairness, as it suppresses human agency and subjugates individual will to the predetermined structures and norms of a theocentric society. On the other hand, the industrial present is viewed positively for its capacity to bring people together, foster interconnectedness, and advance human progress, but it is not without its shortcomings; generates class conflicts, social inequalities, and systemic violence, as power dynamics and economic disparities become increasingly pronounced within industrialized societies. In this aporia, the challenge of reconciling the idealized beauty of the pastoral past with its inherent limitations on individual freedom, while also grappling with the recognition of the positive aspects of the industrial present alongside its associated social conflicts and violence raises profound questions about the trade-offs between societal progress and human well-being, leaving at the observer the responsibility of an unfair choice.
In this sense, we can delve deeper and establish a more nuanced understanding of the concept of Industrial Pastoralism, particularly in relation to the values embedded within industrial civilization. These values encompass notions of solidarity and collective endeavour towards progress, which are often portrayed as inevitable, positive, and laden with promises of a better future. However, it is important to acknowledge a notable exception to this prevailing narrative, exemplified by Jules Verne’s Stahlstadt, where the ‘city of steel’ becomes entangled with overt racism and Prussian militarism[21]. The conventional representation of this progress finds expression in postcard imagery, characterized by picturesque watercolour illustrations showcasing factories from a bird’s-eye perspective, accentuating a sense of optimism and upliftment. Yet, within this context, certain artists sought to challenge the axonometric aesthetics of industrialization, with notable examples including Mario Sironi in Italy and L. S. Lowry in the United Kingdom.

3.2. Images of Dereliction, Post-Industrialism and Critical Picturesque

It was not until after the Second World War that the portrayal of factories shifted from merely alienating spaces to distinctly unsettling and hazardous. This transformation can be witnessed in Michelangelo Antonioni’s 1964 film ‘Il Deserto Rosso’ (The Red Desert), wherein the factory assumes a prominent role as a silent perpetrator of the erosion of personal narratives and a contaminating force upon individual consciousness. However, a pivotal moment in the re-evaluation of the industrial landscape came in 1975 with the seminal photographic exhibition titled ‘New Topographics: Photographs of a Man-Altered Landscape,’ curated by William Jenkins at the George Eastman House in Rochester, New York. This exhibition showcased works by photographers such as Lewis Baltz, Robert Adams, Bernd and Hilla Becher, Joe Deal, Frank Gohlke, Nicholas Nixon, John Schott, Stephen Shore, and Henry Wessel. These photographers captured images that documented the profound transformations brought about by human intervention in the landscape, reflecting a shift towards a critical examination of the industrialized world and its impact on both the physical environment and human experience[22]. The exhibition confronted the then-romanticized notion of the American Landscape, by capturing the impact of human intervention on the land. The photographs featured in the exhibition depict scenes of suburban development, industrial sites, and mundane urban structures, highlighting the profound alterations humans have made to the landscape. This subversion of the pastoral ideal disrupts the notion of a harmonious coexistence between humans and nature, revealing the complex and often dissonant relationship between them, but also the fascinating beauty of a banal domesticity of consumption and land-exploitation.
In “Park City,” Baltz documents the rapid development and transformation of a once-pristine natural setting into a sprawling suburban community. The series portrays the relentless expansion of housing developments, revealing the impact of human intervention on the landscape. Baltz’s photographs depict a flat land, defined by man-made mountains of debris and construction materials, a landscape of temporary promises, between a natural state and a profit-oriented real estate development. In this suspended time a sense of order contradicts the inorganic spirit of the easy-criticisable hyper-building of the suburbs.

Baltz's artistic representation of the residential and industrial landscape (Fig.3) subverts the traditional pastoral order, where the ruin is no longer an abandoned human element embraced by nature's triumph. Instead, the landscape is dominated by walls, parking lots, and infrastructures. The natural ruin, whether a tree or a bush, simultaneously proclaims its fragmentary existence within a human-altered landscape while celebrating its integrity as a vital component for the reestablishment of the disrupted relationship between humanity and nature, a connection ruptured by the violence of architecture[23].

On the opposite end of the spectrum, but still aligned with the critique of the reckless exploitation of the environment, we find Edward Burtynsky's 'Shipbreaking' series. Through this collection of large-format photographs, the Canadian photographer examines the impact on the landscape resulting from the policy of dismantling large single-hulled ships following the Exxon Valdez disaster in 1984. These old and unusable ships, decommissioned in Bangladesh, give rise to anthropic monuments that, similar to Baltz's mountains of debris, redefine the landscape. They form a tragic, tangible, immense, temporary, and thus mutable representation of the post-industrial landscape[24]. As always, these interpretations do not offer a singular perspective on the phenomena at hand. On one hand, the rust, oil, and decaying steel of the ships define a landscape of decadence and neglect. On the other hand, the presence of these post-industrial corpses implies (as previously mentioned through their absence) the existence of other, safer, more technologically advanced, and ostensibly environmentally friendly giants of the sea.

Fig. 3

Fig. 4

Similar to the picturesque landscape, Burtynsky's portrayal can be described as a 'residual' landscape, distinct from the 'primary' landscape. However, this residual landscape metonymically encapsulates all the contradictions of post-industrialization, ranging from the juxtaposition of cottages and factories in Georgian Yorkshire to the sprawling micro-component gigafactories in Shenzhen. Burtynsky has perhaps captured not only the global scale of industrialization, particularly in China, but has also managed to cultivate a neo-pastoral dimension in which the message deliberately remains ambiguous. This deliberate ambiguity allows the narrative to simultaneously evoke admiration for the captivating power of the landscape's colours and shapes, shaped by the capricious and monumental human divinity, while also conveying the imminent risk of systematic violence against nature. Burtynsky's pastoral thus serves as a twofold provocation: firstly, to apprehend the sublime wonder of human-altered space, and secondly (although the second level is increasingly implicit), to serve as a stern admonition against indulging in hypocritical ecological sub utopias or moralistic greenwashing[25].

4. Conclusions – Ethic and Aesthetic of the Post-Industrial Pastoralism

The internal ambiguity inherent in pastoralism has now reached a dimension, within contemporary post-humanist contexts, that extends beyond mere stylistic considerations and delves into the crisis of contemporary ethics regarding space, community, and the broader notion of coexistence. Post-Industrial Pastoralism, similar to classical pastoralism and Industrial Pastoralism as previously defined, can be interpreted in two contrasting ways. The first interpretation leans towards moralization, aesthetics, or style, while the second interpretation serves as an urgent call to reimagine a different relationship with a nature inherently intertwined with all living beings, not necessarily limited to the human realm. This perspective, as described by Nic Clear in the cited article, encompasses the acknowledgment of a world continually shaped by intra-actions that demand an expansion of our understanding of social relationships.

Within the realm of this productive landscape, where the God of seasons and the wandering shepherd, as well as the figures of factory owners or workers, have been lost, what remains is a space devoid of individuals. Here, machines operate in self-sufficiency, and vast logistic centres exist as spaces of human exclusion, fully automated and autonomous. In these spaces where humans are merely "guests," the perilous beauty of the Anthropocene has given rise to a new aesthetic of the pastoral landscape. Instead of Claude's mirror reflecting the shepherd's flute, the contemporary mirror is represented by the screen of a mobile phone, the window of a high-speed train connecting Rome to Paris in nine hours, or the rear-view mirror of an Amazon delivery van—objects in constant motion. The fixed focus of pastoral representation has shifted from the shepherd's flute to a landscape distorted by speed, where the remnants of modernity's factories serve as memorials to a civilization that, although surpassed, managed to create fairer and more equitable working conditions at the expense of pollution, climate change, and the dehumanization of production and the surrounding environment, as for instance in the contemporary visions by Jenny Odell (Fig.5) in Satellite Landscapes (2014).

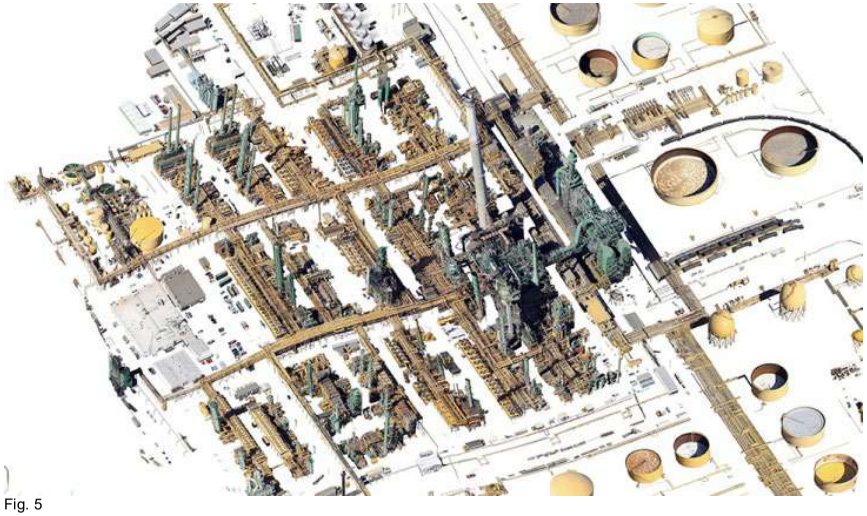

Fig. 5

In the condition of Industrial Pastoralism, aesthetics adapt to the posthuman world, not in the traditional sense of a space where humans coexist with unexpected forms of life, but rather a space that remains indifferent to the human condition—a landscape engaged in dialogue no longer with the melancholic observer of industrialization, but with a polysemantic philosophy where production and consumption become intertwined actions.

The intricate nature of the term under examination presents a complex realm for exploration within the scope of this conference. This term exists in a state of suspension, entangled within various strands including tradition, political power, style, and deliberate ambiguity. The inclusion of the prefix “industrial” further complicates the task of elucidating the precise extent and limitations of the subject matter. Instead, it introduces an additional dimension encompassing the domains of production, communities, and the potentially perilous realm of sublime experiences. As previously discussed, during this period of value crisis and institutional upheaval, pastoralism serves a dual purpose of both caution and prediction. Post-industrial civilization finds itself in the throes of late-imperial decline, amidst emerging philosophies such as post-humanism, ecocentrism, and cosmocentrism, swirling amidst the ruins of LEED Platinum-certified buildings and vertical forests exportable from Milan to China, allowing the affluent to possess a slice of landscape on their balconies for a domestic micro-pastoral experience. Meanwhile, gigafactories have become completely dehumanized, acting as creators of algorithms that are then utilized by other machines.

Just as the New Zealander in Gustave Doré’s “London: A Pilgrimage,” arriving from a distant corner of the world, or the sleeper in H.G. Wells’ “When the Sleeper Wakes,” arriving from a different time, observed the ruins of London symbolizing industrial civilization collapsing at its peak, we can easily envision our own ambitious and complacent architectural civilization lying in ruins.

Perhaps, as the wandering shepherd from Asia continues his eternal journey in dialogue with the moon, he will find himself standing before the ruins of NEOM The Line — a desert enclave for influencers and crypto-bankers — and wonder how on earth to get across.

Notes

1. Ernest Charles Jones, poet and social innovator, wrote this poem on *Northern Star*, a Chartist newspaper, to celebrate the creation of O’Connorsville, an utopia based on chartist ideals advocated by the Irish movement leader Feargus O’Connor.
2. In his review to Jona et al., Gavin Williams, “Emilio Jona, Sergio Liberovici, Franco Castelli, and Alberto Lovatto: Le Ciminiere Non Fanno Piu Fumo: Canti E Memorie Degli Operai Torinesi,” *The Opera Quarterly* 29, no. 1 (Mar 01, 2013): 80-85., notes a long tradition of chants and arias in Trovatore related to the productive industrial realm. Not only Chi del Gitano?, though, but also, Se mi si strappa il filo can be considered part of a cottage-industry society, criticized by the Italian composer.
3. The topic of pastoralism as metaphor of the imminent death of Tosca, Scarpia and Cavaradossi, is explored in Theodore Gentry, “Musical Symbols of Death in Tosca,” *The Opera Quarterly* 14, no. 4 (1998): 59. For a more comprehensive study on pastoralism in music, see Huang Lei, “Pastoral in Music: Ontogenesis and Semantics of the Genre - Key Performance,” ." European Journal of Arts no. 3 (2021): 79-85.
4. The essay by Nic Clear, “The Persistence of the Pastoral,” *Architectural Design* 83, no. 3 (2013): 86-93 covers different aspects of the Pastoralism, and it’s part of a broader publication in a special edition of AD titled “*The New Pastoralism: Landscape Into Architecture*”.
5. We refer here to the definition of *Places of Memory* given by Pierre Nora, “Between Memory and History: Les Lieux De Mémoire,” *Representations* 26, (1989): 7-24
6. The reference to the picturesque is still debated, especially if we consider the Pastoral a style, or approach, and the Picturesque a compositive method. In John Lark Bryant, “A Usuable Pastoralism: Leo Marx's Method in the Machine in the Garden,” *Mid-America American Studies Association* 16, no. 1 (1975): 63-72., appears clear the relation between Leo Marx’s idea of a critique American Pastoralism, in which the methodology of investigation is not only a generic study on literature, but – using Henry Nash Smith’s words – “an interplay between social facts and aesthetic values.”
7. See: Leo Marx, *The Machine in the Garden: Technology and the Pastoral Ideal in America* (Oxford: Oxford University Press, 1967), Mark Frost, "Journeys through Nature: Dickens, Anti-Pastoralism and the Country." In *Dickensian Landscapes*, ed. Marie-Amélie Coste, Christine Huguet, Nathalie Vanfasse, *Dickensian Landscapes*, (Grenoble: Centre d’Etudes sur les Modes de la Représentation Anglophone, 2016), 53-71, and John Ruskin, *Art and Life* (JB Alden, 1900).
8. Foucault’s case is quite interesting, because links the term “Pastoral” in the sense of responsibility for the growth and wellbeing of a subject by an upper authority, and the “Pastoral” in the sense of the recognition of such authority as defined by the skills and knowledge of a rural tradition, packed with heired wisdom. See: Michel Foucault,. "The Subject and Power." *Critical Inquiry* 8, no. 4 (1982): 777-795.
9. See: Anthony Beckles Willson, "Alexander Pope's Grotto in Twickenham." *Garden History* 26, no. 1 (1998): 31-59.
10. This Emotional Arcadia is often delusional, and should not be simplistically intended as a rapture in a idyllic world. As stated in Tonette L. Bond, "Pastoral Transformations in" Barren Ground"." *The Mississippi Quarterly* 32, no. 4 (1979): 565-576, the Emotional Arcadia of Southern United States is a false idyl destined to shatter.
11. An extraordinary book on this topic is the one by Martin, Meredith. *Dairy Queens: The Politics of Pastoral Architecture from Catherine De'Medici to Marie-Antoinette*. (Harvard: Harvard University Press, 2011), in which the architectural, urban and metaphorical features of the faux villages is rigorously explored.
12. A part from the cited article in Stephen Daniels, "Landscaping for a Manufacturer: Humphry Repton's Commission for Benjamin Gott at Armley in 1809-10." *Journal of Historical Geography* 7, no. 4 (1981): 379-396. Is it worth to be noted, by the same author the comprehensive biography of Repton, Stephe Daniels, *Humphry Repton: Landscape Gardening and the Geography of Georgian England* (New Haven: Yale University Press, 1999).
13. A comprehensive study on William Gilpin, *Three Essays: On Picturesque Beauty; on Picturesque Travel; and on Sketching Landscape: To which is Added a Poem, on Landscape Painting* (London: R. Blamire, 1794) can be found in Robert Mayhew, "William Gilpin and the Latitudinarian Picturesque." *Eighteenth-Century Studies* 33, no. 3 (2000): 349-366.
14. The extraordinary engraving of the frontispiece to Marc Antoine Laugier, *Essai Sur L'Architecture.* Paris: Jombert, 1755 by Charles-Dominique-Joseph Eisen has been widely analysed, most recently in Rebecca Williamson, "Other Lives: Charles Eisen and Laugier’s Essai Sur L’architecture." *Drawing Matter*, December 26, 2019, https://drawingmatter.org/other-lives-charles-eisen-and-laugiers-essai-sur-larchitecture/.
15. See John Ruskin, *Modern Painters. Vol. 4* (G. Allen, 1856).
16. See Nathaniel B. Jones and Sara Ryu, "Distance and Proximity in Hubert Robert." *Classical Receptions Journal* 11, no. 4 (2019): 476-507.
17. The quote is taken from Nathaniel Robert Walker. *Victorian Visions of Suburban Utopia: Abandoning Babylon* (Oxford: Oxford University Press, 2020).
18. One of the strangest poems by Leopardi, edited in a critical edition as Giacom Leopardi and Alessandro Coletti. *Canto Notturno Di Un Pastore Errante Dell'Asia* (Ed. AC, 1983), does not follow the classical schemes adopted by the author for the other pastoral poems, but instead focus the attention on the desperate condition of the natural state of mankind, and its frustrated ambitions. For further details see Zane Mackin, "Rewilding Arcadia: Pastoral and Leopardi’s Search for the Natural." *Quadrante* no. 21 (2019): 231-247.
19. See François Roche, "Next - Door Instructions." *Architectural Design* 83, no. 3 (2013): 126-133.
20. This topic has been explored in Courtney Weiss Smith, "Political Individuals and Providential Nature in Locke and Pope." *Studies in English Literature, 1500-1900* (2012): 609-629.
21. A thorough analysis on Verne’s viewpoint on ecocriticism and militarism can be found in Heather I. Sullivan, "Dirty Nature: Ecocriticism and Tales of Extraction-Mining and Solar Power-in Goethe, Hoffmann, Verne, and Eschbach." *Colloquia Germanica* 44, no. 2 (2011):111-131.
22. A contemporary criticism to the 1975 Exhibition is present in Greg Foster-Rice and John Rohrbach. *Reframing the New Topographics*. Chicago: University of Chicago Press, 2010.
23. This part on Lewis Baltz’s work is based on two pivotal works: Louis Baltz and Lewis Baltz, "The Raft of the Medusa: American Photography in the 1980'S." *Revue Française D'Études Américaines*, no. 39 (1989): 71-83, and Susan H. West, "Lewis Baltz: Discovering Park City." (Master diss., The City University of New York, New York 2016), https://academicworks.cuny.edu/..
24. See Andriko Lozowy, "Picturing Industrial Landscapes." *Space and Culture* 17, no. 4 (2014): 388-397.
25. The three main sources for this paragraph are: Craig Campbell, "Residual Landscapes and the Everyday: An Interview with Edward Burtynsky." *Space and Culture* 11, no. 1 (2008): 39-50, Joshua Schuster, "Between Manufacturing and Landscapes: Edward Burtynsky and the Photography of Ecology." *Photography and Culture* 6, no. 2 (2013): 193-212, and Pritchard, Sara B. "Dangerous Beauty: Aesthetics, Politics, and Power in Anthropocene: The Human Epoch." Environmental History 25, no. 2 (2020): 377-382.

Image Captions

Fig. 1. Hubert Robert (c.1770). *Stair and Fountain in the Park of a Roman Villa*. Los Angeles County Museum of Art, Gift of the Ahmanson Foundation.

Fig. 2. William Wyld (1852). *Manchester from Kersal Moor*. Royal Collection Trust / (c) HM Queen Elizabeth II 2012.
Fig. 3. Lewis Baltz (1977). South Wall, Semicoa, 333 McCormick, Costa Mesa, from *The New Industrial Parks near Irvine, California*.
Fig. 4. Edward Burtynsky (2000), *Shipbreaking No. 8, Chittagong, Bangladesh*. Artist's online website.
Fig. 5. Jenny Odell (2013-2014). *Satellite Landscape*. Artist's online website.

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Biography

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Carla Molinari is Senior Lecturer in Architecture and BA Course Leader at the Anglia Ruskin University. She teaches architectural history and theory, and Design Studio. Carla has a PhD in Theory and Criticism of Architecture, and has published on cinema and architecture, on the conception of architectural space, and on cultural regeneration. Before joining ARU in 2022, she taught at Leeds Beckett University, University of Gloucestershire, University of Liverpool, and University Sapienza of Rome. In 2020 she has been awarded a Paul Mellon Research Grant for her archival research on Gordon Cullen and in 2016, she was awarded a British Academy Fellowship by the Accademia Nazionale dei Lincei for her research on Peter Greenaway and Sergei Eisenstein. Carla's research engages with architecture and media, innovative interpretations of montage and cinematic design methods, theory and history of space, and urban narrative strategies.

The border that becomes a frontier

A new way to inhabit the edge

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Abstract

In the last four decades our society has discussed the topic of borders: since 1985 Europe has tried to abolish all frontiers controls in the name of a globalization that has in fact deleted the borders and multiplied the walls with the others. But is it necessary to completely abolish all borders? The answer is that it is essential to critically think about the semantic value of the word border to understand how this term has culturally defined our way to intend territoriality and social relationships with otherness over time, and to overcome the now rooted supremacy of conflictuality over cooperation.
Understanding how and why some languages have maintained a distinction on a semantic level between the concept of border and frontier is interesting to change our approach (Zanini, 1997). In the cultures in which these terms have a different meaning, the border embodies the spatial role of separator between contiguous territories, while the frontier is intended as the limes that Latin culture attributed to the separation between the known and the unknown, that is the last limit beyond which it is insidious – but also interesting, in some ways – to go (Ferraro, 2001). As such, if the border is a geographically defined line that establishes the right of ownership, the frontier is a strip of land that constantly mutates according to the cultural interaction between two or more parts.
We can start from this concept to create a universal interpretation of border that could target the actual meaning of frontier: if borders were intended as a space of possibility and not as a line, it would be possible to conceive the geographical borders – absolutely necessary in our time (Cacciari, 2000) – as a common ground to found the cohabitation of two or more cultures by leveraging the features they share.

Key words: border, frontier, line, space, otherness.

1. Statistics and consequences of spatial fragmentation in the contemporary world

The topic of borders and the land/sea divide has become, especially in recent years, a highly topical issue due to the media debate triggered by migration flows. Considering the data reported by the *Atlante delle frontiere*[1] published in 2018, there are 323 land borders in the world which, added to the maritime ones, reach about 750 for a total extension of 250˙000 km. It is also necessary to elaborate on this figure by specifying that the so-called “natural borders” count for 55% - of which 30% are hydro-geographical elements and 25% are orographical elements - of the total, while 45% identify “artificial borders”, the actual broken straight lines such as those found in the United States and North Africa. Although the literature has disproved the notion of a “natural border”, ascertaining that this is a concept developed only in the 19th century so that Man's separating action could find a respectable justification[2], these statistics help us to understand how the course of history has always tended towards a global fragmentation towards which, since 1985, on the wave of that globalising sentiment theorised by Bauman[3], Europe has tried to promote, at least for the territories that fall within it, a reversal of course with the introduction of the Schengen Area. However, at a macroscopic level, the ease of moving around avoiding the customs controls of yesteryear has not mitigated the atavistic hostilities derived from the ancient border demarcation and, over time, the controversial concepts of *inside* and *outside*, which have also had repercussions at a microscopic level, have become entrenched in common perception. Indeed, investigating at the local level, where the concept of borders has fuelled hostility to otherness, we have seen the emergence and development of gated communities in which people seek to preserve their identity from the threat of the other who, lacking the social conditions to be able to exclude others, suffers the phenomenon of ghettoisation[4]. Dwelling, however, on the urban sphere, it is necessary to note that borders have also inevitably created hybrid territorial belts in peripheral areas close to the drawn boundaries in which cultures, religions, and languages do not correspond perfectly to the more or less homogeneous pattern found in the core zone of each country. In this sense, it is worth mentioning two experiences that clarify the complex definition of the identity of two cultures that are engendered by the border. The first example is effectively represented by the community of people living on the Karst plateau who have chosen to call themselves *zamejci*[5]: this group is made up of the Slovene minority present in Italy, Austria, Hungary and Croatia, and tells of a linguistic modification deriving from their geographical location, whereby the spoken language moves away from the Slovene of Ljubljana and is made up of words that are the result of the sloveneisation of Italian words. This linguistic modification leads them to be recognised as Slovenes by Italians but also as Italians by Slovenes, placing them at the centre of a debate that constantly forces them to redefine their identity parameters. A similar discourse is linked to the culture of the *chicanos*[6], that is, those who reside in the United States despite being of Mexican descent: it is difficult for them to make themselves understood because the language they speak, a mixture of Spanish and English, is as distant from their mother tongue as it is from that of the country in which they live and work. For them, the linguistic change translates into the impossibility of communicating effectively with the Americans and, simultaneously, represents the cutting of the umbilical cord with their homeland.

1.1 Interpretative hypotheses and purpose of the investigation

While both examples bring to light collective experiences that evoke painful memories of wars for sovereignty and territorial dominance in the political sphere, they also tangibly demonstrate how spatial divisions have failed to translate into the desired preservation of the actors' identity. On the contrary, in fact, the borders themselves have generated new realities that live in marginal spaces redefining their connotations starting from the mixture of traditional elements and elements proper to the destination land. These communities, and consequently the territorial belts they inhabit, have been able to break down the dividing line, giving rise to cultures that are not recognisable within a clear territorial perimeter. Experiences of this kind can then be conceived as potential social connectors capable of breaking down the atavistic hostility that has historically been a direct consequence of border policies through the development of a new way of understanding the word border that can reshape itself by tending towards the concept of fluidity inherent in these realities that inhabit marginality. From all these considerations then emerges an urgency that is to understand how to linguistically redefine the concept of border by analysing how this term is sometimes, in some languages, synonymous with *frontier*: this helps, on the one hand, to explain the historical vision that countries have absorbed regarding the relationship with otherness and, at the same time, provides the tools to rethink the border as a limit that is no longer immobile but open to the possibility of continually reformulating itself. In this way, the more static and divisive conception of borders that persists in the tradition of some cultures would be abandoned in order to promote a collaborative approach that does not distort the identity of the parties involved – as Maria Lai, who founded her entire artistic oeuvre on stitching, states in an interview[7] – but is capable of founding a common ground on which to recognise and enhance the mutual and shared cultural heritage.

2. The origin of the border: the Roman *limes*

In order to understand how current linguistic differences conceive the concept of the border, it is necessary to analyse its origin and how it came into being and paved the way for the now familiar sense of understanding the margins. In the ancient writings of Strabo and Aristides, one can read the idea that the perimeter itself defined the interior of the Roman Empire as the set of places worth knowing and possessing[8]. From this point of view, it is interesting to note that with Hadrian, under whom the empire had reached its maximum extension, the limes was identified as the clear separation between the barbarians and the Romans, both in the East and in the West. However, at the same time, the journeys that the emperor himself undertook along the borders of the empire did not only have military purposes: Hadrian seems to have been so intrigued by the places and their diversity that he wanted to experience them firsthand to the extent that he wanted to recreate, through imitations, an evocation of these journeys within his Villa at Tivoli, which thus became a collector's treasure chest. It is evident, then, how that semantic component that recognises the *limes* traced by the Roman priest as a propeller of interest has disappeared, while that ancient meaning of the term that sanctioned the separation of the sacred place (the empire) from the unknown dominated by the laws of Chaos and perennially identified as a threat of siege and, therefore, of death, has been maintained. There then, far from the centre and close to the space towards which it is not interesting to venture - due to a supposed banality of content and potential danger to safety – contemporary society tends to place that which diverges from the safe centripetal homogeneity of sacred space. Foucault theorises this idea in his definition of *deviant heterotropies*[9]: the place inhabited by individuals whose behaviour appears deviant from the average. By virtue of its nature, then, the foreigner is historically kept at the margins – of a state or a city, if one thinks of the suburbs – since he comes from the confused and threatening outside, bringing with him ways of inhabiting the world that are different from those most shared within a space and capable of disturbing the stability of the norm. Hence the need to understand how language has engulfed, translated and expressed the concept of limes in new forms, shaping the way of considering otherness in various cultures.

2.1 Linguistic comparisons: *border* and *frontier*

Starting from the common Latin root, some languages have developed the concept of *limes*, sometimes translating it as *border* and at other times as *frontier*. However, this semantic distinction does not occur in all languages: in some cases, again for historical reasons, a single term is used to indicate the concept of limit, introducing a synonymy between *border* and *frontier*. The Italian language has evolved from Latin by maturing a semantic difference between the two words: *confine* (border)[10] denoted the line that defines the right of ownership and sovereignty over the territory delimited by it. In some way, therefore, the border still carries with it that ancient nuance of meaning relating to military conquest inherent in the philosophy of the ancient empire, which transfers to the word *border* a sense of immovability and thus of certainty and stability. On the other hand, it was necessary in the Italian language to attribute to the term *frontiera* (frontier)[11] the other nuance of meaning of *limes* relating to the uncertainty and fear of confronting an unknown world: the frontier, by etymology, contains within it the word *fronte* (front) and transfers the sense of turning towards something or someone – so much so that thaey say “fronteggiare il nemico” (to face the enemy). Thus having no geographical or political reasons, the frontier is a limit set at a cultural level – so much so that in Italian, by extension, the concept of frontier is used to speak of languages, customs or traditions. Because of its nature, then, the frontier does not represent a line fixed to the ground but a fringed territorial strip that allows the possibility of continual reformulation according to the socio-cultural changes of the peoples it involves. Also, the difference between *border/boundary* and *frontier* is maintained in English, as well as in Italian and many Slavic languages. Not all languages, however, adopt this same choice. In French, despite the same Latin root, the two terms converge in the expression *frontière*, probably because when France reached the maximum limits of expansion, it was no longer deemed necessary to maintain a term with the exclusive political-military meaning. The same happens with the German word *Grenze*, which means both abovementioned concepts. However, the term *Mark* – used with the same meaning as *confine* in Italian – survived until the middle of the 18th century as it was more useful for discussions between the knights of the Teutonic order and the Polish princes to discuss questions of territorial dominion[12]. Moving away from Europe, it is also worth mentioning the case of the Americans who are more attached to the concept of the frontier because, as Turner[13] explains, it is the frontier that has connoted the proverbial charisma they claim to possess. On the contrary, it is the case in China where the concept of limit was born in parallel with that of limes - adopting its most unfavourable meaning - and has remained the same throughout time: for the Chinese, in fact, the Great Wall established the border between the infallible imperial system and the formless space inhabited by wild nomads[14].

2.2 Edge and identity

Beyond the strictly lexical contemporary issues – to which we will return later – there is no doubt that the limit, as the Latin etymon suggests, is a spatial device that inevitably puts us in relation with the other. This confrontation is very often of a rejecting nature since, in the multiplication of the world's complexity, every exposure to the outside imposes to question the inside. In times of global crisis, this turns into an attitude of closure aimed at protecting one's identity. A repeated process of this kind has led to the numbers mentioned above. A repeated process of this kind has led to the numbers mentioned above. The ones who pay the price for this repulsion are the migrant peoples, who bounce from one place to another because they are removed from any country that perceives them as a threat, fuelling a feeling of hostility on both sides. This social short-circuit does not consider, because perhaps it has forgotten, that the identity one aims to preserve is, to all intents and purposes, the product of confrontation with the other. Luca Gaeta, in fact, proposes the reading of limits as places where the relationship between us and others occurs. It is a comparison that highlights an inescapable dependence between the two parties whereby their respective identities are indebted to each other since it is only through a mutual exchange that, paradoxically, they determine each other[15]. Looking at the concept of identity from this point of view, one can say that it is not an incontrovertible datum but is something that undergoes the changes of time. Bauman tries to explain this phenomenon by making a comparison with the puzzle mechanism[16]: this presupposes that the game of selecting the pieces is oriented towards the replication of an established image; on the contrary, the construction of identity does not know at the outset what the final objective is, but tries to select and discard pieces, which are gradually acquired, on the basis of what seems more or less deserving of being possessed and then tries to find a reasonable connection between them all. One can therefore understand how identity is closely connected to time and changes along with it: this is why one could say that, as Massimo Cacciari refers to the concept of tradition, identity is something that «persists in the form of becoming»[17]. Reconsidering this fundamental aspect of identity would perhaps help to review all those poisonously nationalistic positions, redefining territorial belonging based of a global vision. To this end, it is then fundamental to recall a thought of the poet Dante Alighieri who claimed to have «the world for home, like fish the sea, but that he had drunk the water of the Arno for a long time and had thus learned to love Florence»[18].

2.3 *State* and *Nation*: a binomial derived from the concepts of *border* and *frontier*

Following the "border-frontier binomial", one can understand how, in the same way, the concepts of *State* and *Nation* have evolved as a consequence. Starting from its definition, it is indeed possible to associate the concept of *border* with that of State[19]: this, in a certain sense, can almost be defined as its natural consequence, since in all the linguistic cases dealt with – even in those in which the strict sense of *border* has been lost over time with lexical modifications – the border has always represented an instrument for establishing supremacy and control over the territory it delimits. In the same way, the concept of *Nation*[20], starting from its definition, can be combined with that of the *frontier*: when, by extension of meaning, we speak of social, psychological and cultural frontiers, the Nation has to do with the people who inhabit the territories and who perceive that they share the same system of values and culture, attributing them a common identity in which to recognise themselves. Politically and socially, this new "second-degree binomial" has, over time, highlighted the difficulties arising from the fact that the State has not always coincided with the Nation. In this sense history has been punctuated by wars of repression that have sought in every way to literally annihilate or confine divergences with the aim of making the Nation adhere to the State. These policies have not had the desired success, and this can be demonstrated when one considers all the realities in which coercion has over time defined "States without a Nation" - such as Switzerland, which is made up of twenty-six cantons and has adopted four official languages - and "Nations without a State", such as the Kurdish people, but also the *zamejci* and *chicanos* discussed above. At this point, there is an urgent need to understand how to culturally reshape the conception of borders that, to this day, have fuelled the widespread nationalist sentiment that, faced with the failure of policy of ostracism that has inevitably provoked the emergence of new socio-political realities, persists in hostility by fuelling border conflicts.

3. What should be changed in the language to reverse the trend?

Starting from current linguistic comparisons of the definitions of *border* and *frontier*, two levels of evolution can be clearly distinguished: the first is that of the languages that still maintain a semantic separation between the two terms – such as Italian and English – while the second includes all the languages – such as French, German, US English and Chinese – that, when they no longer deemed it necessary, progressively abandoned the concept of border, maintaining only that of frontier. Considering the statistics of the world we inhabit, it is then evident that the semantically intrinsic mutability of the frontier – and inherent in the definition of *Nation* – has not been introjected into cultures that have nevertheless only embraced this term. The disconnect between language and data shows the inability to conceive the changing character of the edge. What then are stateless nations if not the tangible product of the continuous reformulation of the frontier itself? Here, we are faced with the fact that language still lacks a third level of evolution: that which can accept the phenomena of deviation from the State-Nation correspondence and exploit them to the advantage of mutual cooperation, finally considering the border as a space of possibility. This would be the correct way to understand territorial borders: strips of territory capable of being Maria Lai's needle that sews two edges together without altering the identity of the two, but by leveraging the cultural value of those who live on the margins and, by its very nature, physically represent the union between the cultures that converge in it. Therefore, it is necessary to complete the evolution of the term *frontier* so that it becomes the most suitable contemporary device of union and separation in our globalised age. Paradoxically, in fact, we could try to understand what a truly borderless world means. Firstly, as Cacciari would again suggest, the lack of borders would transform difference into inequality[21], opening the door to even more widespread hostility than we already experience. Moreover, going back to ancient events relating to the Roman empire, *limes*, in its original etymology, suggested a nuance relating to that conflicting feeling, like Eros and Thanatos, which simultaneously saw beyond the border both something potentially interesting to bring in, and a potential threat of death. Thus, that primordial fascination towards discovering the world in its diversity would cease to exist by eliminating borders.

4. Conclusions: methods and practices

Some efforts at social reconnection have been undertaken in an attempt to resolve border adversities. Nevertheless, one aspect that is still missing is to truly value the local communities that have been identified as "Nation without a State". The artist Ronald Rael has tried, with his project *Teeter-Totter Wall*[22] to transform the wall between Mexico and the U.S. into a bridge: the swings installed astride the wall actually manage to bring together in a playful – and no less provocative – way the Mexican families divided by the border. However, this project is mainly a political gesture moved to raise awareness and, above all, it addresses the Mexican community, those *chicanos* mentioned by Gloria Anzaldúa, but leaves out the involvement of the Americans who continue to legislate in favour of the wall. The same happened with the *Interreg Italy-Slovenija* project that created, among other things, the Karst Geopark[23] that involved the natural heritage of the border, carrying out a cross-border project, but which, again, did not actively involve the *zamejci*. If, then, we must start again from a malleable and changeable vision of boundaries – as semantically the term *frontier* really suggests – it is necessary to leverage the participation of all local communities to ensure that reconnection projects can reach their goal by proving to be long-lasting. The acceptance of the temporal dimension that has linguistically distinguished the concept of *border* from that of *frontier*. In the same way if identity also has to come to terms with its constant reformulations, it is necessary to propose projects capable of recognising, safeguarding and actively managing the cultural heritage of the frontier. In this way, following the natural evolution of cultures, the common heritage will be continuously updated, creating the conditions for a real cooperative approach between the parties. This concept is also confirmed by the 2005 Faro Convention in which Europe commits itself «to develop knowledge of cultural heritage as a resource to facilitate peaceful co-existence by promoting trust and mutual understanding with a view to resolution and prevention of conflicts»[24]. Caring for one's own identity would then not become a pretext for fostering new hostile nationalist attitudes but a tool capable of founding an effective and permanent cooperation process.

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Biography

Flaminia Valchera graduated with honours in Architecture-Restoration from the University of Roma Tre in October 2020 and a few months later was enrolled in the Order of Architects of Rome. Her master's thesis - supervised by Professors M.M. Segarra Lagunes, F. Cellini, G. Caudo - entitled *Designing, negotiating, overcoming the border. Analysis of Trieste karst plateau* gave her the opportunity to reflect on the theme of the border, bringing to light its value and repercussions in the landscape, cultural and social fields. Interested in the issues of the conservation and valorisation of cultural heritage, in 2022 she published the article *From the border stories to the care of rural heritage: the cultural value of the Karst landscape* in the proceedings of the conference *The art of dry-stone walls for terracing: an intangible and material heritage to protect* in which she took part as a speaker.

HOME-steading

Subversions, Reversions, and Diversions of the Moral Right to Space

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Abstract

It can be argued that putting to words one's relationship with the earth has always been a prerequisite of architectural construction, and that such proclamations have required, in turn, structures of the abstract - moral, economic, legal, and of course, linguistic, that assign the necessary hierarchies of value and power to the human and nonhuman entities involved. Therefore, words are, like bricks and mortar, fundamental to the spatial construction of our world. One of the most powerful definitions of such kind, with legacies both catastrophic and subversive, can be found in the evolution of the word "homestead".
Built upon the philosophical ideas of John Locke, the conception of "homestead" invalidated an entire population's relationship with the earth, eradicated their livelihoods, cultural systems, rights to the land, and replaced them with colonial bodies, practices, and beliefs. Under the banner of this word, over 270 million acres of land and countless lives were indelibly altered. Yet, in contemporary times the invocation of "homestead" has facilitated instead the adverse possession of the weak and marginalised, who act in resistance against institutional structures to appropriate their own space in an environment designed for their absence.
Through an in-depth discourse analysis of 城市开荒 (urban homesteading), a phrase used to describe an emergent informal practice that leverages the Lockean proviso to re-appropriate expropriated land and ruralize China's rapid urbanisation, this paper examines the paradoxical agency and the intense spatial creativity that can be found through the subversion of words within the urban context. Gathering utterances and writings from TikTok to legislative policy, internet games to classical literature, I argue the importance of understanding not only the construction of words within a spatial context, but also the fungible, paradoxical and entangled ways of they act within the world.

Key words: Subversion, Decolonisation, Informal Agency, Land Rights, Tactical Reclamation.

归去来兮，请息交以绝游。世与我而相违，复驾言兮焉求？悦亲戚之情话，乐琴书以消忧。农人告余以春及，将有事于西畴。

I've come home! And bid farewell to the society of men. Since the world and myself cannot agree, What more have I to strive after? Joy will be found in the hearty talks with my kin, Or delight in music and books that lighten my mind. When the farmers tell me of the arrival of spring, There will be enough to do in the western fields.

Excerpt from "*Going Home*" by Tao Yuanming[1]

"Hence subduing or cultivating the Earth, and having Dominion, we see are joined together. The one gave Title to the other. So that God, by commanding to subdue, gave Authority so far to appropriate."

John Locke, *Second Treatise*, Sec. 35

1. Introduction

Every act of construction begins with a story, be it one that relays its history with the land or justifies its future upon it, each act begins with a story that provides legitimacy and protection by demonstrating its right to take place, argued through the conventions of right and wrong within its situated context. This paper follows the social media discourse of the informal practitioners of 城市开荒 (urban homesteading), where individuals illegally infiltrate what they recognise as the wastelands of China's rapid urbanisation to cultivate patches of vegetable gardens. Threading through various evolutions of so-called "original" appropriation between China and the West, this paper demonstrates how political ideologies as well as historical and literary imaginaries can be subverted by citizens to assert their Right to the City (Lefebvre 1991). The case of urban homesteaders demonstrates how individuals without formal organisation can leverage a diverse range of concepts from the Lockean proviso to the idyllic imaginary of the Peach Blossom Spring[2], to re-appropriate expropriated land and ruralize China's rapid urbanisation.

1.1. 城市开荒 (Urban Homesteading)

Fig. 1

Under the shadow of a concrete viaduct, a phone camera watches the sky brighten as a bent-over figure tends to his vegetables; in a city under COVID lockdown, a viewfinder pans from half-completed residential buildings to follow the movements of a mother and her small daughter watering vegetable sprouts emerging from reddish brown soil; in a thin sliver of land behind a flower bed in a residential neighbourhood, a young woman attempts to bring her wilted tomato sprouts back to life. These are just a few of the scenes that would appear if one was to search 城市开荒 (urban homesteading) on China's social media platforms (Fig. 1).

In the four decades since China's economic reform, China has achieved one of the most rapid rates of urbanisation, raising the percentage of its urban population from 21% in 1980 to 63% in 2020 (Xu and Akita 2021; Central Intelligence Agency 2022). Within this transformation, the practice of urban homesteading have emerged within the idle and wasted lands created by inefficient developments of expropriated rural land through Iji Kaifa (first class development), a model of urban expansion where rural people are removed from their land in exchange for monetary compensation and resettlement in urban residential developments (Lora-Wainwright 2012; Gan et al. 2019; Qu et al. 2020). Infiltrating the "terra nullius" of urban idle lands, from vacant construction sites to neglected landscaping by the sides of streets or rivers, urban homesteaders dig up, clean, till and fertilise the soil to grow vegetables for the self-proclaimed purposes of good health, exercise, and leisure.

While local governments have formally condemned acts of urban homesteading as "backward", "unhygienic" and "selfish", and have acted to demolish the plots of vegetable gardens with tractors and diggers, the narrative presented by the homesteaders via social media continues to garner popularity amongst netizens through their careful alignment to the etymologies of party slogans, literary metaphors and historical imaginaries that argue for their moral right to exist.

1.2. Social Media as Subversive Narrative

Through social media, urban homesteaders permeate the descriptions of their labours and products with cultural and political references and associations to achieve a variety of associations. For example, the use of party slogans from both the past and the present aligns urban homesteads to valorous behaviour:

> To all the farmers of the city, today Granny officially passed the family inheritance [the urban homestead she established] in Wuhan to her little grandson! #FamilyTreasure #HumanCubComingOfAge **#ThoseWhoLabourAreTheMostBeautiful**
>
> A friend from my hometown came to help plant and water vegetables! **Labour is the most glorious!**[3]

Alluding to pastoral imaginaries to evoke aesthetic empathy:

> In the forest of concrete towers and the cacophony of engines in my city, I have homesteaded a small vegetable garden to enrich our family's dinner table. What I plant is hope, with no expectations of results, but to enjoy the process, and harvest happiness.

Or, extolling the virtuous character of the older generation:

> In a foreign city, grandpa found a piece of wasteland. He opened it, weeded it, and cultivated it~ In less than a month, he has planted 11 varieties of vegetables. **He has laboured his entire life and never stopped, what reason do we have for not working hard!** 90-year-old grandpa is so awesome! (Fig. 2, Img. 4, caption translation by author)

Despite their lack of formal organisation, the proliferation of urban homesteading content across major Chinese social media as well as in-person networking have maintained a stable "non-movement" (Bayat 2013) of urban homesteaders in multiple Chinese cities undergoing rapid urbanisation[4]. Despite the disapproval of the local governments, representation through social media provides a social capital for urban homesteading that not only encourages positive associations with the informal practice and attracts more individuals to participate in homesteading but also ultimately influences market desires and changes to real estate development[5]. In the following sections, this paper breaks down some of the most popular references used by homesteaders to justify their right to land within the urban environment to examine the ways in which concepts and verbal mechanisms of the state are inverted, reverted, and subverted.

2. Inversion of Waste and Labour – Terra Nullius and the Politics of Productivity

Though the earth and all inferior creatures be common to all men, yet every man has a *property* in his own *person*. This nobody has any right to but himself. The *labour* of his body and the work of his hands, we may say, are properly his. Whatsoever, then, he removes out of the state that Nature hath provided and left it in, he hath mixed his *labour* with, and joined to it something that is his own, and thereby makes it his *property.*

(Locke 1994, 31, original emphases)

The elders often said, as long as you are willing to work hard, anything is possible, today I finally understood, **if you cultivate this plot of land, it is yours**.

#MyVegetableGarden
#UrbanHomesteading
#MyOwnOrganicVegetables

(Yi, excerpt from Douyin post)

In John Locke's Second Treatise of Government, written during the heights of European colonisation, the key to appropriation lies in the definition of "waste". For Locke, who derived his laws of governance from what he saw as the laws of nature and of God, nature was given by God to all men in common

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ownership and men are obligated to “make use of it to the best advantages of life and convenience”(1994, 32). A man’s labour upon the land to improve it is not only right and moral, but also mixes the land with his labour to make it his property. “Waste” therefore sets up the precondition for ownership with “labour” as the tool for appropriation – a rather simple formula that provided the foundation for the mass appropriation of Indigenous land in the Americas, Africa as well as Asia Pacific. From the Homestead Act of 1862 in the US to the Free Grants and Homestead Act of 1868 in Canada, the Waste Land Acts between 1854 and 1877 in New Zealand to the Crown Land Acts from 1860 to 1884 in Australia, colonial projects globally draw upon the “moral superiority” of agricultural productivity as the key mechanism of dispossession to deem less overtly cultivated Indigenous land as “waste” and available for appropriation (Fig. 2, Img. 2).

Fig. 2

Ironically within contemporary history, the same principles of Lockean homesteading are used by squatter communities to dismantle the kind of private ownership of the rich and powerful it espoused. The waste that colonial settlers once saw in untouched nature, squatters now see in dilapidated buildings, and urban homesteaders, in turn, see in the vacant construction sites of a newly urbanised city. As Martin O’Brien writes:

> [I]n contrast to common-sense conceptions […] rubbish is … not that which has no value; rather, it is that which motivates the search for value. (1999, p281)

The verbal act of identifying and labelling something as “waste” is therefore a productive act that sets up the right to act physically upon the site.

For Chinese urban homesteaders, labour is an exalted moral quality, not of Christian, but of revolutionary origin. The frequent references to “劳动 (labour)” and “节省(living frugally)” originate from a corporeal governmentality that helped the nation survive times of war, famine and economic depression. The imaginary of a selfless labourer or a hard worker recollects a deeply ingrained sense of moral character that is valued within Chinese society till this day (Fig. 2, Img. 1). Out of the 172 social media posts collected for analysis (Fig. 2, Img. 3, Img. 4), 21 were tagged #劳动者是最美的人 (#ThoseWhoLabourAreTheMostBeautiful), a reference to Maoist and contemporary Communist slogans praising the importance of labour within society.

The homesteaders who live in the fringes of the city patch up the wasteland of urban greenery.
#DigForVegetables #Homestead #HardWorkingLabourer #PlantingHope **#ThoseWhoLabourAreTheMostBeautiful**
(Lu, excerpt from Douyin post)

We must securely establish the notion that labour is the most glorious, labour is the highest virtue, labour is the greatest achievement, **labour is the most beautiful**, so that the people can further ignite their passion for labour, realise their potential for creativity, and create a more beautiful life through their labour.
Speech by Xi Jinping, April 28th, 2013[6]

While both past and contemporary slogans for labour were intended to encourage productivity and stimulate economic growth within formal sectors of industry, by associating their practices with the revolutionary ideals of labouring selflessly to improve the lives of others, urban homesteaders frame themselves as good citizens and their homesteads as productive labour that are aligned with, rather than resist against, the state.

3. Reversion to Nature - Opening Wastelands as Escape

All the men in the family have mobilised to homestead for vegetables. A precious **Peach Blossom Spring** in the city. Seeds are starting to sprout. The vegetable garden is filled with life.
(L, excerpt from Douyin post)

开荒南野际	*Opening some wasteland by the southern wilds,*
守拙归园田	*I abide by rusticity and have returned to my farmland.*
[…]	[…]
户庭无尘杂	*Within my doors there is no **dust or clutter**;*
虚室有余闲	*In my empty rooms there is leisure to spare.*
久在樊笼里	*Long have I been in the **confining cage** [of the city];*
复得返自然	*Again, I have managed to **return to Nature***

(Excerpt from “Returning to Live on the Farmland[7])

The conception of 开荒 (“*kaihuang”, homesteading*), the act of original appropriation, where unowned land becomes acquired through productive cultivation, has a physically congruent yet culturally varied connotation to the Lockean proviso. Where the proviso defines European ownership against that of an “other”, the Chinese cultivation of wasteland emerged in an era without a clearly defined racial “other”. Instead, the “other” was the urban as an antithesis to the simplicity and purity of nature – in a way, the opposite of the “other” for Locke, which he saw *as* the original state of nature. The term emerged in a seminal 4th century poem named "Return to Nature (I)" by Tao Yuanming, the representative poet of the Fields and Garden genre of Chinese poetry. In the poem, the land ownership established in the process of *kaihuang* was merely a means to the ultimate goal of peace by achieving a dwelling place in harmony with nature. As such *kaihuang* was both a reference to the physical creation of a farmstead and an allegory of breaking free from the “confining cage” and the “dusty net” of the city and returning to a state of nature, like a caged bird for the woods, and a pond-fish for the deep sea (Fig. 3, Img. 1). Though Tao lived more than sixteen centuries ago, his pastoral longing of a simpler, freer, slower past in contrast to the urban present is as, if not more, keenly felt within China’s present urbanisation. The alienation felt by urban citizens within China’s metamorphosis was a recurring theme within social media.

In the city, tall towers are built in droves, we plant vegetables to relive fond memories.
(Yu, excerpt from Douyin)

In a city of intimidatingly tall towers and the unrelenting noises from engines, I have cultivated a small vegetable garden.
(Ping, excerpt from Douyin)

A Peach Blossom Spring within the busy city, how beautiful it is to be close to Nature!
(L, excerpt from Douyin)

The practice of urban homesteading thus takes on the role of the city’s polar opposite, an idyllic space that provides everything that the city denies: nostalgic instead of modern, soft instead of hard, warm instead of cold, vibrant instead of sterile, wild instead of controlled. A similar desire to escape from the harshness of urban life for a fictional idyll has emerged within contemporary popular culture through a genre of internet novels named 种田文 (cultivation novels). According to Baidu, the “cultivation novel” first emerged within contemporary society within Simulated Life Games (SLG) where the gamer employs a conservative strategy of “高筑墙，广积粮，缓称王 (build high walls, establish grain reserves, conquer slowly)” to protect one’s own territories whilst slowly developing their resources in contrast to the high-speed, violent, and intensive pace of conventional video games[8].

A characteristic of the cultivation genre of the internet novel is the trope of time travel or fantasy world building that sets up the main character in the agricultural society of a bygone era. The protagonist gradually constructs their land and connections, developing their agricultural resources gradually to improve their economic, political, and technological prowess to defeat the antagonists. Works within this genre are noted for their methodical and logical storylines as well as their lack of conflict for the majority of the narrative. Later evolutions of the cultivation novel grew even more focused upon seemingly banal but extremely detailed descriptions of everyday life and character developments. Baidu outlined three reasons for this genre’s popularity, particularly amongst young women: one, it provides a calming, happy, and warm fictional world that is healing for citizens of the modern Chinese society who live within highly pressured environments; two, the predominant use of time travel as a narrative trope where the protagonist is reborn within their childhood or another past era, allows the

reader to experience a sense of redemption and to imagine going back in time to fix mistakes or become an alternative self; three, the emphasis on detailed descriptions and historical accuracy makes the works of this genre fairly well-written and high quality[8].

Fig. 3

Similar to Tao Yuanming's Peach Blossom Spring, the cultivation genre situates the rural and the practice of agriculture within a utopic, escapist imaginary of a slower, more idyllic life connected to nature, an imaginary much shared, and exploited, by the homesteaders. The attachment of such narratives to the practice of urban homestead within contemporary culture indicates that the social significance of urban homesteads extends beyond its physical products or political debates of land rights and urban development into the metaphysical and psychological dimension. For the older generation that practices urban homesteading, the pastoral imaginary of the rural along with connections to labour and revolutionary valour comes from memories and habits formed from their lived experience of China's revolutionary history. However, for younger homesteaders born after China's economic reform in the 80's, 90's and even 00's, their posts on Douyin reflect an interest in homesteading that is directly connected to the fantasy of idyllic rural living that lacks grounded experience. Thus, the pastoral as an escape from urban life becomes almost supernatural in its ability to connect the practice of homesteading to fiction and virtual experiences, from online fantasy novels to internet games.

In 2008, Chinese game developer start-up 5 Minutes released an online multiplayer social network game called "快乐农场 (Happy Farm)" (Fig.3, Img. 2), which rose to become one of the most popular online games in Chinese history with 23 million daily active users at its peak in 2009. Techgearx.com approximated that over 15 million urban white-collar workers had spent more than 5 hours a day on Happy Farm, and techinasia.com reported that the game became so popular that it was even cited in divorce settlements and was criticised by state media due to concerns that its addictive nature would cause social problems. Commercially the game was such a great success that it was included within Wired's list of "The 15 Most Influential Games of the Decade" for its impact on social network gaming and went on to inspire a horde of agriculture-based copycat games both in and outside of China, such as the highly popular FarmVille on Facebook, as well as play a significant role in the establishment and growth of gaming social networks in China[9].

Within the game, players can grow crops, trade/sell their produce, and steal from their neighbours, with the latter, according to online forums, being one of the most well-loved and addictive aspects of the game. This popularity of the game and the overlap between its "virtual farmers" and urban homesteaders is evident in the common use of "Happy Farm" as an analogy and "I am coming to steal your vegetables" as a comment on other homesteader's vlogs.

Within the virtual platform of HappyFarm, not only could netizens experience a calm and meditative "slow life" that is the antithesis of their high-pressure urban environment, but they could also obtain things such as land that are out of their reach in their physical reality due to financial or state limitations. From this perspective, urban homesteading is a virtual reality/dream come true – it allows users to obtain land without the burden of payment, to create a space where they can escape from the

chaos of the city but still earn an urban wage and enjoy urban amenities such as better education and transportation. By conceptually linking their physical practice with online gaming/fantasy culture, homesteaders can enjoy the vicarious excitement of "looting" or "stealing" land and produce by *"gaming"* the modern capitalist system.
At the same time, the Happy Farm imaginary appears to be a useful marketing tool for developers as well. In a video posted by a local news channel, Yunlong Fenghuanggu, a residential development in Zhuzhou, Hunan, has converted its vacant land into allotments for its residents and labelled it the "Happy Farm".

We can't travel during pandemic, so let's homestead. Let children understand that every grain of food comes from hard work. **#HappyFarmRealWorldCombat**
(Yang, excerpt from Douyin Post)

A new residential development in Zhuzhou provides **Happy Farms** for residents to "divide up the land" and plant vegetables.
(Douyin post by Live from Zhuzhou News)

4. Subversion of Civility– Self-Sufficiency and Environmental Morality
With the rapid speed of China's urban development, there is limited capacity for oversight or quality control on the part of the state to ensure that developers maintain their developments (Qu et al. 2020). Local news reports as well as previous studies on urban homesteads by Zhu et al (2020) and Yu (2020) point out that in many urban areas the jurisdiction and responsibilities of various authoritative institutions are convoluted and unclear, which creates confusion and delays in governance. While this provides an ambiguity that the homesteaders exploit, as the state and corporations fail to provide the type of environment promised to its citizens, the citizens' practice of urban homesteading is in fact taking on their work and responsibility. Numerous Douyin homesteaders noted that they are homesteading to provide a reliable source of produce at a reasonable cost that the cities were unable to guarantee during the pandemic.

In fact, this shifting of responsibility onto the shoulders of citizens during times of crisis was at the root of the historical emergence of some of the political slogans popular amongst homesteaders. For example, during the Sino-Japanese War, as the Red Army (Chinese Communist forces) faced severe food shortages as a result of the Japanese invasion, economic blockades by the Kuomingtang as well as several natural disasters in the north of China, Mao Zedong called upon the people to provide for themselves in order to outlast the Japanese invasion. The poster child of the movement was the story of the 359th Brigade, which was deployed to open the muddy wastelands of Nanniwan to increase productivity and create self-sufficiency during a time of crises. The exploits of the 359th was heralded as a success of the intelligence and hard-working character of Chinese people, minted in a documentary, folk song, and famous calligraphy by Mao Zedong with the slogan (Fig. 4, Img. 1):

自己动手，丰衣足食。
(*ziji dongshou, fengyi zushi*, "do it yourself, want for nothing")

Fig. 4

The practice of outsourcing public services to the voluntarism of the people, which echoes neoliberal characteristics of community gardening that have been analysed in Western academia (Ernwein

2017), has allowed the Chinese state to overcome multiple disasters in its contemporary history from political struggles such as the Great Leap Forward to natural disasters such as the Tangshan earthquake of 1976 in addition to the aforementioned Sino-Japanese War. The revolutionary values of self-sufficiency and hard work, as embodied by the slogan and the act of *kaihuang*, remained popular within society after the war.

In parallel, since 2012, when the central government wrote into the Constitution of the Chinese Communist Party a vision for [illegible] (ecological civilisation-building), urban sustainability and environmental protection have been a major campaign within China's urban planning (Olivier Krischer and Luigi Tomba 2019). Initiative with catchy slogans such as [illegible] (beautiful China) and (clear waters and green mountains) have become widespread in popular culture in order to encourage citizens to do their part and participate in sustainable and environmentally conscious lifestyles (Fig. 4, Img. 2) - a task that urban homesteaders have eagerly taken up.

Homesteading in the vacant land in front of the residential building to **become self-sufficient, adding a bit of green to the city** #VegetablePlanting #LabourIsTheMostGlorious #PastoralLife #Homesteader
(Chang, excerpt from Douyin post)

Homesteading for vegetables in a desperate time, clearing up the backyard wasteland to grow vegetables, **becoming self-sufficient as well as environmentally friendly and economical** #JoysOfGardenLife #PlantingVegetables #OrganicVegetables #Homesteading #WildTrees #DesperateTimes
(Gong, excerpt from Douyin post)

By representing their homesteading efforts as the volunteering of their own bodies and labour not just to lessen the burden on the state in terms of food provision but also to contribute to the party's goals for greener healthier cities, urban homesteaders seem eager to embrace neoliberal exploitation in order to avoid demolition. For example, many commenters on the post by Live from Zhuzhou mentioned at the end of section 3 (describing the residential development that have decides to rent its vacant land to residents as vegetable gardens) argued that such schemes are not only pleasurable for the residents but also positive in their contribution to the nation:

This is the life I long for, I want to go plant vegetables too.

Very creative, I like it, I think this can [illegible] policy to save cropland and increase food production.

Planting vegetables is aesthetic and fun, can stimulate small-scaled economies and protect our country's breadbasket

5. Conclusion

Though it is nearly identical to the practice of Lockean homesteading in its justification of land use/ownership through the valorisation of agricultural productivity, urban homesteading is a project of inward escapism and survival whereas the Lockean homestead is one of outward expansion and development. The combination of both within the practice of urban homesteading, as a form of escapism into fantasies of pastoral life from the harshness of urban life through the occupation and appropriation of land they deem to be in waste allow the homesteaders to take on identities both docile and political, both romantic and utilitarian, both inward facing and outwardly expanding.

Fig. 5

The success of the story that legitimises an act of appropriation lies not in itself, but in the nature of its entanglement with the structures of the society within which it is situated. The continued survival and proliferation of urban homesteaders rely, not on formal structures of resistance, organisation, or aid in the forms of NGOs or charities, but on the rhetoric of positive citizenship and the imaginary of appealing pastoral peace they evoke through the power of words and social media platforms. Their understanding and intentional misinterpretation of etymologies allow them to take ideologies, pop cultures, and, legal frameworks made for the visions of top-down governance and turn them into weapons of the weak (de Certeau 1984) in their pursuit of their right to the city. In answer to the central, timely, and worthy question asked by the symposium, the case study of the urban homesteaders demonstrates the power of etymologies as a resource of spatial agency that is more economical, flexible, viral, and democratic than brick and mortar.

Notes

1. The poem was written by Tao Yuanming, the seminal poet of the Fields and Garden genre, upon his retirement from bureaucratic service to return to his family homestead in 405CE. Translation of poem by Stephen Field, Ruralism in Chinese Poetry, 13.
2. The Peach Blossom Spring is a common allegory used in China to denote a fantastical location of extraordinary natural beauty where one can be sheltered from the troubles of the world, in particular those of cities. The allegory originated from Tao Yuanming's famous fable of the same name. Written in 421CE, the fable tells the story of a fisherman's accidental discovery of an ethereal utopia set during a time of political instability McGreal, Great Literature of the Eastern World, Harper Resource.
3. All social media excerpts have been anonymised or attributed to pseudonyms in order to protect the privacy of the homesteader. Translations of the excerpts by the author.
4. See remote sensing analysis and survey of urban homestead distribution in Wang, Assessing the Impact of Informal Ruralisation Practices within the Rapid Urbanisation of Wuhan, China, IGARSS 2023.
5. See section 4 for description of emerging incidences in real estate developments in China where developers, who are unable to proceed with construction on bought land after the initial phases of development, opt to rent such land to existing residents for vegetable gardens. Such schemes have been marketed as Happy Farms (see game in section 3) and urban homesteads.
6. http://cpc.people.com.cn/n/2013/0429/c64094-21323712.html [published on 28/04/2013, accessed on 10/06/2022]
7. Translation by Charles Kwong, [illegible]65.
8. https://baike.baidu.com/item/%E7%A7%8D%E7%94%B0%E6%96%87/1644809
9. https://www.techinasia.com/rise-fall-china-happy-farm-social-game-2012 [posted 28/12/2012, last accessed 10/06/2022]; https://www.chinasmack.com/happy-farms-popular-online-game# [posted 21/10/2009, last accessed 10/06/2022]

Image Captions

Fig. 1. Examples of urban homesteads and their homesteaders from social media: 1) Homesteads patches taking over undeveloped lot [source: Xigua videos]; 2) retired man homesteading under the light rail [source: Douyin]; 3) a grandma bringing water for her homestead [source: xcool.com]; 4) middle-aged man homesteading under a bridge [source: Douyin]; 5) urban homesteads spring up inside a stagnated Evergrande construction site [source: Douyin]; 6) homesteads established along a river bed [source: Douyin]

Fig. 2. Inversions of waste and labour: 1) Poster published in 1989 in honour of national model workers, the slogan reads [illegible] (Selflessly and respectfully presenting the glory of labour); 2) American Progress (1872) by John Gast, an allegory for Manifest Destiny and the American westward expansion; 3) a woman homesteading in a failed urban green space between the street and residential developments [source: Douyin]; 4) a 90-year-old grandpa who established a homestead with 11 varieties of plants in under a month [source: Douyin].

Fig. 3. Reversion to Nature: 1) Fairyland of Peach Blossoms by Qin Ying (ca. 1494-1552) [source: Tianjin Museum]; 2)&4) screenshots from a young man's urban homestead vlog where he compares his cultivation to the game Happy Farm [source: Douyin]; 3) a young woman's vegetables from her homestead by the river [source: Douyin].

Fig. 4. Subversion of Civility: 1) Calligraphy of the slogan 自己动手，丰衣足食 (do it yourself, want for nothing) by Mao Zedong for the documentary Nanniwan [source: Baidu]; 2) Poster with the slogan [illegible] (Protect Clear Water and Green Mountains, Empower A Beautiful Guangzhou) from Guangzhou Municipal Planning and Natural Resources Bureau; 3) A man homesteading with the caption "Homesteading for vegetables, do it yourself, want for nothing." [source: Douyin]; 4) A newly established homestead in a vlog with the hashtag #BeautifyOurEnvironment [source:Douyin].

Fig. 5. Examples of urban homesteads in Wuhan found through remote sensing analysis (Wang, 2023).

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Biography

Hanxi Wang is a licensed architect, urban geographer, and ESRC-funded PhD researcher whose work questions the dominant narratives of power and agency within the urban environment. In particular, she is interested in informal practices of urban ecology and the complex, sometimes paradoxical ways in which their practitioners negotiate, adopt, or subvert top-down structures of governance to create alternative visions of the city. She has multiple teaching and research experiences at Cornell University and the University of Oxford. Her current research project, Ruralizing Urban Wastelands [illegible] Homesteads and Subversive Metabolisms in China's Growing Cities, which investigates the subversive influence of displaced farmers in the wastelands of China's rapid urbanization and the potential of informal practices in creating strategies of urban metabolism, has been exhibited at Cornell University and presented at the 2022 Royal Geographical Society Annual International Conference in Newcastle as well as the 2023 International Geoscience and Remote Sensing Symposium.