Accepting the Unexpected

Research Plan: Towards an architecture of chance

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Accepting the Unexpected

". . . aim to give voice to the song of the Earth, to show by way of some glimpse of chaos how there were other possibilities… A building is formed in a milieu, but it also has a milieu within and around it, where new concepts and new ways of living can be shaped."[1]

1. Introduction

In the past, sciences were about substance and foundation like geology, physiology, physics, and gravity, but our environment is much more complex and consists of order and chaos simultaneously which is continuously being modified, composed, and recomposed by individuals and collectivities. However, it took a long time for us to understand that complexity and reflect on our practices. By the 20th century, with relativity, quantum theory, and the uncertainty principle, the foundations we know crashed, resulting in the appearance and acceptance of indeterminacy/chance in other disciplines related to architecture.

 In philosophy, indeterminism has been argued extensively regarding time, yet mistakes and accidents are viewed as valuable indicators for exposing the unconscious in psychoanalysis. In art to oppose causality and stretch the limitations of representation; Dada, Surrealism, and avant-gardes used various forms of techniques like collage and assemblage. Also groups as situationist internationalists, with their performative urban practices like dérive, combined planned and unpredictable in the dynamic implementation of public events. In music, aleatoric processes incorporating chance, improvisation, and interpretation are encouraged by composers like John Cage, followed by dance theatre and writing. Parallelly, advances in science and digital technologies studied complexity and employed probability to predict patterns of behavior and change. [2]

While other disciplines take the concept of chance as crucial to understand the world and integrate it into their practice, which took their practice to another level bringing freedom and triggering creativity, architecture is still concerned about solidity, rationality, structure,

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[1]*Ballantyne, A. (2007). Deleuze and Guattari for architects. Routledge. pp. 99*
[2] *Manolopoulou, Y. (2013). Architectures of Chance (Design Research in Architecture) (1st ed.) [E-book]. Routledge.*

firmness, and hierarchy. As we develop a better understanding of the indeterminacy of the future, tools and methods have been developed to control it so far. Today computational practices in architecture are being used to control indeterminacy and achieve the optimal instead of embodying it to the practice. That results in almost mass-production of repetitive and over-determined spaces and programs which limits the movement and creativity. In addition to that, most of those spaces will have the same destiny, being replaced with a new one.

The research focuses on an approach for the architect who is confronted with an increasingly indeterminate environment and cityscape with unexpected dynamics . Project site Binckhorst, a former industrial site, is indeterminate both structurally and socially. Structurally indeterminate since it is decaying, being restored, being destroyed, and also constructed simultaneously. It is socially indeterminate because it has fewer restrictions on the rules of behavior in opposition to the formal public space. Here the lack of definitions liberated the users into interpreting the space, which supports that accidental uses of space can become as meaningful as the predefined spaces.[3] It Shows that the area has excellent potential generating activity within the existing spaces that also form what gives Binkhorsts its own identity. Therefore, Binckhorst requires another approach.

 For that, this research will investigate how architecture can embody processes of indeterminacy and chance by studying its appearance in music, architecture, arts, and philosophy. Which will create a foundation but later expanded and implemented according to the conditions and by making use of the existing qualities of Binkhorst related to the studio theme Music Marvel. The result of the study is aimed to be a place that strategically embodies chance/indeterminacy within its operation, a public space that gathers the diverse population of The Hague by generating various events around music and performance. This research will cover the questions as follows ;

- If both the design process and building itself constantly interact with humans and environments' indeterminacy, why does architecture still keep this integrity? Could it be because allowing the chance to play its role also means a let go from the authority of architects?

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[3] *Doron, G. (2007). ...badlands, blank space, border vacuums, brown fields, conceptual Nevada, Dead Zones ... Field : Architecture and Indeterminacy, 1(1).*

If so, how can architecture loosen the control and be open to unexpected situations, therefore instead of trying to optimize, embody chance?

-Bergson suggests that accidents might break the routines of daily life and stimulate the imagination[4]. What kind of freedom would the application of chance provide, and to what extent the open-ended design of the performance space can activate creative behavior?

-How can architecture strategically integrate concepts of chance/indeterminacy in its program, learning from art, music, and philosophy, to promote freedom and creative behavior?

-How can the Music Marvel in Binkhorst be structured like life, like indeterminate, and be in the chaos, belong to the confusion, and represent its culture? Therefore, what kind of situations around music and performance can be generated here?

Keywords: chance, indeterminacy , indeterminacy in architecture , chance in architecture , improvisation , aleatoric performances , music and architecture

Fig.1. Photo of *Structet* , a fluctuating formation consisting of 52 visual and sonic improvisers , TodaysArt Festival 2006 – The Hague, NL

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[4] *Bergson, H., & Mitchell, A. (2021). Bergson's Creative Evolution (1st ed.) [E-book]. Henry Holt.*

POWER

always variable
and constantly
being altered

indeterminacy in...

nature
environment
Binckhorst
socio-political-
economical dynamics
human activities

unexpected

unexpected situations
disorder
complexity
interpretation

socially and
structurally

RESEARCH

what it does?

what is the effect?

control

avoiding unexpected
situations
optimization
repetitive/over-determined
spaces/programs
limiting tools
control of movement
control of mind

**constant
change in...**

culture
program
needs
space
requirements
use of space

PROJECT

what there is?

what is the intention?

PROBLEMATIZATION

what could it be?

what could be the
intention?

a place that

forms around music,
a public space that
emerges from the
chaos and encounters,
where new
experiences can be
invented

DESIGN

embrace

instead of controlling,
embodying chance/
indeterminacy in
programme

what could
it do?

what could
be effect?

activate

free movement
playfullness
creativity

liberation of...

mind
body
resistance to..

conventional practice
institutionalization
rationalization

POWER

as improvisational practices in music
collage/assemblage of avant-gardes

Fig.2. Problematization diagram of the research

2. Methodology

2.1. Categorising & Cataloguing

To have a holistic approach, I first investigated different concepts around indeterminacy/chance in various disciplines, moving back and forth between philosophy, music, architecture, and art through literature review and case studies. Selected approaches and works are categorized under main concepts, creating a dialogue between the authors . Later to be investigated in detail and collected in a catalog, indicating the strength and weaknesses. That will lay down the theoretical and practical foundation for the next step, designing the events and situations as fragments.

2.1.1 Theoretical Framework

2.1.1.1. Aleatoric Performances in music / in architecture

Music's nature is meant to be improvisational, dating back to medieval times until it became institutionalized and rationalized. However, limitations of conventional musical notations have naturally triggered musicians to develop alternatives to notational systems. Parallelly the concept of indeterminate music rose, which has been a concept that is predominantly associated with methods of composition based on chance operations in music. Indeterminate or chance can be classified into three categories in music: the use of random techniques to provide a fixed and predetermined score where chance element is involved only in the process of composition, movable form where notated events are provided by the composer but their arrangement is left to the determination of the performer, and indeterminate notation where where the performer chooses how to read visual or verbal signs instead of traditional musical notation, such as graphic notation and texts.

 In music, more indeterministic applications are possible, whereas in architecture, it's harder to achieve. Chance can be seen in two steps in architecture; first has a role in the design process since it helps shape the imagination and the event of thought itself. Second, the building's performance in terms of perception and physical change through time, as it is rebuilt and co-made by architects, non-architects, social life, and the environment. Their lifespan differs significantly from that of a musical performance, but the question of receptivity to change is

relevant to both. Nevertheless, experimental approaches can give further inspiration for expanding the operations in architecture. Here I will try to explain concepts related to chance/indeterminacy by connecting with different approaches from architecture, music, and philosophy.

2.1.1.2. Participatory Design , Expansion , Releasing Control

In the works of John Cage, instead of fixed results, chance outperforms the author's control to build flexible, pluralistic, and performative configurations.[5] He questioned everything from tools, spaces, and representation techniques to disturb conventional practices. For example, the 'prepared a piano' by implementing elements like screws, bolts, rubbers, etc., to generate different sounds and take away the performer's control over the music. Later he developed techniques where the author almost completely ***released the control*** of the performances. Cage's larger goal was to erode his influence over the final product progressively and, as far as possible, liberate himself from his own taste and ideas by pursuing indeterminacy[6]. The well-known silent piece 4'33" is entirely unpredictable except for the three-time frames defined by chance operations. Therefore the sounds of the performance space will be the performance itself which will be different in each performance. Another technique was game pieces used by John Zorn, a composition that allows musicians to engage with one another. Unlike free improvisation, musicians must agree to a set of rules. Therefore it might be defined as organized improvisation. In the case of architecture, the idea of improvisation based on a set of rules is more applicable.

 The audience has a vital part both in music and architecture. Architects like Cedric Price and Lacaton & Vassal, and Lina Bo Bardi also take the audience into account and create space for them to participate by questioning and complimenting their design aims and appreciating the environments they create. ***Non-designing*** is also one of the concepts that especially Lina Bo Bardi and Lacaton & Vassal incorporated in their design. Since, when employed in creative works, the imprecision of an unfinished shape offers an openness that allows others to experience the work. Therefore the design expands with time and the user's interpretation.

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[5] *Manolopoulou, Y. (2013). Aleatoric form - Architectures of Chance (Design Research in Architecture) (1st ed.) [E-book]. Routledge.*
[6]*ibid*

John Cage: Suggests that compositions are not objects but they are processes and questions the generally accepted norm of making more and more music. Brian Massumi has a similar approach as follows:

Brian Massumi: "Built form could be designed to make the "accidental" a necessary part of the experience of looking at it or dwelling in it. The building would not be considered an end-form so much as a beginning of a new process. Stable forms can be designed to interact dynamically..."[7]

Pierre Boulex: In his compositions performers are given choices within a limited range of possibilities which is similar to Cedric Price's approach of programmatic in architecture.

Cedric Price: In his Generator project he designed a menu of items caters for individual and group demands for space. The highest level of chance appears in Fun Palace where the structure can also change itself without any input randomly, creating completely random situations.

Lacaton & Vassal: They support the idea of allowing architecture's capacity to welcome accidental environments and positively enhance non-designable events. Which relates to Lina Bo Bardi's approach. As she says:

Lina Bo Bardi: 'Until people enter the building, climb the steps and take possession of the space in a "human adventure" that develops in time, the architecture does not exist, it is an inhumane cold scheme.'[8]

2.1.1.3. Adhocism / Non-designing

Cage questioned the popularly accepted standard of generating more and more music. Similarly, in architecture, Lacaton & Vassal questioned the wide expectations of most cultures to constantly produce new buildings and public places as well as Jenks and Silver in their book Adhocism: The case for improvisation. They defined adhocism as "a method of creation relying particularly on resources which are already at hand." [9]This also relates to concerns of this research. Should we add one more music venue designed in a specific way, or should we stop a moment and think of the site's potential, existing structures, and activities?

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[7] *Brian Massumi, "Sensing the Virtual, Building the Insensible", in Stephen Perrella (ed.), Hypersurface Architecture, Architectural Design (Profile no. 133), 68, 5/6, (May–June 1998), pp. 16–24.*

[8] *Manolopoulou, Y. (2013). Aleatoric form - Architectures of Chance (Design Research in Architecture) (1st ed.) [E-book]. Routledge.*

[9] *Martin, C. (2015). Design Issues, 31(2), 105–106. Retrieved November 12, 2021, from URL: https://www.jstor.org/stable/43829338.*

Jenks and Silver: " Design is what everyone does all the time. Buildings are designed, as are 'consumer durables', disposables such as clothing, and anything else - including food- that has been shaped and packaged for a market. Adhocism deals with the fact that choice and combination are more central to design than novelty." [10]

2.1.1.4. Designing the event

Cedric Price used mechanical flexibility in order to generate different spaces and different activities. Bernard Tshcumi's intentions were similar but the method was different. He proposed an 'architecture of event' and an 'architecture of disjunction' space , movement , action and event come together and expand each other. Architecture here is more about generating events than creating a form . These ideas are relevant to this research discussion of indeterminacy and chance as here architecture allows and promotes different possibilities.

Heidegger: Suggests that the concept of architecture is the site of human activity and meaning rather than as structure or enclosure.[11] Which relates to Tschumi's work. Which is:

Bernard Tshumi: Making room for events.

Diller & Scofidio: Also supports this concept by claiming architecture doesn't aim to produce spaces , but to produce events, situations, as it is tied up with the body of users.
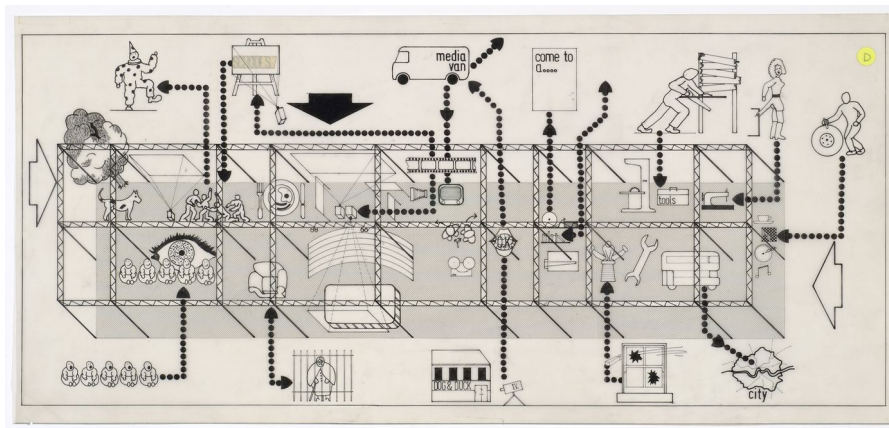

Fig.3. Designing the event, *Cedric Price,Diagram mapping programme and community for Inter-Action Centre, London, England*

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[10] *Manolopoulou, Y. (2013). Aleatoric form - Architectures of Chance (Design Research in Architecture) (1st ed.) [E-book]. Routledge.*

[11] *Heidegger,M. (1951) Building,Dwelling,Thinking*

2.1.1.5. Liberating the mind and body & Playfulness

Bergson suggests that we respond to our environment with ''reflex acts''. Which means we use the space using our memory as when we see a gate we initially know that it is an entrance . This behaviour makes us inattentive and blocks the need for creative thinking.[12] What consists of this memory is the elements of architecture that don't give choice to our mind and bodies . As a result the movement becomes repetitive as the architectural spaces that determine the movement.

Bergson: One way to get out of this cycle are accidents according to Bergson. He suggests that they are imagination in action: they can imitate, complement or interrupt, and totally alter our thinking. [13]

Diller & Scofidio: Diller & Scofidio focuses on individual perception in order to achieve similar results. They intend to reclaim the centrality of individual perception and freedom of movement, rather than focusing on the notion of autonomy .

One parallel idea is introducing spontaneous play in order to liberate the mind and body from ordinary life. Huizinga in his book Homo Ludens suggests that play was the initial motivation for cultures to arise.[14] However , as they evolve the playfulness dissapeared .

Huizinga: According to Huizinga, playing in an unstructured and undirected manner is a type of liberation from everyday existence.

John Zorn: John Zorn introduced the idea of playfulness into music practice with his game pieces as an indeterminate composition. He developed a game as composition,composition as game.[15]

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[12] *Manolopoulou, Y. (2007). The Active Voice of Architecture: An Introduction to the Idea of Chance. Field : Architecture and Indeterminacy, 1(1).*

[13] *Bergson, H., & Mitchell, A. (2021). Bergson's Creative Evolution (1st ed.) [E-book]. Henry Holt.*

[14] *Huizinga, J., & Eco, U. (2009). Homo ludens. Einaudi.*

[15] *Price, C., & Hardingham, S. (2016). Cedric Price Works 1952-2003: A forward-minded retrospective. Architectural Association.*

Liberating the mind and body in order to trigger creativity will be one of the aims of this research. Therefore playfulness , playing with perception and signs , introducing accidental encounters will be concepts to come back in different stages of the research.

2.1.2. Practical references
2.1.2.1. Data from users point of view about space into drawings

Designing a music space requires a comprehensive knowledge of music and performances. Since this research deals with improvisational practices, different descriptions of the imagined ideal space of performers and users will be collected and translated into drawings. This information can be collected with online questionnaires.

As an example, John Cage describes an ideal performance hall as he also starts to question and speculate about conventional architecture and specially designed concert halls.

"It is indeed astonishing that music as an art has kept performing musicians so consistently huddled together in a group. It is high time to separate the players one from another, in order to show a musical recognition of the necessity of space, which has already been recognized on the part of the other arts, not to mention scientific awareness. What is indicated, too, is a disposition of the performers, in the case of an ensemble in space, other than the conventional one of a huddled group at one end of a recital or symphonic hall...The conventional architecture is often not suitable.... In this latter case, the further separation of performer and audience will facilitate the independent action of each person, which will include mobility on the part of all. "[16]

2.1.2.2. Case Studies

Case studies ranging from realized and visionary projects related to discussed concepts will be investigated further as practical references listed below.

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[16]*Cox, C., Warner, D., Cage, J. (2013). Composition as process:indeterminacy. In Audio culture: Readings in modern music (pp. 251–263). essay, Bloomsbury Academic.*

Generator , Cedric Price: participatory design, users create their own spaces selecting from defined options , generating activity , releasing control , allowing unexpected situations , activating /liberating body and mind,mechanical flexibility

Fun Palace , Cedric Price: Architecture of event , no specific form , mechanical flexibility , participatory design , generating activities , building as a performance , no specific programme, releasing control , activating /liberating body and mind

Blur, D&S : Play with the individual perception , no specific form , architecture of event , activating /liberating body and mind

The Shed , D&S : Variety of programmes of spaces , mechanical flexibility , form changes between limited and defined options.

National library of France , Bernard Tschumi : Program is about movement, architecture about constant dynamic, architecture of event rather than a frozen monument

Activating the Void , Openact : Expansion , non-designing , promoting activity , enhancing the existing cultural activity , reuse , activating public action

Museum of Modern Art,Lina Bo Bardi: expansion , activating public action

Fig.4. Imagining the unexpected situations *, Lina Bo Bardi, sketch for the Museu de Arte de São Paulo, 1957-68. Courtesy Instituto Lino Bo e P.M. Bardi, São Paulo*

2.2. Tools

This research will also draw on the process of design and the tools being used. Sketching and digital tools both have their strengths and weaknesses. Sketching might not be as reliable and effective as digital tools but can be powerful regarding representation of time and movement. On the other hand, digital tools limit the process and optimize spaces, but also faster in bringing the fragments together and creating different variations . In order to make the most out of it , we should not over-determine the instruments' operation. Methods like manipulating , transforming , dismembering and assembling an existing material or tracing a line from imagination can be useful. There are certain limits and accepted formations of the digital softwares we use, but sketching can be an extension of our imagination. This research aims to question that and will try to integrate sketching with digital tools. By that, it intends to explore new possibilities within the tools that architecture uses. As our minds want to explore vital order, it can liberate itself from the automated order. [17]

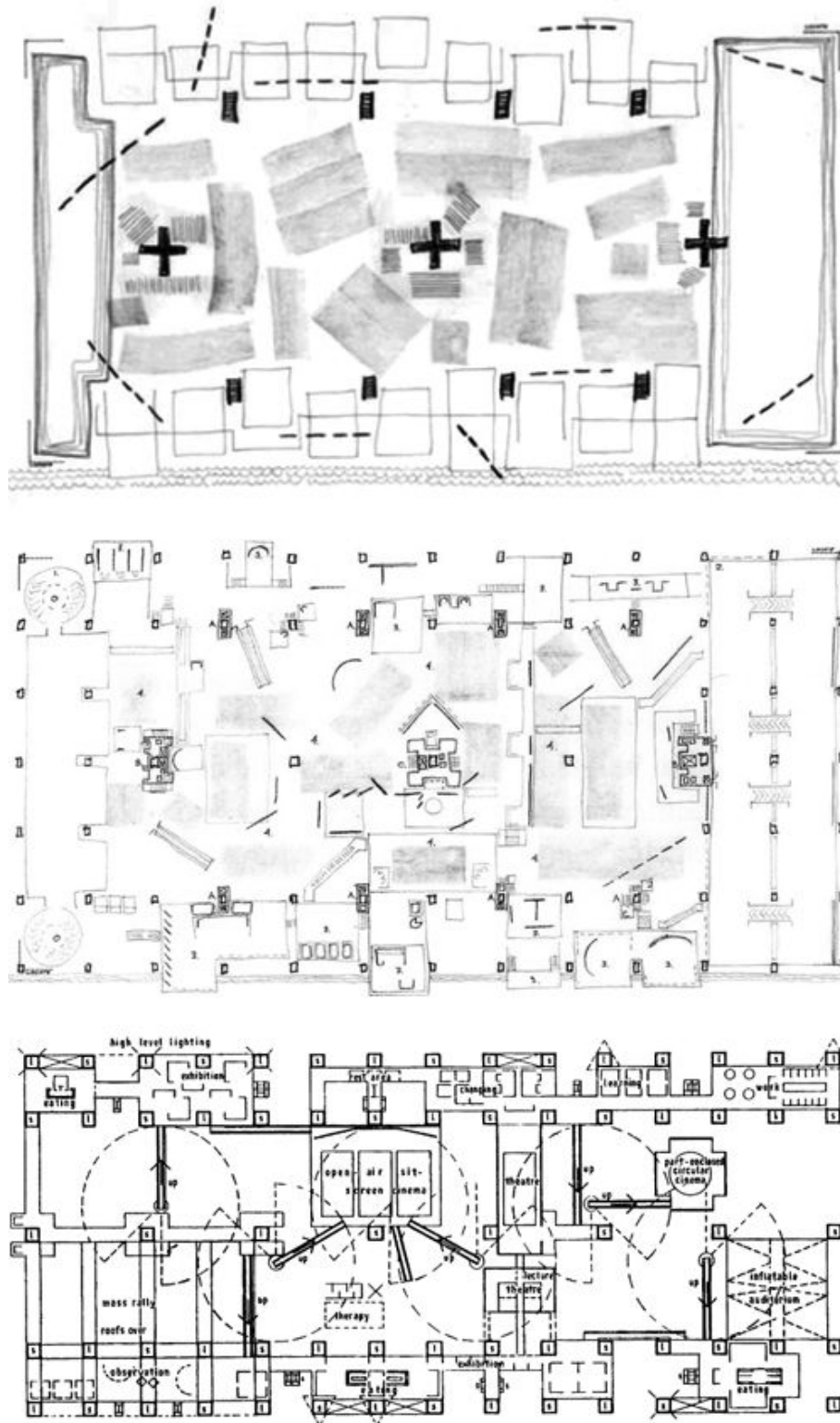[17] *Bergson, H., & Mitchell, A. (2021). Bergson's Creative Evolution (1st ed.) [E-book]. Henry Holt.*

Fig 5. Open ended diagrammatic floor plans,*The Fun Palace, conceptual plan -> working plan -> final plan [Cedric Price /
1963]*

2.3. Encounter , assemblage , notational systems

Both Dada artists and Avant-gardes used methods of intentionally disordering, dislocating and then creating assemblages. In the process of dislocating, disordering but then also noticing and deciding if the work is completed consists of a chance process .

These methods and notational systems that have been used in aleatoric practices which have more freedom than the conventional ones can be used in architecture. For example It is preferable to use only dynamic terms of reference during the design process, rather than specific names or signifieds that over-determine the final output. Assemblages in order to design fragments, encounters rather than a unified object and notational systems in order to represent the potential of events . Therefore rather than working with forms , letting the fragments come together and imply different possibilities of the form allowing experimentation and chance.

3. Research and Design Limitations

First of all there are not many sources directly on the relationship of chance and architecture, therefore this research assembles its own catalogue from different disciplines as music, philosophy , art and architecture , combining practical and theoretical approaches.

Secondly the question about flexibility in architecture, indeterminacy does not always imply flexibility. Buildings that are both flexible and rigid may both elicit skepticism and the possibility of the unexpected, but in opposite ways. Unpredictable chance may have an impact on any form of structure, whether it is flexible or not, functional or not. However.In the context of modernist architecture, indeterminacy in structures is typically considered in terms of flexibility, a concept connected with function and efficiency. Change should be possible in a flexible structure. This can be accomplished by redundancy, the lack of predetermined content, or use. Technical measures, such as a system for rearranging components, can also give flexibility in a structure. By designing a structure to be mechanically adaptable, the architect is defining how the building may change rather than attempting to dictate its look and usage. However , there are not many successful examples of mechanically kinetic structures which are

envisioned in Fun Palace[18] but never realized. Also In The Shed[19] , it is realized but did not go as smoothly as it envisioned , yet it still brought an innovative and different approach to architecture. Since mechanically being flexible is not the only way to achieve the intended result , whether or not going that direction will be decided through the research according to the requirements of the site and the space.

And last , the digital tools we usually use in the practice limits the design process therefore within the research and design analogue tools such as sketching will be used in a hybrid way in order to increase creativity and expand the limits.

4. Critical position

The methods and ideas above also take critical positions. For example, Dada artists implied a political position by loosening control of the work and pursuing an expression of the disorder, which was a criticism of rationalism and institutionalism.[20] A similar situation can be seen within the music discipline. With the development of graphic scores and aleatoric practices, musicians like John Cage and Pierre Boulez intended to disrupt conventional musical methods. The architects above, like Cedric Price, Lacaton & Vassal, Bernard Tschumi, Lina Bo Bardi, Charles Jencks, and Nathan Silver, have explored concepts such as adhocism, participatory design, surplus space, in-between space, designing events rather than space, and non-designing. These concepts embody chance and also take a position as criticizing the authorial control, rationalization, and conventionality. Therefore this research and design also will take its position as criticizing the monumentalization, rationalization and authoritarian control of architecture.

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[18] *Price,C. (1959-1961), Fun Palace for Joan Littlewood Project, Stratford East, London, England*

[19] *Diller, E. , Scofidio, R. (2008-20015)The Shed, New York , United States*

[20] *Manolopoulou, Y. (2013). Fragment,Part,Whole , Architectures of Chance (Design Research in Architecture) (1st ed.) [E-book]. Routledge.*

5. Design Intends

In Binckhorst the lack of definitions liberated the users into interpreting the space, which supports that accidental informal uses of space can become as meaningful as the predefined formal spaces. In addition, it shows that the area has excellent potential for generating activity. Promoting creativity and fluidity with programmatic indeterminacy is an exciting concept which will be further developed strategically, concerning musical events with the design as a contemporary public space. [21]

In opposition to architecture that rationalizes, monumentalizes, controls, this research aims to open architecture to chance. Therefore the most perfectly designed music venues are not the focus of this research. Instead of envisioning the whole, designing operations that generate combinations of events will be the intention. [22] Openness will be one of the key principles of this research in the sense of being open to non-expected situations, encounters, uses of the space, and connections as an architect. The building, in that case, can be defined as a performative assemblage[23] where the building elements, as well as human activity, programs, and performances, are juxtaposed. [24]It also aims to become an inclusive place that can gather the highly diverse population of The Hague, trigger them to share and produce.

One of the main aims here is that if we take music events as a leisure activity and considering that today's leisure activities are mostly based on consuming, this research aims for a space that is not about consuming the music but producing, therefore, a leisure activity that is a liberating experience from our daily lives.[25]

Interpretation and improvisation was the central aspect of chance operations in the compositions of John Cage, who believed art should follow how nature operates. This research

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[21] This act by the users here happened unintentional to the designer of the building but there are practices which use intentionally non-designing like Lacaton & Vassal .

[22]Umberto Eco theorizes the significance of openness in modern aesthetics in his open work, concentrating especially on what it means for an author to see their work as unfinished and open to chance—an important topic for all creative processes, including music and architecture. See *Cox, C., Warner, D., Eco, U. (2017). Poetics of the Open Work. In Audio culture: Readings in modern music (pp. 241–251). essay, Bloomsbury Academic.*

[23]   *Manolopoulou, Y. (2013). Fragment,Part,Whole , Architectures of Chance (Design Research in Architecture) (1st ed.) [E-book]. Routledge.*

[24]See *Tschumi, B. (1981). The Manhattan transcripts. Academy Editions.*

[25] *Huizinga, J., & Eco, U. (2009). Homo ludens. Einaudi.*

aims to achieve a similar approach in architecture since the design process also depends on various complex circumstances related to humans and the environment. This interaction with the indeterminate factors continues through the lifetime of the building.   Therefore performance, time, and movement will be the main design aspects. Ambition is to design a place that forms around music, a public space that emerges from the chaos and encounters, where new experiences can be invented.

6. Conclusion

By reconsidering the tools we use within the design, breaking the repetitive use of spaces, generating different encounters, or designing open-ended ways to embody chance into architecture that can trigger creativity both for the architect and the user. Furthermore, with this action, an effect which improvisational practices brought in conventional music is expected in architecture. This research will also underline integrating time and movement in architecture by using sketching and notation, which will add another dimension to representation techniques.

Chance and its broader field of indeterminacy have a crucial effect on subject-object relationships and reshaping the place when inhabited in an architectural environment. Highlighting the importance of design as a continuous activity is an essential step in architecture; this way, hybrid forms of creative innovation emerge.

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