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# Reading Architectural Spaces Based on Historical Dialectical Models

(Case study: Bernard Tschumi's architecture)

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**Abstract:** This research focuses on the role of dialectics in architectural design and the interpretation of text and architectural spaces based on this approach. In today's constantly changing post-modern life, the issue of meaningful and identity-based design in architecture is a topic of discussion. Dialectics necessitates the creation of spaces derived from fundamental concepts of existence for human interaction with the environment and the continuous creation of events. As one of the acts of existence, dialectics can serve as a concept in phenomena and explain the method in categories. The research is conducted using descriptive, analytical, and phenomenological methods, and the various layers of conceptual existence are analyzed through analogical and inductive approaches. The concepts are then reviewed using the dialectical method, and the different modes of interaction between component layers are analyzed. The Swiss architect Bernard Tschoumi's works are examined and interpreted as a case study, and the three-level component concepts are explored. The case study is analyzed, and the results are extracted hermeneutically. The components of architectural design derived from dialectics are then read, and an effective dialectical model for text reading is developed, which has the ability to adapt and visualize the conceptual components that are influential in design. This process has the potential to provide identity to architectural spaces in today's continuously evolving life.

**Keywords:** *Bernard Tschoumi, event, space, text reading, dialectics.*

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## **Introduction**

The examination of identity and meaning in the realm of contemporary human perception and emotion is an inevitable necessity for establishing an analytical connection with the reality of modern societies. In postmodern society, due to the diversity of cultural patterns and their reflection in behavior and social events, there is a need for the development of a method based on concepts related to existence and in line with the evolutionary movement. The exploration and interpretation of a work or event in various historical, social, cultural, and artistic dimensions, from its emergence to its occurrence and its relationship with other phenomena, is crucial in this field. The laws of existence and nature have existed prior to the emergence of societies. Objective laws of social development through the laws of natural evolution can be effective (John Bellamy Foster, 2017;100). Dialectics has always had a significant role as a method and concept in traditional and modern analytical spaces in its historical evolutionary process. Dialectics means "through" and "towards." It refers to an experience that is constantly renewed and does not confine itself to a stagnant and rigid framework (Georges Gurvitch, 1972;100). Dialectics deals with its own subject but does not present its subject directly to humans. (Kosik, 1386;7) We propose defining the dynamism of thought as dialectics (Foulquie, 2021;146). The concept and method of dialectics have always been present in the intellectual background of the East and West, but it was formulated in its own form in the thinking of Western rationalists and causality-oriented debates in ancient Greece. Dialectics originated from the concepts of dialogue and artistic debate. Initially, dialectics was not a set of logical rules but a social relationship from which logical rules were derived. Parmenides was the first to use the term "dialectic"<sup>1</sup> (Joel Kovel, 2017:318). Heraclitus is the first dialectical thinker who believed in the uniqueness of events and phenomena due to continuous change and evolution in time and space. He said, "You cannot step into the same river twice," which indicates the effect of transformation and movement in phenomena and the realization of their field. This perspective was later expanded by Socrates, Plato, and Aristotle. The process of transformation in dialectical explanation starts from abstract concepts and ends with inclusive subjects (Thomas T. Ruskin, 2017:318). Dialectics has a cognitive method and encompasses a method for thinking and searching for truths in issues. The evolutionary nature of meaning to matter in art and architecture gives a special place to dialectics as a method for manifesting text derived from the existence of phenomena in interaction with the environment. Since the creation of identity, specialization, and human interaction with space have always been a concern for thinkers in this field, the dialectical process derived from the existence of phenomena can play a role as a concept and method. In this regard, we examine the thought of an architect from the perspective of dialectical interpretation of their works towards the evolution and improvement of dialectical models.

## ***Bachgrand Literature***

*Dialectical Autobiography (Thomas T. Raskin 2017:326)<sup>2</sup>*

Dialectical inquiry uncovers itself by answering the questionnaires designed by Hegel (autobiography) and includes three principles of existence, essence, and concept:



- The principle of existence is divided into quality, quantity, and size.

Dialectical inquiry in this principle is determined by the method of externalization.

- The principle of essence includes appearance and actuality, which is related to the internal determination stage of dialectical inquiry.

The dialectical method is called reflection-grounding, which can also be called internalization.

- The principle of concept is divided into subject, object, and idea, and the dialectical method is its formation and development.<sup>3</sup>

*Elements of Dialectics (Lucien Seve 2017)*

Every phenomenon derives its identity solely from its dialectical relationship with its opposing element. Therefore, the third element negates both the other two elements and realizes itself, resulting in the emergence of an internal movement. This can be called the negation of negation. The element of negation contains its own negation within itself. These two elements mutually influence each other based on their internal relationship and produce a third element, which is found in the first element and defines itself in relation to the first element. The third element is then transformed back into the negation of the second element, thus recovering its content by focusing on the deficiencies and limitations of the first element, which were predetermined by its negation.

*Aspects of Dialectics (Georges Gurvitch 1972:29)*

Dialectics has three aspects, which themselves have dialectical relations with each other:

- Dialectics as concrete and real movement is a way that human totality and historical social realities have adopted.
- Dialectics as a concept is something hidden in all parts of existence and nature.
- Dialectics as a method is the complete identification of the movement of social and historical totality.

*Directions of Dialectics (Fredric Jameson 2017:197)*

- The first direction is related to reaction or self-reflection. This approach can be described as simultaneous in dialectics.<sup>4</sup>
- The second direction highlights issues related to concreteness, narrative, and historical explanation. It is associated with transformations over time.<sup>5</sup>
- The third aspect of dialectics focuses more on the critical aspects of dialectical work. It emphasizes self-contradiction and perhaps deserves more attention. This principle is where dialectical thinking begins with contradiction.<sup>6</sup>

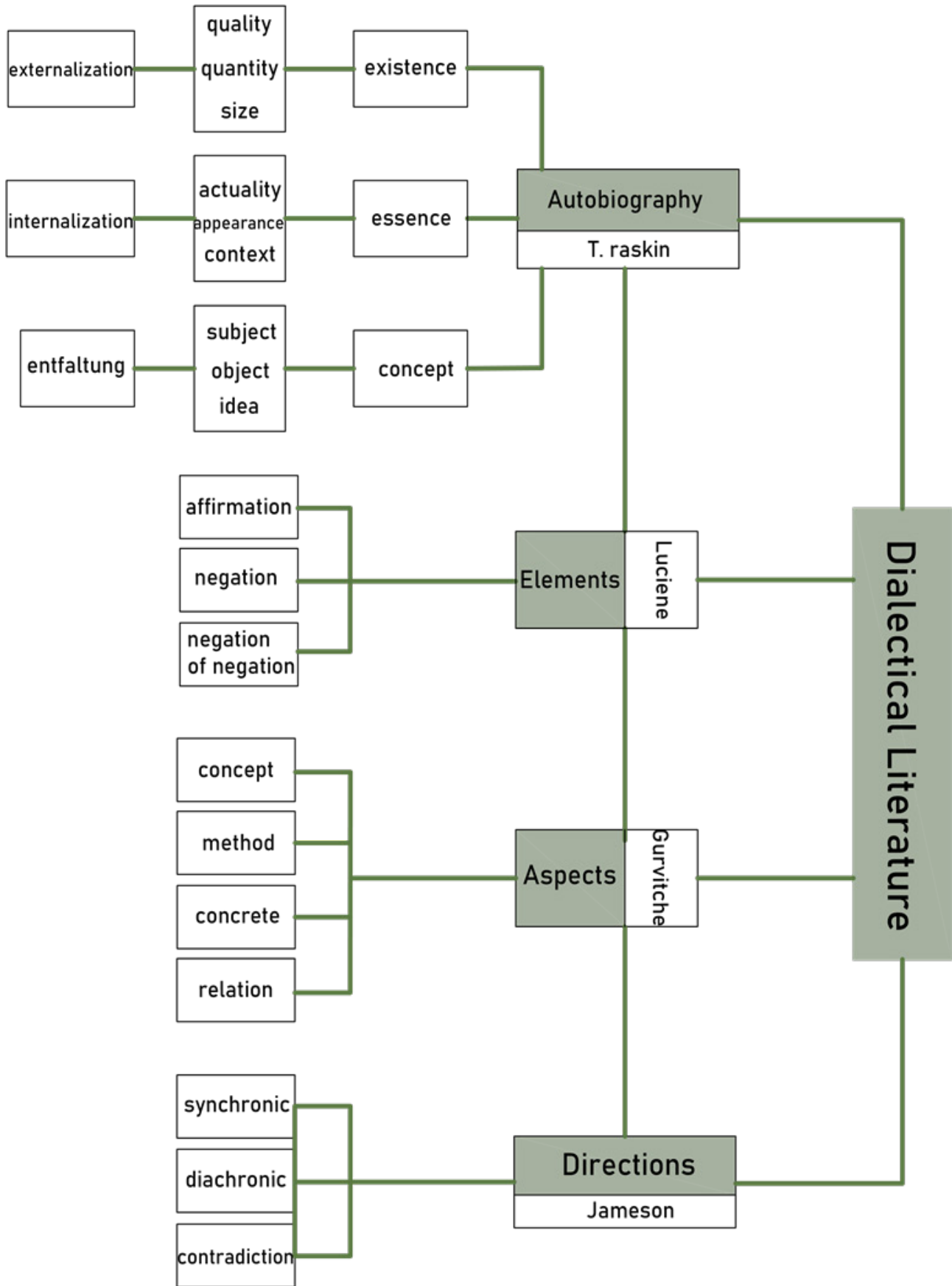


Figure 1: Dialectical Literature (Sources: Authors)

Research History

Table 1: Background history of dialectics (Sources: Authors)

Dialectic Description	Dialectic Area	Dialectic Synthesis	Dialectic Type	Historical Existence	Scientists
Feng shui – Fuzzy Logic Moving towards Nirvana	Being-Nature-Human Being-Human	Contradiction Process Nirvana	Yang Yin(Tao) Awakening ,Liberation	Fourth century B.C. 189B.C.	Lautze Buddha
Human-centered – A Way of Life	Human	Lei	Unity , Stability (City)	174B.C.	Confucius
Flowing in all Phenomena – Conflict between Opposites	Being-Human	Parmenides	Logos and Writing	170B.C.	Heraditus
Consecutive and Purposeful Questioning	Society- human	Aristocracy	Democracy, Monarchy	179B.C.	Socrates
Hierarchy of Existence - Becoming	Being-Human	Dialectic	Presence and Absence Speech and Writing <sup>7</sup>	175B.C.	Platon1
Moving towards the Creation of Techne	Being	Techne	Poesis, Mimesis	175B.C.	Platon2
Course in Rhetoric and Logic Two phenomena destroy each other without dissolution	Being-Human Being	Metaphysics Continuity Being	Catharsis, Eros Sequence, Alternation	171B.C. 171A.D.	Aristotle Flotin
Simple Existence against Church Luxuries	Society- human	Protestant Luther	Mystic and Teacher	1211A.D.	Francis. Dominik
Movement from Multiplicity to Unity Movement in the logic of events	Being-Human	Transcendental <sup>8</sup>	Noumenon, Phenomenon	1804A.D.	Kant
Dialectic Subjective Movement and Endless Return Pragmatism Search for Existing Balances in Diversity Controversial course. The link between man, society and history The journey from the essence of existence to the absolute spirit	Society- human Society- History – Society Being	Idealism Without Synthesis Marxism Synthesis	Self and Other Dialectical Opposition (Pluralism) Capitalism ,Proletariat Thesis and Antithesis	1814A.D. 1820A.D. 1842A.D. 1819A.D.	Fichte Proudhon Marx Hegel
Human Evolution	Human	Beyond Morality	Before Ethics,Ethics	1844A.D.	Nietzsche1
Super Human	Human	Super Human	TraditionalMan,Modern Man	1844A.D.	Nietzsche2
Semiotics	Being-Human	Semiotics	Langue and Parole	1917A.D.	Saussure
Movement in Truth and Appearance	Being – Nature	Becoming	Being and Non-being	1926 1889A.D.	Heidegger
Movement in Material Dimensions mind and brain The psychoanalytic course of self-knowledge (Fundamental Order)	Being-Human Human	Death of the Subject Symbol	Subject and Object Self and Other (Phase Being)	1911A.D. 1911A.D.	Neo Materialism Lacan
The Course of Human Social History	History	Without Synthesis	Master and Slave	1928A.D.	Kojeve
It is connected to human conditions and social action. Codes and dimensional space of the text A walk in the history of space- different spaces	Society – Being Human History	Existentialism Reader Genealogy <sup>9</sup>	Existence and Essence Author and Text Archeology and Contemporary Studies	1941A.D. 1941A.D. 1944A.D.	Sartre Barthes Foucault
Relationships between Reality and Acute Reality	Society	Simulation <sup>10</sup>	Reality and Recognition	1967A.D.	Baudrillard
Deconstruction of meaning and belonging to the present	Being	Deconstruction	Interiority, Otherness <sup>11</sup>	1967-1971A.D.	Derrida
Synchronic,Diachronic,Contradic tion Anthropological place and super modern man	Being Being-Human	Subject position Without Synthesis	Here, There Place, Non place	1974A.D. 1935 A.D.	Jameson Marc Auge

### ***Dialectical Definitions:***

- Dialectics is the study of the real movement, the movement of groups and classes in societies, and the effects of civilization and the construction of things, and ultimately the participants in these events. It is a continuous movement that encounters new and unforeseen internal and external difficulties in its own curved path (Georges Gurvitch 1972:13).
- Gaston Bachelard defines dialectics as a method of contemporary sciences that dialectizes a simple matter.<sup>12</sup> Dialectics itself is dynamic. Dialectics is a practical method that aims to remove the curtain from each contradiction and these two contradictions become a simultaneous diagram in dialectical analysis, where each one is functionally related to the other and at least these two enter into a set (Georges Gurvitch 1972:18).
- Dialectics is always a negation. However, this negation is not because it puts theses and antitheses against each other, but it is only a display of polarizing style. Dialectical negation is only a destroyer of formal logic, an argumentative matter that leads to issues that these matters hide from theses (Georges Gurvitch 1972:27).
- Dialectics undermines any stability in social reality and also in any knowledge and is a battle against artificial constructs. It proves in reality and in concept that things are to some extent flexible and adaptable.
- The basis of dialectics is the unity of opposites. It is a unity that includes the integration of these opposites and also includes their differences (Lucien Sève 2017).<sup>13</sup>
- Dialectics is not a chapter in the history of philosophy belonging to the past, but it is a speculative knowledge resulting from a kind of thinking about the future that has not been realized.<sup>14</sup>
- Dialectics is a way of understanding. Dialectics strives for integrity, but it moves towards integrity.<sup>15</sup>
- Dialectics is fundamentally the principle of movement, the whole of life, and all actual activities. Dialectics is the essence of all true scientific knowledge. All limited essences are not fixed and in their final form, but they are changeable and perishable. Dialectics is a general and irresistible power that is not permanent against these limited essences.<sup>16</sup>
- Understanding the powerful influence of the fact that things are related, it indicates that the body cannot be separated from the soul, the economy from culture, the physical from the metaphysical. This interweaving of phenomena indicates the unity of these things. Important components in mystical consciousness that claim our unity with the world.<sup>17</sup>
- Dialectics is an effort to understand a world that is constantly changing and interacting.<sup>18</sup>





**Research Method:**

This research is based on interdisciplinary studies in the fields of philosophy and architecture. The research method is a combination of qualitative and quantitative methods and is based on descriptive analysis. Initially, the codes and content of the text were obtained from different layers of existential concepts, and hidden concepts in phenomena and the nature of interactions were explored using phenomenological method. The obtained results were analyzed using comparative (whole to part) and inductive (part to whole) methods. Since the subject of research is the methodology of thinking, concepts were also reviewed using the dialectical method, and the process of different modes of interactions, dual (polar) components, and the relationships between layers of phenomena at three levels were examined.

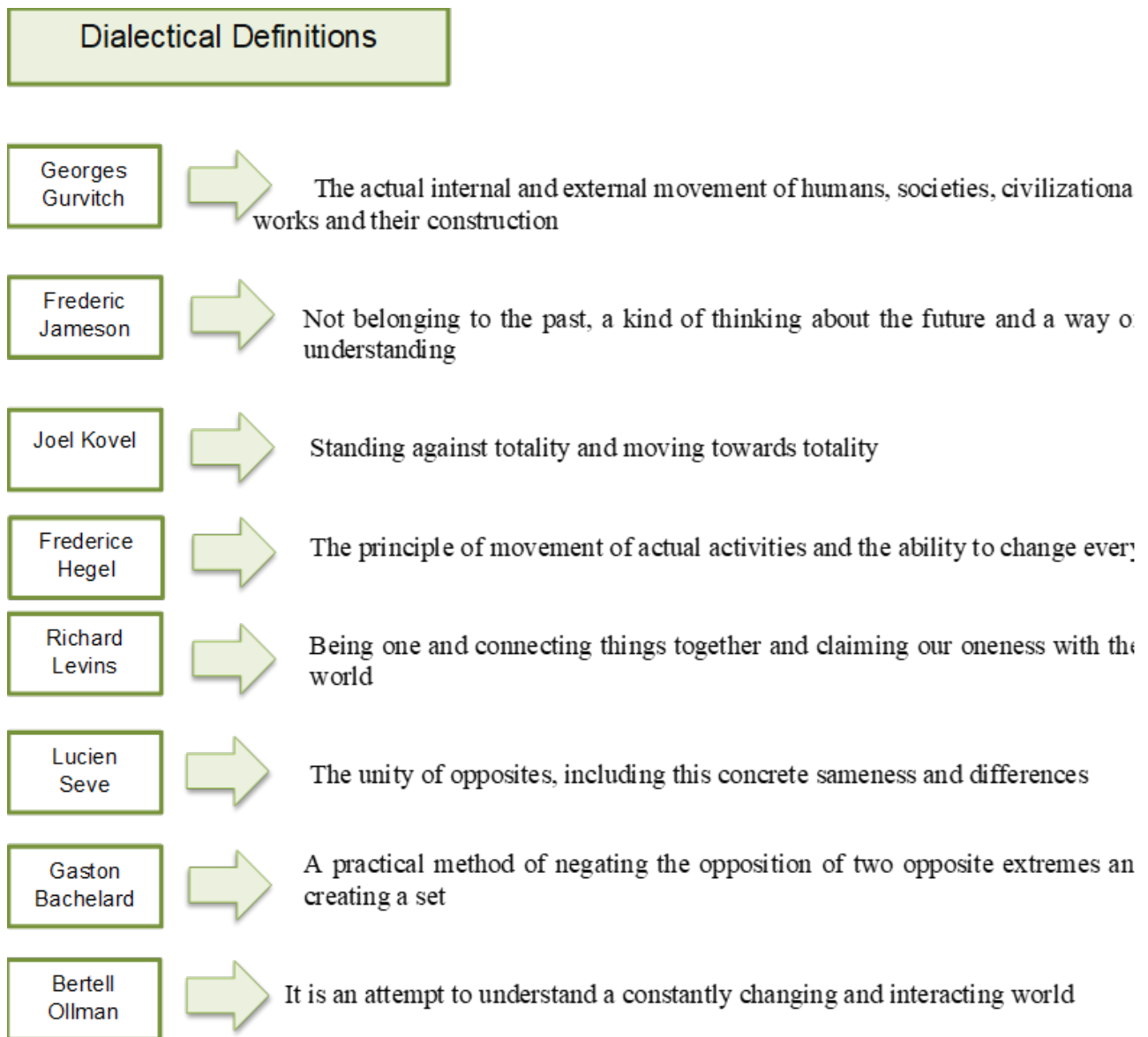


Figure 2: Dialectical Definitions (Sources: Authors)

## ***Types of Dialectics***

### *Dialectics of the Whole and the Part:*

The whole and the part are two opposing determinations that are perceived in relation to each other as an external matter. They can be connected through separation or connection. The whole is a pre-existing unity capable of being divided into parts, and the parts are elements that exist in relation to the whole and have the ability to shape the whole. The whole can be divided into various types of parts, and the parts can be combined in different wholes. (Lucien Sève 2017:144)

### *Dialectic of Quantity and Quality:*

Quantity is only something until it is not something else. This negation establishes both an internal limitation and an external boundary. The dialectic of quantity and quality has no fixed measure. Hegel considers it as a qualitative determination. Continuous change in quantity leads to a discontinuous leap in quality. (Lucien Sève 2017: 152)

### *Dialectic of Essence and Appearance:*

It refers to the essence and relations of phenomena. Phenomena and processes that arise from analysis and essence give rise to production. On the other hand, objective phenomena that interact with each other and are independent of essence perform functions. There are dialectical relationships from essence to appearance, which lead to the realization of the third phenomenon. This process goes from the world of imagination to the material world.

### *Dialectic of Being and Nothingness:*

Hegel says that being and nothingness are inseparable elements of unity and also represent a third element, becoming. Transition from one to another is inevitable. Being and nothingness exist through this third element. Hegel sees contradiction as the root of every movement and vital manifestation. When a being cannot transition from positive determination to negative determination, it is not alive.

### *Dialectic of Form and Content:*

It is one of the triadic concepts of dialectics and indicates that as the concept and content of a phenomenon change, its form changes in the objective world, resulting in a functional interaction that produces diverse phenomena. Thus, a phenomenon can experience being active or passive in different times and places.

### *Dialectic of Existence and Situation (Self and Other):*

A phenomenon has an inherent existence based on its internal potentials, and it has a self-role in interaction with the other, which plays the role of situation for it. This interaction leads to changes and transformations that, after internalization in the phenomenon, repeat this process in interaction with the environment, creating continuous new formations in the whole existence.



*Dialectic of Space and Time:*

In this dialectic, in the first dimension, three distinct concepts of space and time come into play. Definitions of absolute space, relative space, and space of relationships are present. In the second dimension, we witness three other definitions resulting from the work of Lefebvre: experienced spaces, conceptualized spaces, and lived spaces.<sup>19</sup> And from this, we observe a dialectic that occurs when these two dimensions are integrated (David Harvey 2017:173)

From this dialectical confrontation, spatial-temporalities of non-linear results are obtained: (David Harvey 2017:177)

Representational spaces,	Space representation,	Physical space,
Relational space-time,	Relative space-time,	Absolute space and time.

*Dialectic of Presence and Absence:*

Phenomena of presence lead to the emergence of new characteristics. The origin of these characteristics is uncertain. The new characteristics arise from a previous situation (where presence is no longer involved). Or the new characteristics have been created themselves! (Lucien Sève 2017:154). Both positions are equally important. The only option we have is to start thinking dialectically. According to Hegel's interpretation: the new cannot be explained without its elements and cannot be clarified without them.<sup>20</sup> The new can only be explained through its relationships. François Jacob, a biologist, raises the main general principle: logic and new characteristics emerge at every level of organization.<sup>21</sup> It is not a matter of delivery, but of self-organization.

Interactive dialectical relationships (Georges Gurvitch 1972)<sup>22</sup>

Dialectical mutual evolution

In this interactive relationship, we cover the mutual boundaries and opposing elements. These elements simultaneously manifest and each is functionally related to the other, entering into a set. Sets can be conceptual or real, with varying degrees of coherence and harmony.

- Mutual evolution: This type of evolution does not manifest alternations. Physicists have used this type of evolution in their studies. The evolutions are interconnected and each reveals a different perspective. Like two slopes of a mountain that cannot be seen together, one must climb to the peak to observe both.<sup>23</sup>

- Compensatory or tracking evolution in non-harmonious and reverse directions: Relationships between effort and stability, connection and separation, surface and depth, qualitative and quantitative fall into this category.

- Mutual evolution of elements moving in one direction and sometimes in opposite directions: These refer to opposing elements that complete each other through a double movement. This double movement sometimes intensifies and increases in one direction and sometimes in opposite directions.



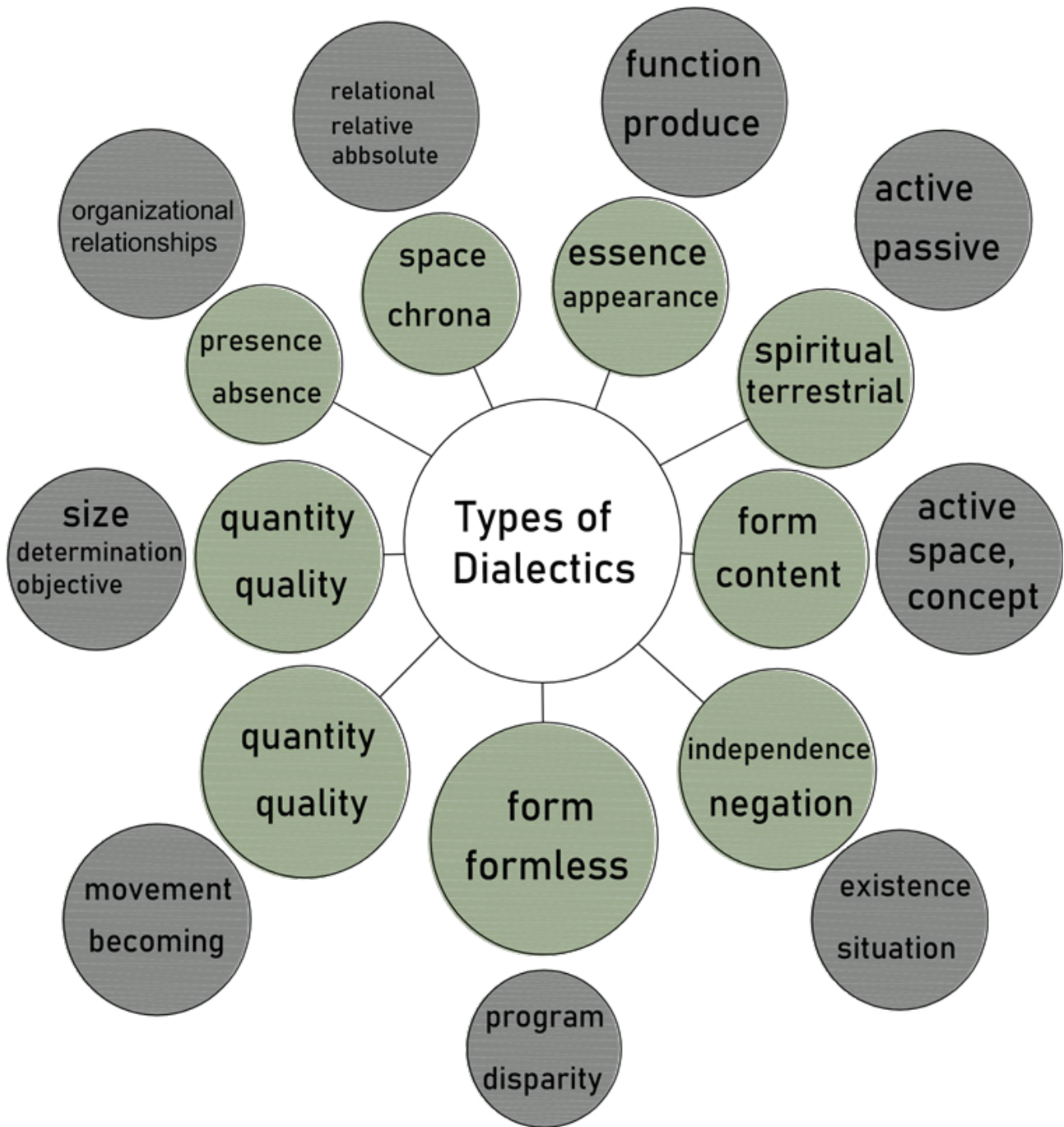


Figure 3: Types of Dialectics (Sources: Authors)

***Mutual inclusion:***

This relationship is based on the idea of retrieving parts that cut each other off and partially encompass each other, or flowing from one category to another in a partial and partial way.

***Dialectical ambiguity:***

This point is one of Freud's discoveries, indicating that ambiguity is a result of human reality.<sup>24</sup> It carries the sign of ambiguity<sup>25</sup> and in these relationships, moving phenom-

ena have two opposing values. For example, qualities or opposing states in a phenomenon prove and negate each other symmetrically or alternately in a subject.

***Dialectical polarization:***

These relationships refer to phenomena that appear to be more controversial than others in the real world, and separations and divisions in movements, directions, and different times sometimes lead to the emergence of hierarchical conflicts.

***Contradiction:***

In elements that neither merge nor accept separation, we find a great contradiction. This contradiction is so intense that it somehow parallels or symmetrizes the manifestations of these elements. Contradiction has variable degrees of intensity and weakness, with various faces.

***Research and investigation:***

Dialectical models in the thought and works of Bernard Tschumi

***Dialectics of space and time***

According to Bernard Tschumi, architecture has always been about an event that takes place in space (Panahi, 2021:545). A dialectic exists for every architectural research. An architectural text is derived from various programs that have contrasting spaces in relation to each other. Each scene (sequence) of architecture encompasses elements and factors:

- internal elements that are based on recursion and deal with the process,
- an external factor related to the juxtaposition (interconnection) of real spaces that have countless changes and geometries.
- An external factor based on the program, events, and occurrences (Bernard Tschumi, 2019:157).
- The interactional relationships between spatial sequences and events involve mutual evolution
- (compensation): In this regard, we witness an interactive strategy in which sequences reinforce each other and are interdependent.
- Polarization of dialectics: It includes an opposing strategy in which sequences occasionally collide with each other and are in contrast with each other.

Contradictory dialectical confrontation: Sequences are independent of each other and may coincide with each other in a short or long period of time, but since they are not interdependent, they form independent systems (Bernard Tschumi 2019:165).

The ultimate meaning of each architectural sequence depends on the relationship between space, event, movement, and the type of relationship between these components.

Dialectic of form and content: In this process, Tschumi enters into the dialectic of form and content and says, "Instead of merely looking at formalism as the main element, I

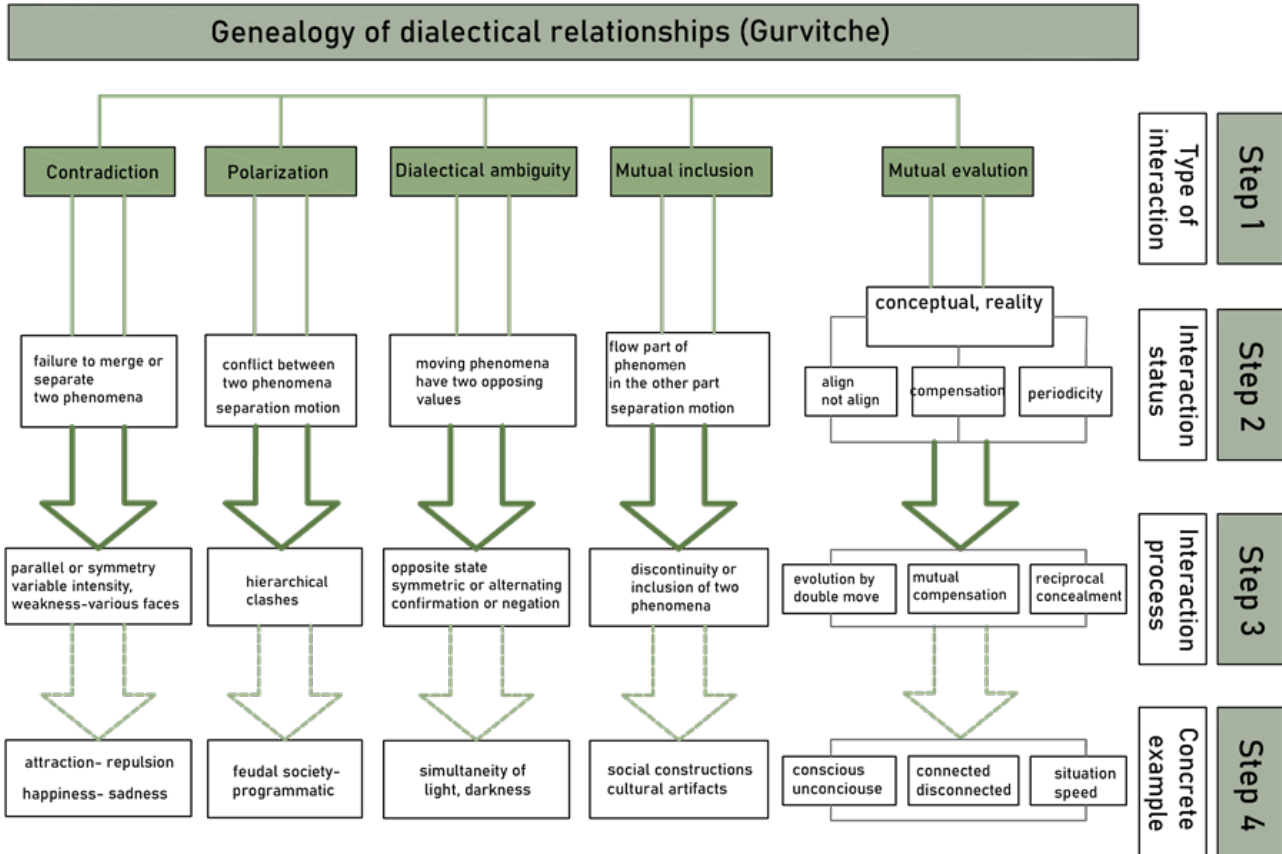


Figure 4: Relationships of Dialectics (Sources: Authors)

consider historical and cultural concepts as the starting point for creating phenomena in space. Therefore, dialectic of content and space (absolute, relative, and relational) leads to the final form." In Park de la Villette, the shapes of points, lines, and surfaces, which are signs of the dialectic of form and content, indicate the dominance of content over form, and the empty squares resulting from this space are places for events to occur. These three systems are complete within themselves, but when one is placed on another system, they establish a mutual relationship. These systems collide with each other and sometimes strengthen each other, and sometimes they coexist and become indifferent to each other (Bernard Tschumi 2019:191).

***The interactional relationships of dialectic of form and content:***

The mutually evolving relationships show the degree of coherence and harmony between these three systems. If the relationship between action and space is continuous, mutual evolution occurs alternately, and if they are in conflict, dialectic polarization takes place. Dialectic of mutual implication: Architecture cannot be separated from the events that occur in it (Bernard Tschumi). So here we are faced with a dialectical relationship of mutual implication, which includes two types of dialectics: form and content dialectic, and space and time dialectic.

***Dialectic of independence and negation (entity and situation):***

Bernard Tschumi formulates the theory of independence with Hegelian concepts: as

an image of the effort and movement of the spirit towards material. Tschumi interprets the technical and functional characteristics of a house or temple as a means to achieve a goal that does not include itself. Architecture is only preserved if it preserves the expectations that society has of it and preserves its essence. The unnecessary nature of architecture is the reason for its necessity (Bernard Tschumi 2019:08). In this regard, Tschumi gives authenticity to the independence and entity of architecture. Architecture of events for him is dialectically manifested between independence and apparent negation, which must capture the generative force of contradiction, even if it leads to the elimination of contradiction. Tschumi provides a change in the structure through an intermediary space that takes shape through transfer links. For example, follies in Parc de la Villette create a nodal point (connection) that serves as transfer links to create a new platform. (Bernard Tschumi 2019:183).

***The interactional relationships of dialectic independence and negation:***

In this dialectical process, the interdependent evolution between the position and the entity of the text occurs, which involves the process of separation, transfer, and connection, and is manifested through a double movement. In this regard, the process of juxtaposing continuity with discontinuity encompasses the creation of dynamic and variable contradictions or conflicts between events. (Damiani 2007:19) The dialectical relationship between events can be highlighted.

***Dialectics of the subject and object:***

Based on the above, when the dialectic of independence and negation is active and passive, we enter the dialectic of subject and object, which, through an intermediary force, brings together the passive and active states in a process and results in an event. Derrida believes that the park of La Villette has brought many binary conflicts closer to the middle ground.<sup>26</sup> The follies are interactive and activate the space, creating a network of points that cause order and disorder, and the nodes they create sometimes symbolize a reality that allows the construction of imaginary structures through the restoration of dialectics of space and form. (Damiani 2007:183) In this process, we witness three interdependent dialectical relationships, where binary conflicts such as reality and imagination, order and disorder, applicability and inapplicability, stability and instability, compensate or conceal each other and continue to move in harmonious or disharmonious directions.

***Dialectics of the mind and matter:***

The process of creation from concept (mind) to production of the work (matter) is considered essential for the production of a work. He believes that there are constant oscillations between the pragmatic and absolute aspects of the field of construction and the concepts, which lead to separation and disconnection between form, function, and social value.

The interactional relationships of dialectic of the mind and matter:

According to this idea, we see an alternative guarantee that a part of the phenomenon flows in another part, which causes the separation in the movement and it leads to the



separation or inclusion of two phenomena. Sometimes the process of polarization occurs and the conflict between the two phenomena creates separation. It means that it can end in hierarchical conflicts.

Dialectics of the form and the formless:

According to Tschumi, architecture should create a distance between itself and the program it realizes and should not have any kind of adaptation between architecture and its program. Derrida also refers to empty squares in Park de la Villette as distancing or producing distance, which represent systems that are connected to points, lines, or surfaces in a kind of metanarrative. The work constantly produces and changes, and its meaning also constantly changes.<sup>27</sup> Here, we are faced with a dialectic of form and formlessness.

In the Quran ontology, these empty spaces and differentiations exist within the structure of phenomena and do not conform only to external aspects. It is through these empty spaces that their movement and transformation are realized in existence, but their form and appearance only manifest another form.<sup>28</sup>

Dialectics of form and formlessness arises from the dialectical ambiguity that expresses the simultaneous affirmation or negation of two opposing values in a phenomenon.

### **Result**

In this research, based on the explanation, definitions and types of dialectics and interactive relationships were detailed and the symbols and content of this were obtained from the layers of existential concepts, and since the subject of the research is the methodology of thinking, the process was carried out dialectically. Different methods of interactions and polar components that result in various syntheses were extracted using hermeneutics. The results of this process were examined in the thinking of Swiss architect Bernard Tschumi. Various dialectics and dialectical syntheses of architecture were analyzed and the results were obtained (Figure 5).

Also, the dominant dialectic in some of his works was researched. (Figure 6).

The results show that in the current consumerist world, where everything is constantly changing and evolving, there is a need for a model and a comprehensive method in architectural design that is based on deep concepts and can respond to postmodern interactions and events. This is essential.

**Conflict of Interest:** *The authors declare that they agreed to participate in the present paper and there are no competing interests.*



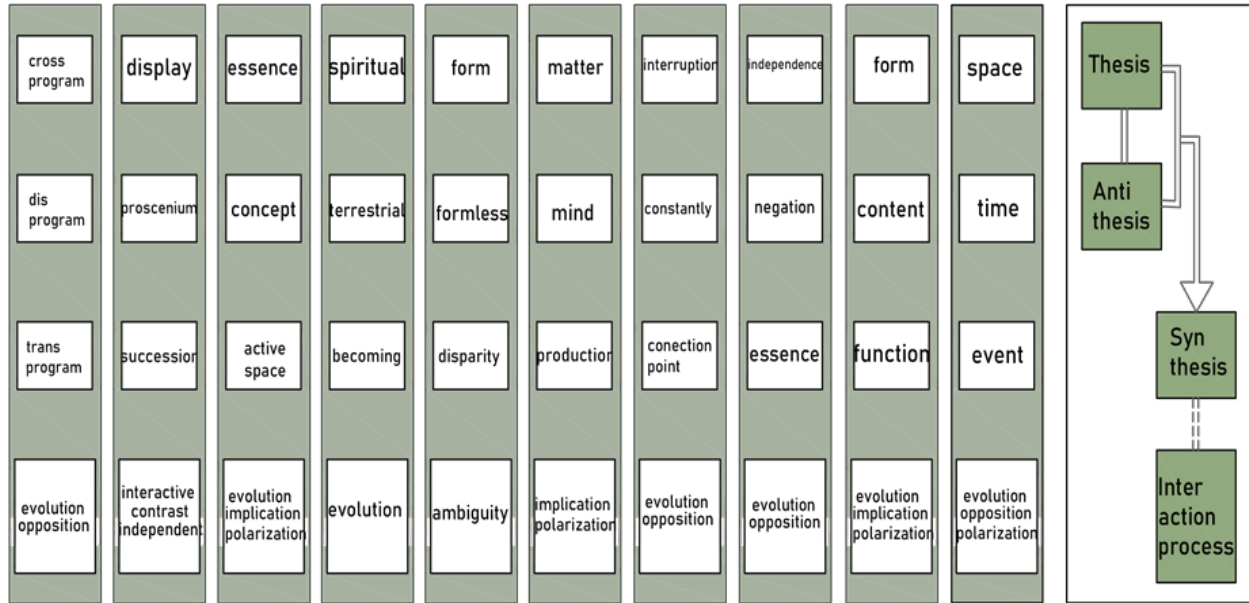


Figure 5: Types of Dialectics in Bernard Tschumi Thought (Sources: Authors)

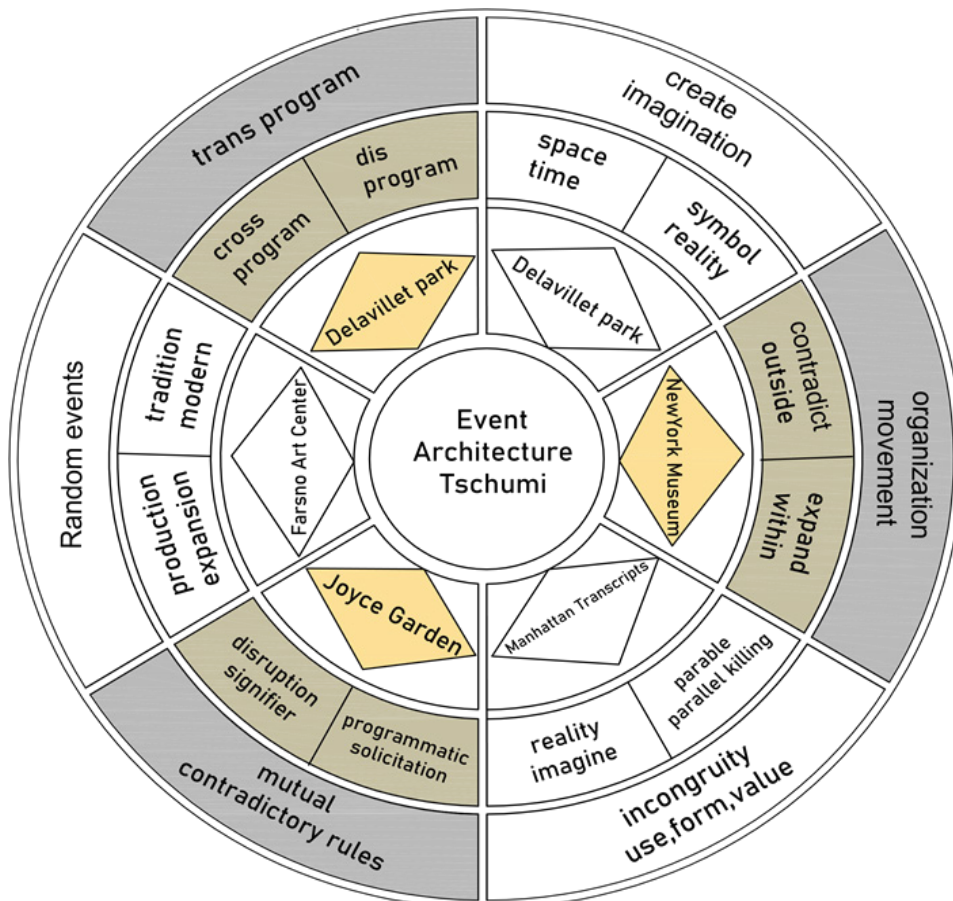


Figure 6: Types of dialectics in the Art working of Bernard Tschumi (Source: Authors).

**Note:**

1. Founder of Eleatics
2. Dialectic of Capital
3. Entfaltung
4. Synchronic
5. Diachronic
6. Bertolt Brecht
7. doxa, paradoxa
8. Transcendental
9. everyday space, other space
10. Simulation
11. Interiority
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19. Lefebvre, Henri
20. Hegel
21. Jacob. 1970
22. George Gurvitche
23. Gunest Mathematician
24. Sigmund Freud
25. Ambivalence
26. Derrida, Jacques
27. Geoffrey Broadbent
28. Quran Sure. 27 Aye. 88



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