

Architectural Thinking in a Time of Climate Emergency

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Abstract—The article uses reflexivity as a research method to investigate and propose an architectural theory plan for climate change. It hypothesizes that to discuss or formulate discourse on "architectural paradigm and climate change," firstly, we need to understand the modes of integration that enable architectural thinking with climate change. The research intends to study the various integration modes that have evolved historically and situate them in time. Subsequently, it analyzes the integration pattern, challenges the existing model, and finds a way towards climate change as central to architectural thinking. The study is fundamental on-premises that ecology and climate change scholarship has consistently out lashed the asymmetrical and nonlinear knowledge and needs approaches for architecture that are less burden to climate change to people and minimize its impact on ecology.

Keywords—Climate change, architectural theory, reflexivity, modernity.

I. INTRODUCTION

THE advent of modernity hinged on the fundamental shift of thinking about the relationship between man and nature, society and culture and lastly, politics of space and place. The increased capacity to appropriate nature and newly cultivated knowledge of political consciousness gave rise to a newer mode of production of technology and architecture. The domain knowledge grounded in science, which in turn also mended the way the new institutions began to function, giving rise to modern sociology, aesthetics and architecture of the city at large. The rapid industrialization throughout the last few centuries of the city and communication medium also changed the city's dynamics and spatial relationships with the environment [1]. Finally, architectural knowledge brings about the relation between self, space and society (example of garden city and United De' Habitation). The obsession with excessive control of architecture and the environment through the maximization of technology also led to a newer cultural resistance for architectural knowledge's collective and progressive isolation. The resultant architectural knowledge is the architectural nemesis of architectural pedagogy and practice.

Architectural education and architectural practices are conducive to the progressive isolation of knowledge. The issues become more complex as one considers the transition of architectural trends in contemporary times due to globalizing forces, homogenization of culture, information networks and various economic imperatives forces of our time. If such knowledge is left unchecked, the impact of architecture will

escalate the current conflict with the environment beyond control. In such a situation, architectural thinking requires a shift at the fundamental conceptual level. It also needs to build a robust value system to bring about systematic change in response to changing time and context.

The article seeks to articulate the needs and way forward for rethinking the processes that reduce the conflict and recognizes the various values systems within the discipline of architecture in the context of global crisis, climate change and the need for reflexive research in architecture to bring about positive and collective transformation.

The article argues that to bring about desirable change, we need to change the orientation of writing an architectural theory based on climate change and redefine the realm of place culture in the regional context. The delayed process of such integration shall only compel the architecture to seek climate change as an application and not as a codified unit.

Historically, architecture's knowledge production dwelt on progressive parameters and resonating the linear concept of time, resulting from science. As one analyzes the architectural literature trajectory over time, it is becoming clear that dominant tendency has been progressive and seeking alternate processes that are nothing but the reoccurrence of themes that focused on aesthetic-based criteria proceeding architecture towards an exquisite object of consumption. This paradigm was subjected to question by several theoreticians and writers, including Colin Rowe [5], Kenneth Frampton [10], Aldo Rossi [16], Alexander Tzonis [7]. The new paradigm brought about the discourse of history, region, and context as a medium to understand architecture.

There are alternative approaches that have expanded the idea of the region and context within the broader context of the urban form and urban pattern. This alternative paradigm has opened up the discourse to connect architecture as a mere urban or urban infrastructure component. However, such concerns have allowed architecture knowledge to shift from progressively isolated to more contextual, yet such assumption also has short life when one sees the cities in a larger context and crisis of climate change.

Therefore, such imagination has now been seriously challenged by global climate change issues and vulnerabilities related to global warming. Such threats challenge the preconceived notion of architectural production and change the contextual knowledge of global climate change issues. This knowledge needs appropriation in how climate change affects different regions with various vulnerabilities. The larger aim of

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the paper is to draw the attention of architecture towards processes that are not merely alternative but resonating and reflexive to the crisis of the current time.

II. THEORETICAL FRAMEWORK & SPECULATION ON ARCHITECTURAL THINKING

Architectural theory reinforces the individual predilection regarding architectural thinking trajectories and allows re-conceptualization. It initiates and debates on various architectural text and trends in linear timelines and parallel or simultaneous time frames, developing position and critical thinking on the situation. Architectural theory is the reading and translation of ideas. It brings about the normative foundation (information on form and ideas) and dialectical (e.g., binary of thesis and anti-thesis) understanding.

If one addresses the architectural theory in the context of architectural issues, architectural history and architectural writing by architects, perhaps there would be a greater possibility of re-imagining or relocating paradigmatic shift in architectural education. Hence, it is necessary to revisit the influential architectural discourses that have challenged the avant-garde and modernist paradigm that propagated the cult of individualism and autonomy of architectural thinking.

The question comes to our mind: why is such referencing of architectural thinking relevant in writing architectural reviews about climate change, and how are they appropriate? We need to harness the newer mode of thinking on architecture, and it is imperative to trace the relationship between architectural mode of production with architectural way of alternate thinking. It allows us to navigate the thought to newer paradigms.

The earlier work of Lewis Mumford [2] began to raise some fundamental debate on regionalism. He argued on the model from biology to study the nature of the built environment. He departed from excessive nationalistic approach, romantic regionalism or picturesque regionalism and dwelt on geography and regionalism in the traditional sense. The argument is almost analogous to the work of Emmanuel Kant, *Critique of Judgement* [3] and *Critique of Pure Reason* [4], where he attempted to redefine the foundation of fundamentals of philosophy. His critical work outlined regionalism finds a new breath of life in today's context as one debates architectural thinking in the era of climate change, especially when one faces the regional realities of culture, social, technical, economic and largely ecology.

In their book titled "Collage City", the literary work of Colin Rowe and Fred Koetter, in their book titled "Collage City" [5], began to dissect the modern paradigm with an image as well as provocative thought that modernism is only allowing enormous obligation to science and destined to solve particularity. Modernity is a psychological project that assumes the idea of hope and the greater good. The inescapable psychological conditioning led to believe that true creativity arises when it escapes the law of nature.

The *Collage City* by Colin Rowe and Fred Koetter [5] is an essential contribution to understanding contemporary cities. This book attempts to define and identify some of the virtues that are against the modernist manifesto and utopian ideals of

urban planning and cities. The discourse also attempts to build the argument that the modern planning paradigm has disintegrated the towns and cities, and there is a need for pluralistic imagination in urban planning and its architecture. The approach has three significant themes.

1. Crisis of the Object: Predicament of Texture: The first theme sets an important question: Why are we compelled to prefer a nostalgia for the future to that of the past? Could the imagined ideal city reflect/allow for our psychological constitution? Could this ideal city behave as memory (conservative) theaters and prophecy (radicals)?
2. Utopia | Decline and Fall: The second theme raises the problem of contemporary urban thinking and utopian ideals, which is creating binary oppositions, contradictory positions, paradoxes, i.e., let science build the cities or let people build the cities. It has produced impoverished ordinariness of public housing, which stand around like the undernourished symbols of a new world that refused to be born.
3. Collision City and the Politics of "Bricolage": The third theme talks about one big idea vs several small ideas and imagination, i.e., hedgehog vs. fox. This is an analogy of someone who can perform one task or someone who can adapt and perform several diverse tasks. The bricoleur is adept at performing several diverse tasks [5]. The urban experience is about plural, diverse, theatrical and spectacle backgrounds. Hence, the literary work of collage cities attempts to articulate space for simultaneity, that has values that are not merely limited to chasing of future.

The literary work of Aldo Rossi [16] in his book titled "The Architecture of City" began to question the idea of the city as Architecture that appears as part of the "collective dream consciousness", its significance arises from the invocation of eternally-valid symbols, which in their association form the city. These events are almost analogous to the Giorgio De Chirico [17] painting (refer to Fig. 1) on the public square with arcades casting hard shadows to evoke a magical city.

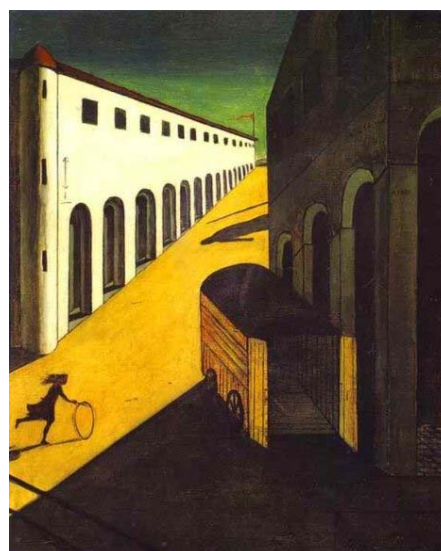


Fig. 1 Mystery and Melancholy of Street by Giorgio De Chirico

Aldo Rossi [16] starts from such an interpretation of architecture. According to him, the non-reducible forms have precise meaning through history. The building blocks follow the logical rules of order, as if from a building set of memories. The location of this event is the historical city: analogous to a theatrical set within which people play merely walk-on parts. He rejects autonomous architecture of modernism; instead, he turns to the art of architectural composition. He propagated the idea of autonomous scholars investigating architecture and the city through inventory and memory. The notion of architecture is an imagined product of the process that resonates with the architectural typology embedded within the region's history and

geography.

The last comparative literary work that resonates with the predecessors is by Alexandar Tzonis & Liane Lefaivre [7]. Their work on "Critical Regionalism" is an awareness of the region as an idiom of having a distinct identity and associated with a specific group or society or culture of the place. The book debates the broader context of history over time with diverse examples of writer and architecture and proposes a plausible model of architectural thinking. The literary work on critical regionalism is compelling as an alternate model of architectural conceptualization, especially in the time of increasing globalization and homogenization of architecture.

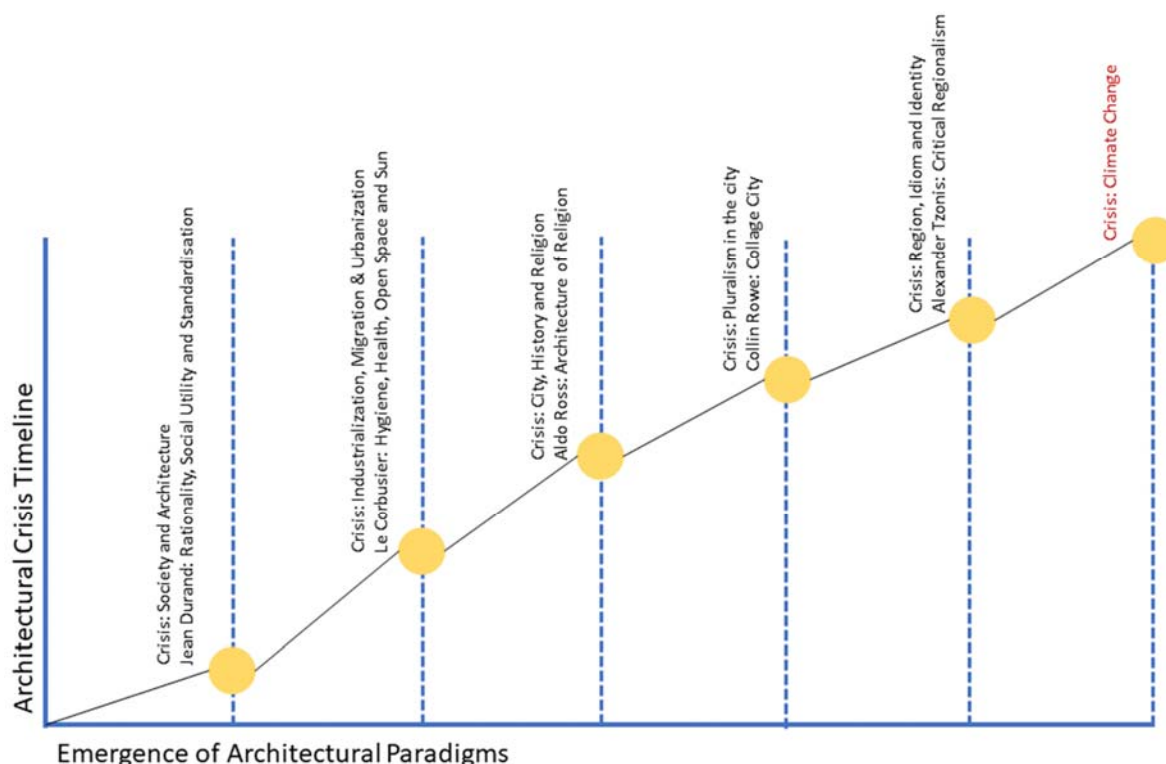


Fig. 2 Architectural Crisis and evolved newer Paradigm timeline

Fig. 2 attempts to explain the general theoretical concepts and their trajectory timeline. The concerns have risen from lifeless architecture of modernism to systematic inquiry into the history, geography, people and region. Several attempts have been made to rewrite the architectural theory based on the predilection that architecture is subservient to its time in a semiotic sense—representational imperatives of material practices limited architectural thinking. The tendency to move towards humanizing architecture and regionalizing architecture has necessitated theorizing architecture that resonates with climate change.

III. PARADOX OF ARCHITECTURAL THEORY

As one attempts to scan the genesis of architectural theory and its set of influencing forces, it is unavoidable as well as necessary to articulate the question of the methodological challenges and its adaptation and transformation of an

architectural theory. Such questions based on methodologies are not often articulated or addressed or positioned either in academics or in practice. The process is constantly on shaky grounds and is undoubtedly at a crossroad. Historically, architectural theory embarked on semiotics, critical theory, postmodernism, critical regionalism, de-constructivism, pragmatism as segmented methodologies to articulate the architectural paradigms during the mid and late 19th centuries. Each paradigm responds to an existing domain attempting to create significant impacts in the architectural field of practice and academics as the way forward.

Such attempts bring about diverse theoretical interventions to conclude on imagined, emerging, and everlasting patterns of narrative and knowledge. It also created a perception of knowledge and formulated a segmented knowledge domain that distilled the argument into linear time. However, the opinion can bring sharp contrast if one attempts to carry the knowledge

domain of cultural studies that follows a nonlinear timeline or a sociological perspective with a rigorous timeline but a slow and steady rate of transformation. Similarly, other domain knowledge follows the trajectories that often contradict the architectural knowledge producers.

Therefore, it is very apt to raise the questions and analyze the writing tendencies of history, its method that creates objectivity, critical spirit, and knowledge paradigm. Perhaps it is a very valid question if one can comprehend that the act of theorizing is escaping the historiography of 'isms' and metaphoric or semiotic frameworks. The current academic milieu must engage with space that argues the following questions on the nature of theory and its constituents and brings about processes that challenge the epitome of post-war architectural theory constructs that articulates the contemporary architectural productions and knowledge domains that produces them.

How do we build Architectural Theory in the time of climate change? How does climate change and region shape Architectural Theory from the global perspective? This question raises some fundamental 'un-easy-ness' in architectural idiom. To operationalize the channel towards understanding the structure of theory or building 'Architectural Theory', one needs to understand some fundamental elements or components that negotiate reflexivity, self, society, and environment. As Tzonis suggests, it is essential for us to explore and reconsider five key aspects: strange-making versus historicism, advanced technology versus nostalgic craftsmanship, sustainability versus picturesque, multicultural community versus traditional community and fusion of local and global [7]. In this context of the time-relevant architectural theory, you need to find the counter-system that goes against the previous trends and continue to create architecture of our times. To make this argument even more compelling, let's look at how reflexivity plays a role in the climate change rethink of architecture.

IV. REFLEXIVITY & ARCHITECTURAL THEORY

The word "*reflexion*" is the first stage of Architectural Thinking or an essential attitude, i.e., how to interpret one's pattern of thinking, feeling, exploring emotive responses towards architecture and its influencing factors. The reflexion is a simultaneous process, which is always in action, bringing about various time-scapes of memory, experiences, judgments, evaluations, connections with emotions and its implication on values. These are perhaps the basic dimensions that get engaged when one begins to raise fundamental existential questions regarding oneself, exploring society, culture, climate, region, and architecture [7]. This aspect requires a rigorous process of involvement with the primary architectural knowledge base and information on architectural trends, issues and an understanding of the power structure that produces the architecture of that time.

The first stage of architectural thinking regarding climate change is building a bridge between architectural paradigms in contemporary practices. The initial reflexion aids the primary architectural knowledge and brings about awareness to the

predicament that inhibits the evolution of architectural theory. This stage is similar to when the modern paradigm overwhelmed the world with its impact and almost shut the avenues for the alternate approaches aiding the transformative process or newer paradigms. We are currently in a situation where architectural production is overwhelmed by the digitalization of technology. The quality of architectural manifestations is often reduced to distinctive architectural forms that challenge the historicity and relevance in the current climate change crisis. Hence, it is necessary to bring such discourses under the fold of architectural criticism and be questioned for change. This stage also simultaneously examines the idea of climate change and climate science and its tangled relationship with the built environment. This stage of transformation is necessary during the formative academic years to build a knowledge community collectively addressing climate challenges and realizing the promise that lies within our reach.

The second phase, "*Critical Reflexion*", brings critical theory on reflexion. *Critical reflexivity* is the capacity to see one's perspective and assumptions and understand how one's perspective, beliefs and identity are socially constructed through critical reflection [8]. It embodies the transformative change that happens within one's practice and in one's relationship with the society at large, concerning the understanding of architecture, its imperative producers and situational context. The "Critical Reflexion" is an advanced state of mind or an attitude towards architectural analysis and its comprehensive understanding; critical reflexivity is the attempt to place one's premises into question. It brings about transformative changes in understanding power dynamics, attempting or striving to equalize its critical operations and maximizing the democratization of relations. This stage also enables the process of design thinking and its rationalization through critical engagement.

The second stage of architectural thinking concerning climate change brings awareness of change and its relation with society. Modernity assumes that technological transformation and progressive aspirations shall bring societal change and societal order for good. The assumption through the canonical structure of modernity was not able to predict in its short account of its impact that oscillated between planned and industrialized utopia vs. denial of historical reality [9]. Such positions are solely based on the assumption that architecture's role is for its existence and not related to either urban or ecology. The very idea of architectural thinking requires facilitating societal priority on its sustenance. Perhaps there is a possibility of building space for critical reflection on architectural theory as transformative knowledge. The particular assumption on the role of architecture has aided the impoverishment of the environment. This vulgarization of environment and ecology is nothing but progressive isolation from society and creates a paradoxical ecology and climate change situation [9]. The main objective of the second stage is to decode and articulate the new networks and possibilities in a multi-disciplinary sense that are equally essential in architectural thinking, the inquiry through theories,

philosophies of truth and environment & ecology in a very fundamental sense and attitude for initiating thinking on iterative possibilities.

The "Reflexivity" is reuse or re-do-again with focus till one has control on where the automotive responses come from and for what cause and effect or situation. It brings about a state of mind that is open for change, able to bring about connectivity, inter-connectivity, systematic connections of various aspects of architecture that brings about its existence. The concept of "Reflexivity" connects emotional intelligence, connecting internal factors to external functions or how emotions are used to build connections and relations that shape architecture and the built environment. Low reflexivity means that the external conditions control one's conversation with architecture and may

bring about judgmental values in action. In contrast, higher reflexivity means one is indifferent to the external situation or can observe one's situation from outside of the sphere, conditions, objectifying the architectural situation, and bring about a critical spirit or space for conversation.

In the context of architectural thinking related to various concerns and crises, the historical emergence of a newer paradigm will aid the awareness about theoretical relations and challenge the inherited biases and assumptions and the negotiation process the conceptual structure of architectural thinking. The reflexivity shall involve developing advanced architectural thinking and a newer theorizing structure, reflecting critically and addressing moral tradeoffs in climate change (refer to Fig. 3).

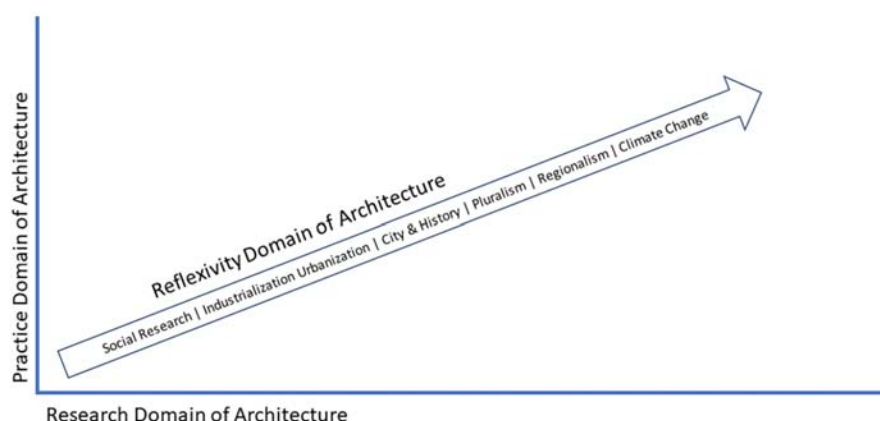


Fig. 3 Reflexivity and Architectural Thinking

The *third stage* brings about the characteristics of transformation that shall constitute the reciprocal interdependency, allowing various discourses to intertwine with a high degree of openness to bring about systematicity of knowledge, blurring of object and logical transparency to the newer framework. Such a process shall form a relatively constant and interact with the prevailing situational circumstances, which evolves from the knowledge base within the discipline and biographical, social, and cultural contexts. The disregard for knowledge boundaries and allowing subjective and objective processes to move away from biases, in turn, enables the paradigm of a new relationship between knowledge and its interpretation, which are in constant flux. The process of critical reflexivity allows the critical spirit to sink in and act as generators of change or transformation in both epistemological and empirical pursuits. At this stage, architectural education and pedagogic development needs to step up the hierarchy of epistemological and theoretical understanding of various disciplines and further, develop a conceptual framework that would aid architectural learning. This transverse architectural learning involves state-of-art knowledge and enquiry into the role of architectural learning, thinking and climate change. The higher reflexivity towards ecological and climate change issues are necessary to write and objectify architectural thinking for climate change.

V. REFLEXIVITY, SYSTEM THEORY & CLIMATE CHANGE

A system is defined as an entity when it is a coherent whole [11]. A boundary distinguishes between an entity that includes both internal and external components of the system, and identifies the inputs and outputs associated with the entire subsystem arising from the entity. The system theory brings about theoretical views or as an analytical tool to understand the interactive relationship of its all the constituents. The architectural thinking still embedded in the modern paradigm seeks the system as an object where knowledge production is a non-previous layer as a closed system of preconceived imagination. To illustrate this point, the architectural significance of the modern era is shaped by the technology of today, yet the foundation of production remains impenetrable and is considered an essential & non-negotiable element.

Knowledge production is a scientific approach as system theory, where knowledge is compartmentalized to make the system work together. The knowledge structure emerges in a compartment, and architecture assembles such knowledge. The system theory has broadly applicable concepts and principles derived in inter-disciplinary mode. Every component has a distinct structure and function, as well as a significant space and time component.

The system's functioning depends on the adaptive capabilities of each component, and adaptation of each component depends on its engagement with the influential

space and time, i.e., environment (refer to Fig. 4).

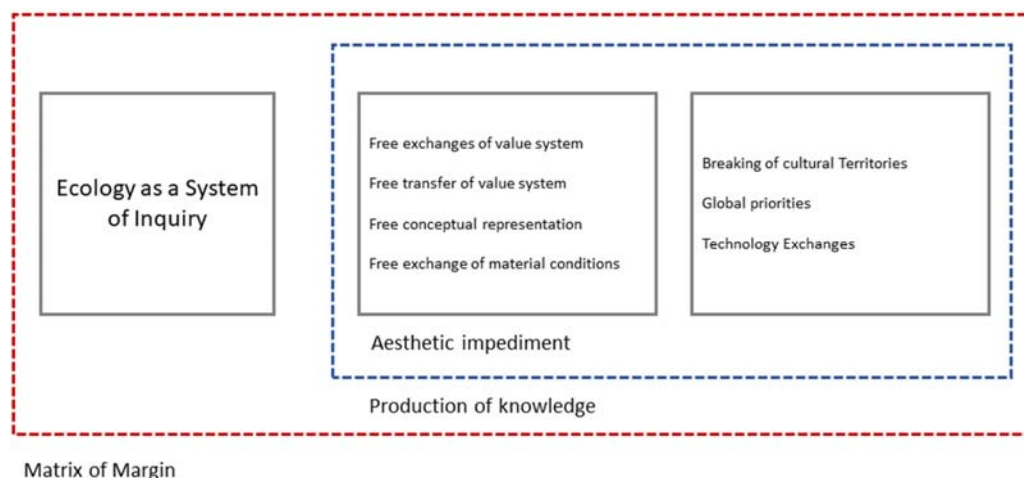


Fig. 4 Ecological Margin in current production of knowledge (author's compilation)

Fig. 4 attempts to explain the existing system theory from the modern thinking paradigm. The values of exchange, transfer, representation and materiality are allowed to escape from the canonical structure of medieval thought patterns. However, one can see the entire framework from system theory and argue that the architectural knowledge system was constituent of various parts that may or may not create interdependency and hence, the question of representations is left without any subservience. The argument gets sharper when one brings the question of ecology.

VI. THE MODEL FOR CHANGE

To facilitate the processes of survival, adaptation, and reflection that comprise the broad conceptual framework of climate change, the open system theory method in this context [Fig. 4] needs to be architecturally combined with a reflexive approach. The reflexive in the context of system theory refers to analyzing the systems and subsystems, the decisions and outcomes and connecting internal factors to external functions or building connections and relations that would establish the dynamic relationship among architecture, built environment and climate change [12].

So, when we discuss the three-prong approach to building architectural theory, we are necessarily bounded by three systems of thinking. The general principle of system theory allows assessing the overall working of the system and not the adaptations or effectiveness of its constituents. The reflexivity is broadly bringing about internal and external factor dynamic relation. Architectural thinking deals with freeing space for representation and bypassing the question of interdependency while climate change brings about space of mitigation, resilience, and adaptation [1]. Hence in the context of integration of three approaches, one needs to rely on trans-disciplinarily in the approach to create a new conceptual, theoretical, methodological framework that integrates and outgrows discipline-specific approaches to address a common issue. The system's performance needs a paradigm shift when we talk about reflexivity and architectural thinking in climate change [12], [13].

Fig. 6 attempts to create architectural theory and thinking patterns to integrate the three approaches and enable the evolutionary process with climate change. The argument is based on the fact that the built environment is constantly required to be recognized and redefined in evolutionary and ecological terms; this would erase popular thought about the polar thinking of humans versus the environment. The first attempt articulates the new relationship in terms of its representation. The question of representation brings about

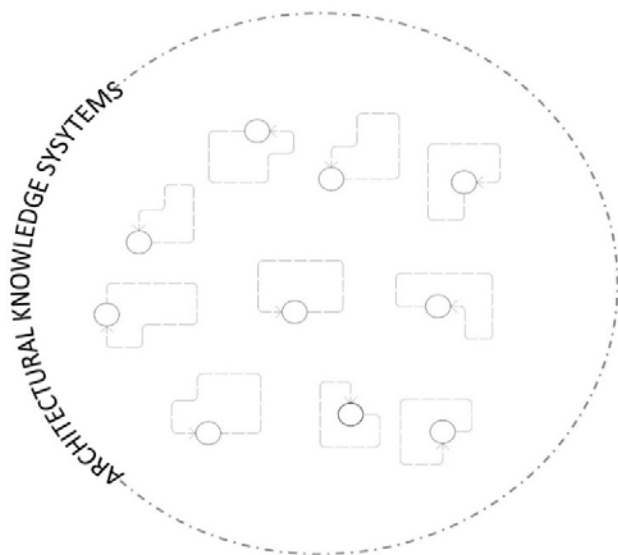


Fig. 5 Architectural Self Service Knowledge System in current mode of architectural theory (author's compilation)

Fig. 5 brings the question of independent parts of the system. It articulates the entire process of thinking with reflexivity where there is the subservience of reciprocity and openness, blurring an object with logical transparency and freeing it from subjective or objective biases.

three fundamental concerns: Is Climate a culture turn? Alternatively, is climate change crisis in representation or is Climate change a crisis of science [13]-[15]? No matter the correct answer, all the concerns have infiltrated into architectural and urban discourse, causing a strong sense of uncertainty. So, the position of the argument is that instead of climate change seeking for design resolution, it is an opportunity to locate renewed relationship between architecture and climate change as discipline inquiry which would encompass the issues of culture, representation and science within which the concern with reflexivity is not to imagine to be an external agent. However, part of the entire conceptual framework for architectural thinking amounts to the newer logic of architectural production.

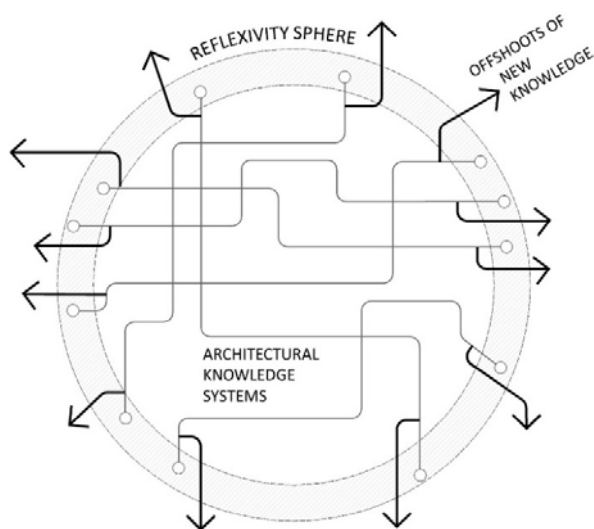


Fig. 6 Intersection with reflexivity sphere (author's compilation)

In climate change, the architectural tendency needs to be moving toward realism, material reality as against representational reality, where architecture is no more object of representation of system but emerges as a system itself. The city is no longer exists outside the system itself: the whole relationship with reality loses its importance as the distance between the subject and the phenomena collapses. The city no longer "represents" the system but becomes the system itself.

Considering the broad challenges stated previously, it is essential to assess the existing tools and shape architectural thinking historically. The pathway to resolving climate change and architectural thinking requires an ambitious model that rattles the existing mode of thinking and paves the way by enabling action at various scales.

The first diagram [Fig. 5] attempts to articulate the system theory along with the architectural knowledge system. The modern paradigm is fundamentally based on system thinking, where each component interacts to make a singular system function. The paradigm shifts into various modes of architectural production were simply based on integrating evolving new systems due to change in the role of architecture or developing semantics that are assumed to be paving the way for rediscovering architecture for contemporary demand. The

modern paradigm has evolved through various phases, transitioning from a tectonic system rooted in modern technology to a paradigm that redefines the meaning within modernism. It further evolved into an urban and regional paradigm before finally embracing an ecological paradigm. Each paradigm introduced new elements to the discipline, but there was a tendency to reduce systems thinking to a mere collection of tools and methods. This overlooks the fact that each thinking pattern is grounded in an underlying ecosystem and philosophy. Systems thinking often involves moving from observing events, identifying behavior patterns over time, and surfacing the underlying structures that drive those events and patterns. In that context, architectural thinking has always been imprisoned to the system that was not allowed to escape from the singularity of interpretation. In the initial stage of comprehending the architectural knowledge model within the framework of system theory, it is important to recognize that each system possesses its own ecosystem that influences the others.

The second stage of the model that necessitates inducing climate change within architectural thinking is about developing key structural projection of key determinants that inhibit the reflexivity to architectural thinking historically. As discussed earlier, system theory brings about an ecosystem of different variables that are allowed to interact and inform the large system of architectural thinking but the relation between the system as architectural theory and subsystem as constituents remained monolithic while such constituents are treated as fixed elements within the relationship where reflexivity as philosophy remains unarticulated. The reflexivity and system theory model bring the argument, as stated in the diagram [Fig. 6] that each system constitutes the various other systems and not the subsystems, which are allowed to inform objectively to architectural thinking and are subjected to reflexivity discourse. The interactions with the reflexivity sphere allow for a newer paradigm and nuanced architectural thinking in climate change. This is an attitudinal change that is much needed in the age of climate change. The risk posed by climate change has evolved from being a subsystem within the ecosystem of system thinking to becoming an integral part of that ecosystem. In this context, scenarios, projections, and forecasts play crucial roles within the realm of reflexivity, providing essential inputs for architectural thinking. They contribute to architectural knowledge and drive informed action within the complex socio-political processes at play. Developing the capacity for adaptive learning to accommodate complexity and uncertainty requires exploratory and imaginative visions for the future. It is only possible to explore uncertainties and newer paradigms in integration thinking by employing scenario building and narrative creation within the reflexivity. The transition from envisioning architectural theory-building requires imagining architecture as a place, architecture as history, architecture as urban phenomena, and architecture as geographic material imagination with climate change.

VII. CONCLUSION

In today's context, architectural thinking and its adaptation

are relegated as an open system, and worldly issues are only accommodated without fully contemplating the core subject. Climate change and architecture need fresh thought on its integration in a dynamic and not a normative sense. To build resilient cities through their architecture, we need to consider resilient architecture that accommodates climate change. If we persist in developing architectural theory solely based on past experience, we risk falling into the trap of incidental thinking, often referred to as "isms" in architecture. This can perpetuate inequality and injustice within society and have detrimental effects on the environment.

It is necessary to morph the three pillars of thinking paradigm that can cut across the disciplines and acknowledge the advanced role of architects and urban planners in human habitat and the environment. The role of architecture, architects, and urban planners requires expanding and accommodating climate change as an essential denominator. The task ahead is far more complex and must articulate the principles drawn from dynamics of socio-economic and ecological conditions of the place in developing the consistent meaning of climate change so that the adaptation is robust and sustainable.

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