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Architecture as Experiential Sequencing: From Choreographic Translation to Relational Field Formation

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Abstract

Architecture design is generally understood as arranging forms and representing spaces-plan drawings, program sheets, circulation diagrams, etc. But what if the sequence of events that constitute a spatial experience begins with movement? This paper argues that movement is not only an observed and translated variable within architectural form but should also be constitutive of the design process. This paper explores this through three stages: movement encoding, field construction and spatial resolution (Refer Fig. 1). Within this framework, movement, program, environment, and user behavior are not treated as separate variables but as interdependent variables within the design system. Furthermore, this paper introduces the concept of "plugin governing dynamics" to conceptualize the architect's role in terms of influencing spatial relations at the systemic level rather than dictating predetermined spatial forms. The architecture that emerges from such an approach is one of stabilization among interacting forces instead of a composition of objects with fixed spatial forms. The rhythms of space, thresholds, and circulation are all emergent rather than designed

Keywords; Movement-Based Design, Relational Spatial Field, Plugin Governing Dynamics, Emergent Spatial Systems, Experiential Sequencing



INTRODUCTION

For quite some time, architecture has considered form, function, and program as the primary conditions for design. Movement has been thought of as a mere derivative condition, often relegated to circulation diagrams only after all other decisions have been made. This has resulted in architecture that accommodates movement at a physical level but does not truly engage with it. Researchers like Pallasmaa and Gehl have pointed this out, arguing that spatial experience actually unfolds through rhythm, sequence, and bodily engagement and not just visual geometry. *(Pallasmaa, 2005; Gehl, 2011)*

Previous studies have taken the first step toward rethinking architecture through choreography and were valuable in that respect *(Foster, 2011; Laban, 1980)*. However, these approaches translate movement only into form rather than integrating movement at the level of the design system. This paper attempts to extend this position. Instead of mapping movement and then converting it into spatial diagrams, it embeds movement as an active variable inside the design system itself *(Refer Fig 2)*. Instead of encoding movement and then representing it as a diagrammatic system of space, movement becomes an internal variable within the design system *(Refer Fig 2)*. Within this framework, architecture is not treated as an object but rather as an endlessly reconstituting condition of space. The present

paper can be read as an exploratory conceptual framework rather than a finished computational metho

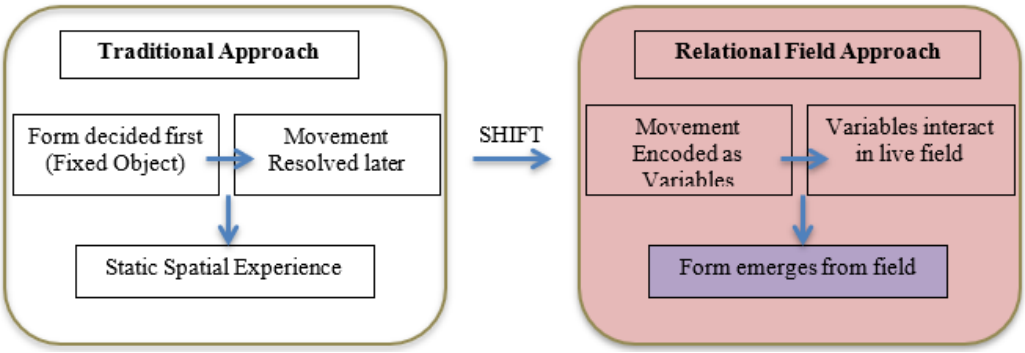


Fig 2: Paradigm shift: from form-first to movement-embedded design

Source: Author

THEORETICAL FRAMEWORK

Movement and Embodied Spatial Perception

The philosopher Maurice Merleau-Ponty gave a useful starting point: perception is not something that happens in the brain separately from the body it is deeply tied to physical experience *(Merleau-Ponty, 2012)*. Space, from this perspective, is not a neutral container we move through. It is something we actively construct through movement, sensory engagement, and interaction. This changes how we think about architectural space. Rather than something fixed and geometrically defined, space becomes interconnected, continuously shaped by where our bodies are, how they're oriented, and how they move. Experience is not instantaneous; it unfolds over time, through sequences of movement. This is what David Seamon called "place ballets", the idea that space is structured through repeated patterns of bodily routine. *(Seamon, 1980)*. Maxine Sheets-Johnstone pushed this further, arguing that movement is not secondary to perception but actually foundational to how spatial meaning is formed *(Sheets-Johnstone, 1999)*. When we take this seriously, it challenges the long-standing dominance of visual form in architectural thinking. Architecture stops being a fixed object to be observed and becomes instead a field of relationships, continuously reconstituted through bodily engagement, where movement and environmental stimuli operate reciprocally within spatial experience *(Refer Fig 3)*.

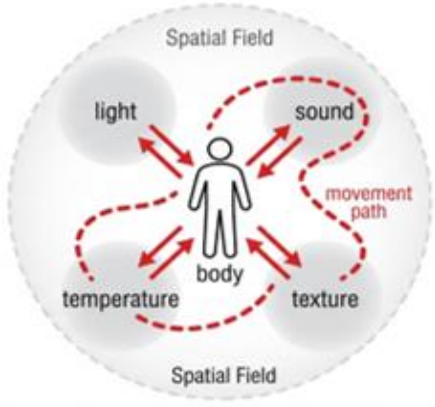


Fig **3: Embodied spatial perception diagram showing feedback between body, movement, sensory input, and environment**
Source: Author's conceptual diagram

Choreography as Organizational Logic

In this research, choreography is not used as a metaphor or aesthetic reference, it is treated as an actual organizational system. Drawing from Rudolf Laban's movement analysis, choreography is understood as a framework built on Sequence, Rhythm, Pause, and Transition (Laban 1980). These are not just dance concepts; they're tools for reading space as a temporal construct rather than a purely geometric one.

Applied to architecture, this reframes familiar elements. Corridors are not just connectors between rooms; they are gradients of transition, where speed and direction modulate. Nodes become moments of pause or intensification. Thresholds become zones of negotiation between contrasting spatial conditions. Space, in this reading, is defined not by its physical boundaries but by the patterns of movement that unfold within it.

From Sequential Representation to Relational Fields

Earlier choreographic frameworks were valuable as interpretive lenses, but they had a limitation: they described movement and then translated it into form, without fundamentally changing the architectural logic underneath. This paper shifts that. Here, choreography becomes an **operative system** rather than a descriptive one. Drawing from Stan Allen's notion of '**field conditions**' is particularly significant here because it shifts spatial organization away from object-based composition toward distributed relational systems *(Allen, 1997)*. Corridors function as gradients, nodes as interaction points, thresholds as zones of transition *(Refer Fig 4)*. This connects with Bernard Tschumi's event-based architecture, where space is produced through the interaction of **space, movement, and event** *(Tschumi, 1994)*. But where Tschumi's work remained largely diagrammatic, this paper proposes embedding choreographic logic directly into the design system, so movement does not just describe architecture, it produces it. Allen's framework is particularly important here because it allows spatial organization to be understood as relational and distributed rather than object-based.

Relational Spatial Field

The concept of a relational spatial field takes this further. Rather than treating movement as something to be observed and converted, it becomes a continuous variable within a system where environmental gradients, programmatic conditions, and behavioral patterns all overlap and interact. This aligns with Allen's "field conditions," where spatial systems are defined by local interactions rather than fixed boundaries *(Allen, 1997)*. Importantly, constraints in this model are not limitations, they're factors that modify relationships within the system. Spatial outcomes are not predetermined; they emerge through the patterns that gradually settle through repeated interaction. This resonates with Manuel DeLanda's writing on emergent systems, where form arises not from a blueprint but from interactions between variables *(DeLanda, 2002)*. Architecture, in this view, is the result of dynamic interactions within a relational field and not a translation of movement into form. This shift is significant because it repositions architecture from formal composition toward the management of interacting conditions.

Plugin Governing Dynamics

If spatial organization develops through the interaction of variables rather than through predetermined decisions, what is the architect's role? This paper introduces the concept of plugin governing dynamics as an answer.

Rather than composing form directly, the architect operates within the system, structuring the conditions under which spatial configurations evolve *(Lefebvre, 1991)*. This is similar to how rule-based and parametric approaches work in computational design: localized interventions influence global system behavior *(DeLanda, 2002; Hensel et al., 2004; Schumacher, 2021)*.

Plugins, in this framework, do not impose form. They alter the behavior of the system. A localized adjustment in movement intensity might redistribute spatial density across a wider field. An amplified environmental gradient such as a change in light or sound can bias trajectories and influence how people settle into or move through space. These local adjustments gradually influence wider spatial behavior across the system, producing global effects from local modifications. This redefines what architectural control means. Rather than determining final outcomes, the architect establishes **conditions of influence**, allowing form to emerge through the continuous negotiation of relationships within the field.

RESEARCH METHODOLOGY

The study follows a qualitative, system-oriented approach structured in three stages.

Movement Encoding

The first stage focuses on translating bodily movement into dynamic variables that can operate within a design system. Rather than simply representing movement as paths or trajectories, the process identifies four key qualities:

Direction - the orientation of movement through space
Intensity - variations in speed and force
Frequency - how often movement patterns repeat over time
Interaction Density - where multiple trajectories converge

Together, these transform movement from something we observe into a structured set of parameters capable of influencing how space is organized. This is consistent with urban behavior studies, where movement patterns reveal underlying spatial conditions not visible through conventional architectural drawings *(Whyte, 1980; Gehl, 2011)*. Encoding movement this way allows it to become an active, generative part of the design process.

Field Construction

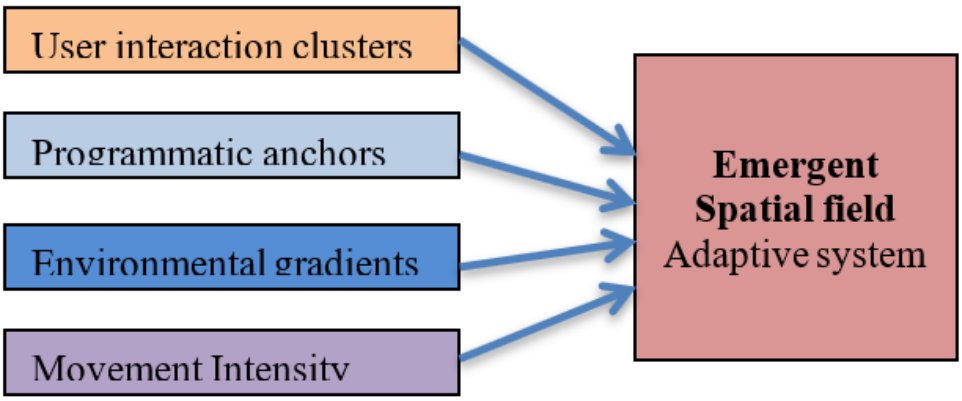


Fig 4: Field construction: four simultaneously interacting layers producing an emergent spatial field Source: Author

Once movement has been encoded, those variables are embedded within a continuous spatial field and not arranged sequentially, but operating simultaneously and interacting with one another within a continuous relational field (Refer Fig. 4). Movement intensity influences how the field expands and contracts, creating zones of acceleration and pause. Programmatic requirements act as anchoring conditions, stabilizing certain areas. Environmental gradients such as light, temperature, sound etc. affect orientation and movement preference. User interactions generate dynamic clusters and dispersions. These variables do not function independently; they continuously influence one another, producing a complex and adaptive system (Hensel, Menges, and Weinstock, 2004; Kolarevic & Malkawi, 2020). Spatial organization, therefore, is not the result of isolated design decisions but of dynamic interactions that evolve over time. The field becomes the medium through which architecture is formed; not as a fixed object, but as an emergent condition (Lefebvre, 1991).

Spatial Resolution

The emergence of actual architectural form happens not through selecting predefined shapes but through the stabilization of interactions between variables *(Oxman, 2020)*. When movement, program, environmental conditions, and user behavior interact, the field produces zones of convergence and equilibrium. Form appears when these influences reach a temporary balance. High-intensity movement zones tend to expand. Areas of reduced intensity consolidate into spaces for pause or occupation. Environmental gradients and programmatic anchors reinforce these patterns, allowing spatial configurations to persist *(*Lefebvre, 1991; Seamon, 1980).

Plugin governing dynamics refine this process by strengthening or reducing specific interactions within the field. Spatial resolution can therefore be understood as an evolving process guided through relational calibration.

Plugin Deployment

Following field construction, plugins are introduced as a means of regulating system behavior. This is not a final intervention; rather it is an iterative process where relationships are continuously adjusted and recalibrated. Each plugin operates as a rule-based modification targeting specific interactions within the system. For example, a

movement-dampening intervention may reduce velocity in areas of high interaction density, forming conditions of pause.

Directional biases can guide movement toward programmatic anchors, reorganizing circulation without imposing fixed routes. This is consistent with how people actually behave in urban environments where individuals respond dynamically to environmental cues and spatial conditions (Pallasmaa, 2005). Plugin deployment is therefore iterative and relational. Each intervention is evaluated based on its effect on the system, and subsequent adjustments respond to emerging spatial conditions *(Seamon, 1980)*.

Exploratory Application

To examine the operational potential of the proposed framework, the methodology was applied exploratorily within an academic thesis context focused on movement-based spatial organization. Movement patterns, environmental gradients, and interaction zones were mapped and encoded as dynamic variables within a spatial field.

Plugin-based interventions were then introduced to test how localized modifications influenced circulation behavior, threshold formation, and spatial density. Rather than generating a final architectural proposal, the exercise functioned as a methodological test platform to observe how spatial configurations stabilized through interaction.

The application demonstrated that the relational field approach could produce adaptive circulation systems, differentiated spatial rhythms, and variable occupation zones without relying on fixed formal hierarchies.

ANALYSIS AND FINDINGS

The outcomes are not derived from comparing design alternatives but from observing how relationships stabilize within the system.

Rhythmic Structuring

Spatial rhythm emerges from how variations in movement intensity interact with environmental conditions. Linear paths produce acceleration, while areas with sensory variation viz. changes in light, material, or density causes deceleration and pause. These alternating conditions generate patterns of expansion and compression that structure spatial experience over time. As Psarra notes, spatial sequences can be read as narrative structures, where movement organizes experience through rhythm and progression (Psarra, 2009*)*. Crucially, these rhythms are not determined by geometry alone but sensory gradients significantly influence movement behavior, reinforcing the idea that spatial tempo is a gradually formed property of relational interaction (Pallasmaa, 2005).

Threshold Intensification

Thresholds emerge as zones of overlap where movement, environmental gradients, and programmatic shifts intersect. Rather than fixed boundaries, they're dynamic conditions shaped by relational interaction. These areas exhibit increased variability in speed, direction, and interaction. Spatial meaning, in this sense, is produced through behavioral and perceptual negotiation rather than through physical demarcation.

Distributed Circulation Networks

Movement patterns shift from linear paths to distributed networks. Users adapt trajectories based on environmental cues and interaction density, producing multiple pathways rather than fixed routes. This aligns with what Marcus calls "spatial capital" the richness of connections that enhances movement choice and adaptability. Rather than hierarchical circulation imposed from above, the system generates movement patterns shaped by relational structures.

Governing Effects of Plugins

Plugin-based interventions demonstrate that localized modifications can produce system-wide effects. Small adjustments in movement intensity lead to redistribution of spatial density, transforming transitional zones into areas of pause or interaction. Overlapping plugins intensify threshold conditions, while circulation patterns adapt dynamically. This confirms that spatial organization can be governed through relational modulation rather than direct formal control.

DISCUSSION

From Static Form to Dynamic Systems

What emerges from this research is a shift from object-based design toward relational and system-based thinking. Architecture here functions as a system of relationships rather than a collection of discrete elements. Form becomes the outcome of interactions between movement, environment, and user behavior. This is aligning with Lefebvre's conception of space as relationally produced.

From Design as Selection to Design as Governance

Design shifts from selecting predefined solutions to governing relationships within a system. Through plugin-based interventions, architects influence how spatial configurations evolve rather than determining them directly.

This points toward indirect control through calibrated influence, where the architect governs evolving relationships rather than fixed outcomes *(Refer Fig. 6)*. Such a shift also challenges conventional authorship in architecture, where control is traditionally tied to the production of fixed form

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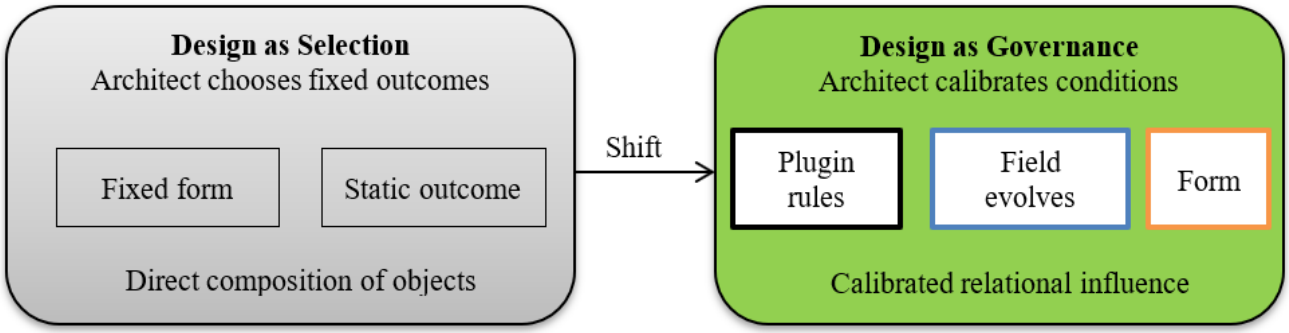


Fig 6: From design as selection to design as governance through relational calibration

Source: Author

Implications for Practice

The framework proposed in this study suggests alternative ways of approaching contemporary spatial problems. Public environments, for instance, may become more responsive to changing patterns of occupation and movement rather than relying on fixed circulation hierarchies. Similarly, transit and urban systems could accommodate variability and distributed movement more effectively by operating through adaptive spatial relationships rather than rigid zoning structures. The approach also opens possibilities for integrating environmental and behavioral data more directly into architectural organization.

Limitations

The approach requires abstracting complex behavioral data and may challenge conventional workflows. Outcomes also remain dependent on variability in user interaction, which limits predictability.

Architecture and Emerging Modes of Thought

This approach also raises broader questions about how architecture engages with evolving ways of thinking. Rather than simply adopting external computational tools, architecture can develop its own conceptual models for handling complexity and interaction. The relational field approach may be seen as aligning with wider intellectual shifts toward non-linear and multi-variable systems and in some cases, as running ahead of emerging frameworks for organizing complexity. This aligns with contemporary discourse on the "**second digital turn**," where architecture increasingly engages with computation, data, and relational systems as core drivers of design thinking. Within this context, the proposed framework should be understood not as a computational replacement for architectural design, but as an exploratory model for organizing spatial relationships through interaction.

CONCLUSION

This research extends movement-based architectural thinking by reframing design as a process of relational governance rather than formal composition. By embedding movement within a dynamic spatial field and introducing plugin governing dynamics, architecture is repositioned as a continuously evolving system shaped through continuous interaction between movement, program, environmental conditions, and user behavior. The relational spatial field model demonstrates that spatial organization can arise through the stabilization of interacting variables, producing adaptive patterns such as rhythmic structuring, intensified thresholds, and distributed circulation networks.

In this framework, the architect's role shifts from form-making to system calibration, enabling conditions that guide spatial emergence rather than prescribing fixed outcomes. While the approach opens new possibilities for engaging complexity and adaptability, it also raises questions regarding control, predictability, and implementation within conventional design processes. Rather than treating movement as something architecture accommodates after the fact, the study proposes that movement itself can operate as an active organizational force within the design process.

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