Architecture and/as Choreography: Concepts of Movement and the Politics of Space

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Abstract: Dance projects exploring and interpreting architecture through choreography have become increasingly popular over the past two decades. This article takes a similar but theoretical approach, using the concept of choreography as a lens to look at the underlying scripts that shape the ways in which subjects move in, and are being moved by, architecture. Typically associated with the field of dance, choreography refers to spatial ordering principles, evoking highly political questions of authorship and authority, interpretation, improvisation, appropriation, accessibility, inclusion, and exclusion. Applying historical and comparative analysis, this article focuses on seminal examples from the fields of 20th-century Western dance and architecture. By mapping out evolving concepts and constellations of architecture and/as choreography, it aims to help create awareness of the spatial politics of architecture and their historical situatedness.

Keywords: Architecture Theory; Choreography; Dance; Motion; Movement; Politics; Space; Spatial Politics.

Introduction[1]

Let us begin with a sequence of images from Maribeth Romslo's short film *Kitchen Dance* (2020). We watch a woman entering a kitchen with a shopping net full of groceries. She opens a window at the far end of the room, briefly enjoying the breeze coming in through flowing white curtains. Soon, it becomes clear that the woman we are watching is not a regular »housewife« but a professional dancer. In fact, she is more than one. Her identity

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1 The examples discussed in this text formed the basis for a seminar titled »Architecture as Choreography«, which I lead in the summer semester of 2020 in the Department of Architecture at the Technical University of Darmstadt. Some of the arguments presented here evolved out of the seminar discussions. Also, some of the literature referenced has been researched by participating students. I would like to thank all participants in the seminar for our stimulating discussions and for their contributions.

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Three stills from: Maribeth Romslo, Kitchen Dance, *2020, 7:30 min.*
Online: https://web.archive.org/web/20201027232218/https://www.
kitchendanceproject.com/, accessed October 1, 2021 © Maribeth Romslo.

changes with every shot. In total, there are six dancers, each with different ethnic features. The ever-transforming protagonist puts away the groceries and begins to routinely move around the space, opening and closing cabinets and drawers. Sitting down on a stool she peels some potatoes, then sets them on a stove to cook. A stopwatch begins to tick. Now the woman's movements become more expansive and increasingly experimental. For example, she climbs onto the countertop and balances on the edge of the sink, she twirls on the floor like a break-dancer, and playfully pours flour out of a chute and swirls it around with her bare feet. The ringing of the stopwatch eventually ends this brief burst of creativity (fig. 1).

Architecture enthusiasts will immediately identify the film set as a *Frankfurt Kitchen*. They will know it was designed in 1927 by Austrian architect Margarete Schütte-Lihotzky (1897–2000) for the large-scale housing project *Neues Frankfurt*. Observers lacking this knowledge may notice the confined space and rationality of the kitchen's design and assume a historical context due to the somewhat outdated technological equipment. At the same time, the dancing women with their individual traits and styles, surely do not conform to the idea of a housewife in 1920s Germany. Neither do their movements follow the patterns prescribed by the architecture. By transgressing the standards inscribed into this kitchen, Romslo's film questions how architecture prefigures movement and constructs its user's subject, by means of choreography.

Dance projects like this have become increasingly popular over the past two decades. They explore and interpret both contemporary and historical architecture. In this article, I propose a similar but theoretical approach, using the concept of choreography as a lens to look at the underlying scripts that shape the ways in which subjects move in, and are being moved by, architecture. Traditionally associated with the field of dance, the term choreography comes from the Greek *choros* (=dance, dancing place) and *graphein* (=to write, writing) (cf. Brandstetter 2016). From here, two different, yet closely related spheres of inquiry unfold. On the one hand, there is the staging and performance of a choreography, the dimension of event and experience. On the other hand, there is the writing and prescribing of moving bodies in space, the dimension of notation, and the script (cf. Spier 2005; Brandstetter/ Hofmann/Maar 2010). In both cases, choreography refers to spatial ordering principles, evoking highly political questions of authorship and authority, interpretation, improvisation, appropriation, accessibility, inclusion, and exclusion.

Working with the medium of space, the disciplines of dance and architecture are both invested in the experiential and diagrammatic dimensions of choreography.[2] Yet, while in the field of dance the question of movement through space has always been central, in architecture it has only become prominent over the course of the 20th century (Jöchner 2004). This was closely related to technical and scientific innovations, for example, in transportation or telecommunications, and a concomitant change in the experience of mobility from the second industrial revolution around 1900 (Noell 2004) up until today's digital age of global »flows« (Delalex 2006). In this process, the way that movement in space is conceived in architecture changed along with notation techniques, for example, axonometry and 3-D-modeling (Krausse 1999).

It is against this backdrop that architectural theory has turned to questions of experiencing architecture in motion, some scholars addressing it in a more general sense (Zürn 2014; Blundell-Jones/Meagher 2015), and others, explicitly through the lens of choreography (Meisenheimer 1999), while a parallel discourse is dealing with architecture itself becoming kinetic and performative (cf. Vogt/Schaeffer/Schumacher 2012; Malkawi/Kolarevic 2005). Closer to the field of dance and combining the questions of performing and writing, Isa Wortelkamp argues that choreography makes it possible to achieve a sensory awareness of the »movement script« of architecture and to explore its »choreographic potential« (Wortelkamp 2006, author's translation). Kirsten Maar explores the reciprocal relationship of choreography and architecture, discussing the »situational potential« of both disciplines (Maar 2019: 31, author's translation). She rightly points out that their impact as both »models of thought that determine space« goes beyond the aesthetic sphere (Maar 2019: 28, author's translation). This performative and potentially disruptive dimension of choreography has been addressed by dance scholars with varying degrees of reference to architecture (Hewitt 2005; Lepecki 2013; Klein 2014, 2015). Here, questions about the political dimension of choreography arise. The scripting of movement and the organization of bodies in space evokes power structures and points to architecture's (bio-)political dimensions. Gerko Egert addresses this question from a global perspective in his current project on »Choreopower« (Egert 2020).

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2 For a more in-depth look at architecture and choreography in etymological terms, see Maar 2019: 29–30.

In this article I will focus on such political dimensions of architecture and/ as choreography rather than its phenomenological or experiential aspects. I will do so from a historical and comparative perspective. The two parts of the article provide an overview of canonical positions – more precisely, canonical in Western discourse – from the fields of architecture and dance in the 20th century, which at the same time connect to each discipline in different ways. The first part will focus on the era of modernist rationalism and the second part will deal with the era of deconstructivism and the early digital age. On the basis of this overview I will sketch out how conceptions of space and the moving body have been subject to historical change and in what way they answered questions of authority and interpretation. By doing so, I intend to demonstrate how the concept of choreography can be a viable tool for a critical approach to architecture and spatial politics.

Norms, Efficiency, and Dynamics in the Era of the Second Industrial Revolution

Margarete Schütte-Lihotzky's *Frankfurt Kitchen* was the first serially produced fitted kitchen, a mass product built into thousands of homes. The standard variant is a small space of 6.5 square meters, connected to the living room by a kitchen pass-through. The kitchen is constructed from pre-fabricated components like work boards, floor and wall cabinets, an electric stove, a sink with running water, and accessories such as a dish drainer over the sink, a folding ironing board, an adjustable rolling metal stool, and handy chutes pre-labeled for the standard German cooking ingredients.

Developing her design, Schütte-Lihotzky aimed to »apply the principles of labor-saving economical management« (Schütte-Lihotzky 1927: 120). She looked at train and ship kitchens for inspiration and conducted movement studies – a method famously refined by Frank and Lillian Gilbreth in the early 1900s (cf. Corwin 2003) – resulting in diagrams resembling choreographic scripts (cf. Zürn 2014: 43). In favor of Taylorist efficiency, Schütte-Lihotzky championed short and linear movements in order to minimize the required effort. Implicitly, her studies were based on the idea of a prototypical well-functioning modern woman.[3]

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3 What this woman may have looked like we see in a promotional film from 1927 where a young Caucasian woman with a short bob-haircut demonstrates the kitchen's functions. Die Frankfurter Küche, 1927, Online: https://web.archive.org/web/20211001173423/https://www.filmportal.de/node/123351/video/1445356, accessed October 1, 2021.

The architect stressed the emancipatory and health-relevant aspects of her design. She argued that speeding up a housewife's work in the kitchen would save her time and energy for more important tasks (Schütte-Lihotzky 1927: 120). However, apart from the fact that only women are considered possible kitchen users here, this stop-clock efficiency comes at the cost of limitation and de-individualization. A woman's workplace in the kitchen, separated from family life, resembles a factory setup or a giant machine, incorporating its user. In other words, by directing her every movement, the architect-choreographer's authority over the user is enormous, while space for interpretation shrinks to a minimum. What is true for the individual applies collectively as well. Imagining the women of *Neues Frankfurt* in their identical kitchens cooking standard German meals may remind one of the synchronized mass choreographies that became popular in the field of dance at the time. In the process, not only the kitchen design is standardized but also the bodies and lives of its users. Based on a normative image of women as care-workers in their families and in society, in this choreography, private space succumbs to the dictum of the machine age.

In parallel, some 500 kilometers northeast at the Bauhaus School in Dessau, *Neues Bauen* and dance were joined even more explicitly. At the very heart of the newly built school was a stage for interdisciplinary experimentation. It was here that »Bauhaus Master« and leader of the stage workshop, **Oskar Schlemmer** (1888–1943), created the so-called *Bauhaus Dances* (cf. Kaldrack 2011).[4] These short choreographies for up to three dancers could take different forms. Some involved props that were handled by the performers (e.g. *Baukastenspiel*, 1929) or devices strapped to their bodies (e.g. *Stäbetanz*, 1927–28), others, such as *Raumtanz* (1926), involved no props at all.[5] The stage setting for these dances was minimalist and performers wore de-individualizing masks and padded bodysuits. As in *Raumtanz*, where three dancers follow marked lines in the shape of a square, the dancer's steps and gestures were strictly timed, often mechanical. In this respect they are reminiscent of the movement patterns within the *Frankfurt Kitchen*.

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4 Schlemmer developed the Bauhaus Dances with students and professional dancers (Siebenbrodt/Schöbe 2012: 179). Schlemmer taught at the school as a »Bauhaus Master« from 1921 to 1929. In 1923 he took over the Bauhaus Stage. Only after moving to Dessau was a professional stage available.

5 English translations of German titles: *Baukastenspiel* = Building-Block-Game, *Stäbetanz* = Stick-Dance, *Raumtanz* = Space-Dance.

These seemingly simple dances are embedded in a complex theoretical framework, propelled by Schlemmer's studies – as a visual artist rather than an architect – of abstract configurations of color, figure, and space. Dance and the stage played an important role here. A central problem for Schlemmer was the incompatibility of space, which he understood as a mathematical-abstract and geometric construct, and organic nature, as part of which he saw the human body (Schlemmer 1961[1926]: 25). Schlemmer visualized this in a drawing showing an abstracted stage crisscrossed by geometric lines, with a human figure at the center (fig. 2). According to Schlemmer, »man as dancer« (»*Tänzermensch*«) obeying »the law of the body as well as the law of space« is the ideal medium to bridge this divide (ibid.). Therefore, it was his interest in abstract space that made him turn to »body-mechanical« and »mathematical dance« (Schlemmer 1968[1926]: 129, author's translation, orig.: körpermechanischen/mathematischen Tanz). By using costumes and devices, Schlemmer aimed to help the transformation toward abstraction. In the process, he stated that »natural man, in deference to abstract space, is recast to fit its mold.« (Schlemmer 1961[1926]: 23). In this sense, Schlemmer's quest for abstraction has a limiting effect on the dancing subject. It conceptualizes non-individual dancers with limited freedom of movement to make them fit into his box-like concept of space.

Schlemmer's Bauhaus Dances were not about dancerly expression but rather analytical testing arrangements. It has been noted, that this brought him close to movement analysis and body-mechanical studies (Kaldrack 2011: 129 pp.). Schlemmer himself stressed his interest in »mechanization« and »technology« which he saw as two guiding principles of his time (Schlemmer 1961[1926]: 17). He was convinced that »theater, which should be the image of our time [...] must not ignore these signs« (ibid.: 18). However, as opposed to economically motivated movement studies, Schlemmer was not interested in technological efficiency, nor was it his aim to create a man-machine. It was rather his metaphysical search for universal truth that led him to de-individualization and standardization, giving his choreographies their mechanical character.

In what way is this relevant to architecture and/as choreography? First of all, Schlemmer's teaching formed part of a curriculum for architects, introducing dance and experience-based approaches into architecture education (Ersoy 2011). This teaching was not about actual design tasks but again, Schlemmer was pursuing larger goals: to reveal to his students the universal
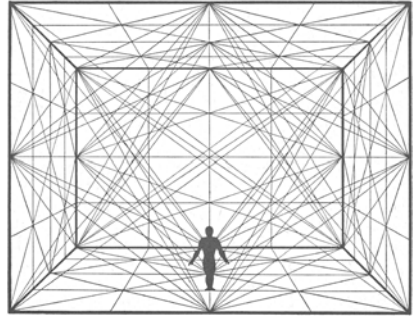
2.

Oskar Schlemmer, drawing of the abstract stage. From: Schlemmer, Oskar (1965[1925]): Mensch und Kunstfigur, in: Oskar Schlemmer et al.: Die Bühne im Bauhaus, Mainz: Kupferberg, 13.
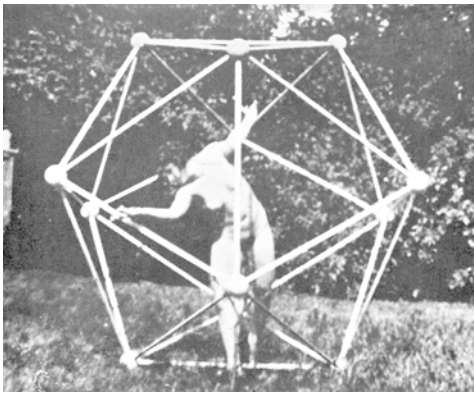
3.

Dancer inside Rudolf von Laban's icosahedron, 1910s. Photographer unknown. From: Laban, Rudolf von (1926): Choreographie, Jena: Diederichs, n. p. Reproduction: Jürgen Schreiter, Darmstadt.

principles of man and space.[6] The idea of man as a universal prototype reveals an anthropocentric and essentialist world quite typical for this era. If we now think of the image of the architect conveyed in the process, they are pictured as keepers of universal knowledge, equipped with quasi omnipotent authority to create a universal theater or *Gesamtkunstwerk*, a popular idea at the Bauhaus. It seems important to consider this concept of artistic authority when thinking about the rationalist and rule-based design with which the Bauhaus of the 1920s is associated. Not unlike the *Frankfurt Kitchen*, this is an architecture that intentionally regulates and prescribes the choreographies of its users, all in the name of an essentialist vision of a »greater good«.

Negotiating the relationship between bodily movement and space was also central to the work of the influential dance scholar and »father« of *Ausdruckstanz*, **Rudolf von Laban** (1879–1951). Having studied architecture at the École des Beaux-Arts in Paris, Laban took a truly architectural approach to dance, understanding »movement« as a form of »living architecture« (Laban 2011[1966]: 5). Laban shared with Schlemmer the belief in a »law-governed inner unity of man and nature« and that the »dancer directly expresses the essence of the world« (Dörr/Lantz 2003: 9). However, Laban did not follow mechanical abstraction but chose a more expression-oriented approach. Himself a dancer, his thinking started from the individual moving body and he frequently stressed that the source of movement is a subject's »inner volition« (Laban 2011[1966]: 10). From here, he looked for spatial concepts flexible enough to deal with dynamic and complex movement. Focusing mostly on the individual dancer in his theoretical work, in his practice as a choreographer he took a strong interest in group dynamics and even mass choreographies. Good examples for this are his so-called *movement choirs* that he developed with amateurs (cf. Maletić 1987: 14f).

Similar to Schlemmer, Laban's basic idea of space followed the Euclidian box-model. But instead of »confronting« the dancing subject directly with the geometry of space, he defined the space within reach of the body's limbs as the *kinesphere*, surrounding the dancer like an invisible bubble.[7] To represent this sphere visually, Laban frequently used the platonic shape of the

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6 The image of man was also the subject of Schlemmer's class *Der Mensch (The Human)* in which he included drawing exercises, biological, and anatomical studies as well as philosophy, aesthetics, ethics, and metaphysics.

7 Complementing the *kinesphere*, he defined the *dynamosphere* as a register for dynamics.

icosahedron. For example, for a series of photographs illustrating his 1926 manual on choreography, he had a dancer perform inside a human-scale icosahedron model (fig. 3, previous page). Laban's idea of the *kinesphere* freed the individual moving body from the »confines« of abstract space without giving up a geometric model of space. In comparison to Schlemmer's dances, this allowed Laban to conceptualize movement much more freely while holding on to the modernist essentialist image of man representing the harmony of the universe (cf. Dörr/Lantz 2003: 9).[8]

Laban became famous for his pioneering system of dance notation, today known as *Labanotation* (cf. Guest 2005). Inspired by the then new media of film and motion photography, this system was based on the idea of making movement visible through sequences of »snapshots« (Laban 2011[1966]: 3). At the same time *Labanotation* is deeply rooted in architectural diagrammatics. Laban argued that a »ground-plan, and at least two elevations« were necessary to convey »a plastic image of the three-dimensional whole« (ibid.: 5). The icosahedron model helped him arrive at reliable measuring points on the *kinesphere*. By means of a specifically developed system of signs, individual movements from one point to another could be noted. Additionally, he developed a register for the quality of movement, like speed or intensity. This he referred to as the *dynamosphere*.

Developing tools to systematically measure and describe movement in space is a highly political act. Movement ceases to be something that »just happens«, becoming prescriptible and plannable. With his pioneering work, Laban laid the foundation for increasingly sophisticated choreographic planning strategies that would later gain importance in both dance and architecture. Laban's case also exemplifies how the application of such choreographic knowledge can be highly ambivalent. For example, he cooperated with the National Socialist regime, creating a mass choreography for the opening of the 1936 Olympic Games (cf. Kew 1999). After falling out of favor with the regime and fleeing Germany in the 1940s, he lent his expertise to industrial movement studies in Great Britain (Davies 2006[2001]; Rothe 2012). As opposed to the Gilbreths or Schütte-Lihotzky, who saw short and mechanical movements as most effective, he experimented with dynamic movement

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8 Laban frequently turned to the geometry of crystals, an image corresponding to his icosahedron model, to exemplify the universal order of nature.

patterns, making use of the body's inner drive for motion.[9] This focus on dynamism and processuality, and the intention to stimulate and channel intrinsic motivation in the name of increasing economic productivity, anticipates the tendency toward immaterial labor in the age of neoliberalism.

Where previous examples were mostly concerned with the relationship of bodily movement to space, movement *through* space and architecture is key to **Le Corbusier's** (1887–1965) *promenade architecturale*. The architect coined this term in 1934 when writing about his *Villa Savoye* (late 1920s). He claimed that to correspond to the dynamism of man, architecture should be experienced »*à la marche*« (Corbusier/Boesiger 2015[1934]: 24). He argued for a »living« architecture, challenging the central perspective directed toward a single immobile viewer that had prevailed – according to Le Corbusier – since the Baroque period (ibid.).

Le Corbusier describes the *Villa Savoye* as a walk-in scenography. From the recipient's arrival by car to following the double-flight ramp or spiral staircase up to the roof terrace, to a view of the surrounding nature opening up through a strategically placed opening in the wall. Movement is necessary to fully grasp and experience the building. Le Corbusier also stressed the activating elements of suspense and surprise along the way to prevent passive consumption (ibid.). By replacing the term »circulation« – a term he had previously used – with »*promenade*«, he favors aspects of spatial flow and dynamics over more technical questions of access (cf. Samuel 2010).

Compared to Schütte-Lihotzky's kitchen-choreography, the *promenade* evokes openness and freedom. Instead of efficient work flows it focuses on creating an inspiring and pleasant experience. Considering that the villa was designed as a place of relaxation and leisure for busy upper-class Parisians, this was certainly deliberate. At the same time, the moving experience is not left to chance. On the contrary, its linear progression is carefully scripted (cf. Blum 1988: 21). This leads us to consider the role of the architect in this choreography. To my knowledge, Le Corbusier did not conduct movement studies to arrive at this choreography but relied on his artistic intuition and sense of space as an architect. This makes the underlying concept more difficult to detect and contributes to Le Corbusier's image of himself as an artistic genius. Thereby, his role as a choreographer becomes less visible,

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9 With reference to Schütte-Lihotzky's movement studies, it seems interesting, that he developed this approach to help women workers in post-war Great Britain lift heavier loads.

despite the degree of authority over this meticulously choreographed experience remaining similarly high, as it was in the design of the *Frankfurt Kitchen*.

Le Corbusier was not only the creator of villas, but he engaged in urban planning and mass housing such as his *Unité d'habitation* in Marseille (1940s). It seems interesting to compare the qualities of movement and the underlying conceptions of the users that come with this shift in scale. For the *Unité*, at least at first sight, the more technical concept of circulation seems more apt than the *promenade*. However, the design does follow a similar idea of curated progression, providing inhabitants with stimulating situations of space and light (cf. Janson 2007). Granting »ordinary citizens« the same experiences as wealthy villa owners points to the utopian idea of prosperity across classes, with design playing a major role in achieving this goal. At the same time, in the light of rational typification and standardization, the quasi-individuality of the *promenade* is brought to the fore. This oscillation between individuality and prototypical standardization is also reflected in Le Corbusier's *Modulor*, the human-scale model he developed as a reference for his own work. In keeping with the long-standing tradition of human modeling in architecture (cf. Zöllner 2014), its measurements are based on a standardized male (white) body.[10] This points to a modernist essentialism underlying Le Corbusier's buildings in general and the concept of the *promenade* in particular. The concept reveals itself to be indebted to the master narrative of linear progression and testifies to a belief in the possibility of projecting and controlling movement in space. At the same time, by introducing the individual user experience as a relevant concern, the *promenade* deviates from the rigorous »machine choreographies« of the early 20th century. As we will see in the following paragraphs, it is this aspect in particular that will be developed further in the second half of the century.

Deconstructing Authority and Approaching the Digital Age in the Postmodern Era

In the United States of the post-World War II period, dance pioneer **Anna Halprin** (1920–2021) and landscape architect **Lawrence Halprin** (1916–2009) tackled classical and modernist approaches in their respective fields. They did so individually and in collaborative projects. For example, building on

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10 Federica Buzzi speaks of »an updated version of [...] masculinist and ableist universalism« (Buzzi 2017). In this there is an overlap with the concepts of Ernst Neufert (Meister 2016).

the Bauhaus spirit they taught interdisciplinary workshops for dancers and architects, which were based on the idea of »movement as the primary impetus in form-making« (Wasserman 2012: 34) and focused on fostering active participation in planning processes (ibid.: 44f).[11]

An apt architectonic representation of the Halprins' methods is the so-called *Dance Deck* (1950), an irregularly shaped wooden platform built on a forested slope near the couple's home in San Francisco (fig. 4). The deck was designed by Lawrence Halprin and intended for Anna Halprin's dance classes and workshops. Its shape deviated radically from traditional rectilinear stages with a clear front and back, as exemplified by Oskar Schlemmer's design for an abstract stage. This, according to Anna Halprin, led to a »complete reorientation on the dancer. The customary points of reference are gone […] the space explodes and becomes mobile« (A. Halprin, in: L. Halprin 1956: 24). Anna Halprin's dancing and choreography evolved in relation to this transgressive concept of space. Instead of linear and regulated movement, she favored intuition and improvisation based on an understanding of anatomy, but also visceral and spiritual knowledge. In her teaching she worked with professional dancers,[12] as well as amateurs, aiming to democratize dance by letting »everyone have mastery of movement« while »making it possible to go beyond the conformity of behavior« (Bal-Blanc 2020).

For Lawrence Halprin, his profession of landscape architecture was just as much about »making space« as it was about dance. Writing about *The Choreography of Gardens* he criticizes baroque central perspective – just as Le Corbusier had done – and promotes designing »with the moving person in mind« (L. Halprin 1949: 32). In his eyes, design should be organic and playful, enriching everyday life with »a continuous sense of dance« (ibid.: 34). In this, he goes beyond Le Corbusier's scripted activation of the recipient/ user, aiming to create environments that prompt improvised responses and active participation. His water fountain designs, for example, are constructions of large concrete blocks and platforms of varying shapes and sizes on which visitors can sit and play (i.e. *Ira Keller Fountain*, 1970, Portland, Oregon). Participation was also key to his concept of *RSVP cycles* (cf. Hirsch 2014: 185f), a multi-step method for community involvement in planning processes.

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11 Lawrence Halprin had studied at Harvard where Bauhaus architects Walter Gropius and Marcel Breuer were teaching.

12 Among them, Yvonne Rainer and Trisha Brown who later went on to be part of *Judson Dance Theater* in New York.

4.
Dance Deck with one person standing with hands on hips,
possibly Anna Halprin, 1970s. Photographer unknown.
Anna Halprin Papers, The Elyse Eng Dance Collection,
Museum of Performance + Design.
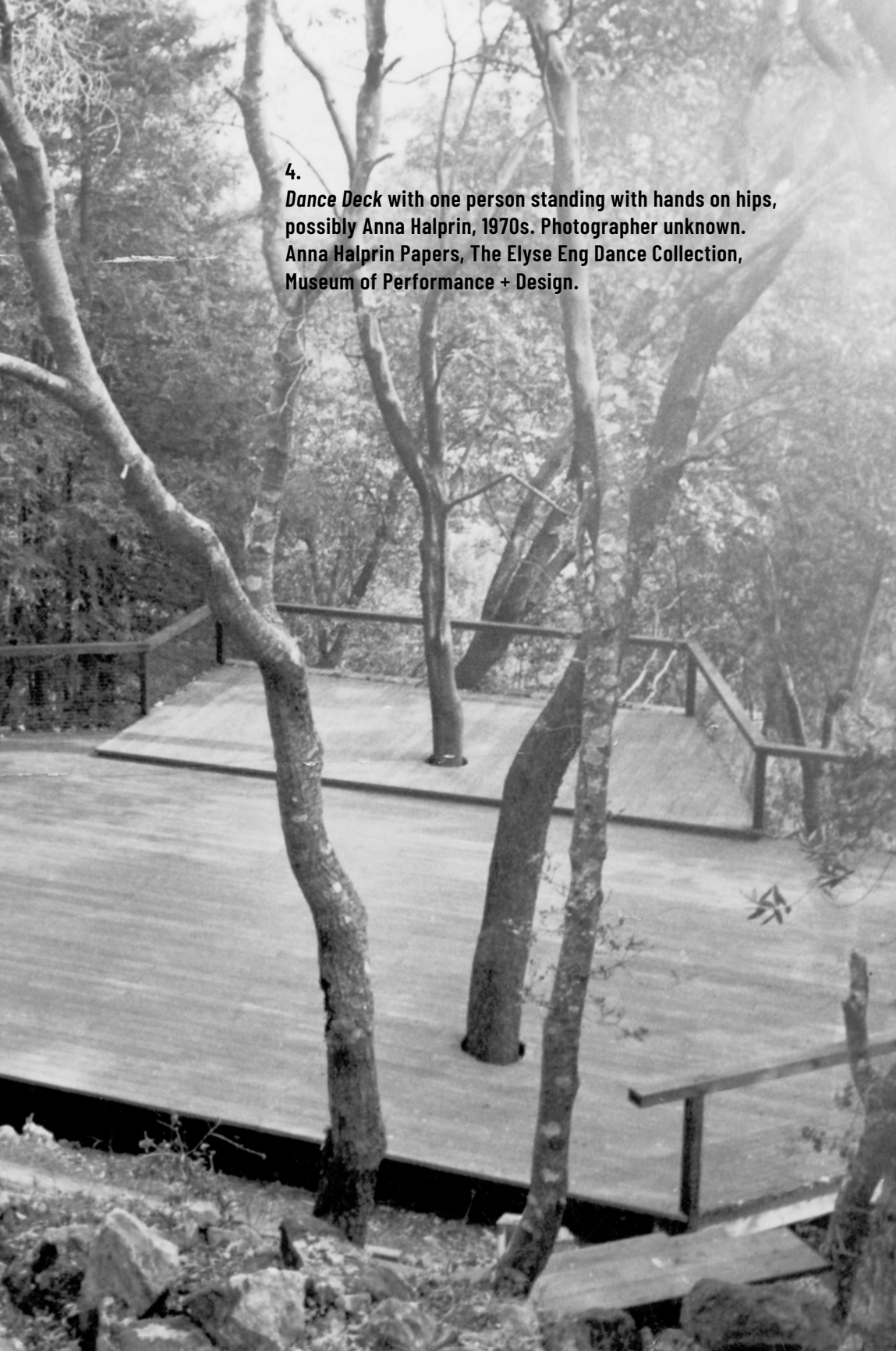
This method was for »breaking down traditional distinctions between architect/dweller and choreographer/audience« (Merriman 2010: 436) and made him a forerunner of today's participatory planning approaches in architecture.

»In a world intensely involved in the development of motion through space«, Lawrence Halprin writes in 1966, little has been done to express it graphically« (L. Halprin 1966: 26). This is why he came up with the notation system of *Motation* (= motion + notation), »a tool for choreography [...] in the broadest sense – meaning design for movement« (ibid.: 31). This system is somewhat complementary to *Labanotation* – which Lawrence Halprin was well aware of. He points out that *Motation* does not record gestures in space but motion through space and the relationships of people, objects, and their environment (ibid.: 27). He used this system for noting Anna Halprin's choreographies, as well as for his architectural designs, from parks to shopping malls, and even highway systems (Merriman 2010: 434). In focusing on relational aspects and communication, *Motation* shows a sensibility for the growing complexity of societies and environments.

The Halprins set the Euclidean box-like space into motion. Rejecting traditional stage environments, in dance and – in a more metaphorical sense – in architecture, they were interested in the performance of everyday life. In Schlemmer's words, »natural man« takes over, rendering the idea of man as a prototype or programmable machine obsolete. Instead, individual experience and creation are brought to the fore. Compared to Le Corbusier's concept of the *promenade architecturale*, which reveals itself as a concept closer to consumption than self-initiated action, active participation and appropriation is encouraged. The Halprins' participatory approach drastically shifts authority from the hands of the choreographer to the choreographed. Historically, this democratization of choreography is embedded into greater sociopolitical processes, navigating the balance of individuality and collectivity in the post-war pluralist democracy of the United States.

Architect **Bernard Tschumi** (*1944) is equally interested in shifting authority from choreographers to the choreographed. Initially unfolding his practice as a theoretician and »paper architect«, he explores the fringes and limits of architecture in all of his projects. In the spirit of post-structuralist thought he takes particular interest in deconstructing the conventions and ordering systems of the discipline. »Movement«, »action«, and »event« are among the keywords most frequently used in his writing. A statement he continues to make is that »there is no architecture without action, without

program, and without event. Architecture must deal with movement and action in space. If one does not understand architecture in this complex way, [...] there will be no architecture anymore« (Tschumi/Ruby 1993: 70, author's translation).

With his *Manhattan Transcripts* (1976–81), a series of graphic compositions in several parts (fig. 5), Tschumi created a method for spatial and movement notation that corresponded to his deconstructivist approach (cf. Tschumi 1994). The *Transcripts* combine line drawings and photographs which are abstractions of architectural spaces (represented through plans), movements (represented through movement diagrams) and events (represented through photographs) (ibid.: 7). Each part of the series deals with a different aspect of urban space and follows a loose narrative (ibid.: 8–9). Borrowing the terminology of cinema, Tschumi speaks of »a form of architectural jump-cut« (ibid.: 12). Unlike *Labanotation* or Motation, the *Transcripts* are not for scripting or recording movement sequences. Instead, Tschumi aimed to »transcribe things normally removed from conventional architectural representation, namely the complex relationship between spaces and their use« (ibid.: 7). In this way he »contaminated« or disrupted architecture's conventional plan drawings with the movements and events of everyday life. According to Tschumi, it is the negotiations of indifference, reciprocity, and conflict (ibid.: XXI) which produce space and architecture. The *Transcripts* as an experimental form of mapping make this reciprocal and conflicting relationship of built and lived space visible, without dissolving its complexity.

With the large-scale project of the *Parc de la Villette*, a 35 hectare park in the northeast of Paris, Tschumi put his theoretical approach into practice. The concept for the park is based on the basic constructivist shapes of points, lines, and surfaces. On a 10 × 10 × 10 meter grid of points, bright red steel structures – Tschumi calls them *Folies* – are scattered throughout the park. These small buildings are intended for cultural and recreational activities, but their design, which is somewhat reminiscent of playful and dysfunctional machines (Gugeler 2005: 50), does not make this function immediately apparent. The lines are paths cutting through the park: two intersecting main axes and a »cinematic promenade« – a sequence of smaller gardens – that meanders through the entire park. The *surfaces* in between are to be used freely (Tschumi 1988: 7–8). By moving the main routes off the axis and allowing paths to run into the void, architectural conventions are destabilized in order to deconstruct their »inbuilt ideology« (ibid.: VII) in the name of an »architecture that means nothing« (ibid.: VIII).
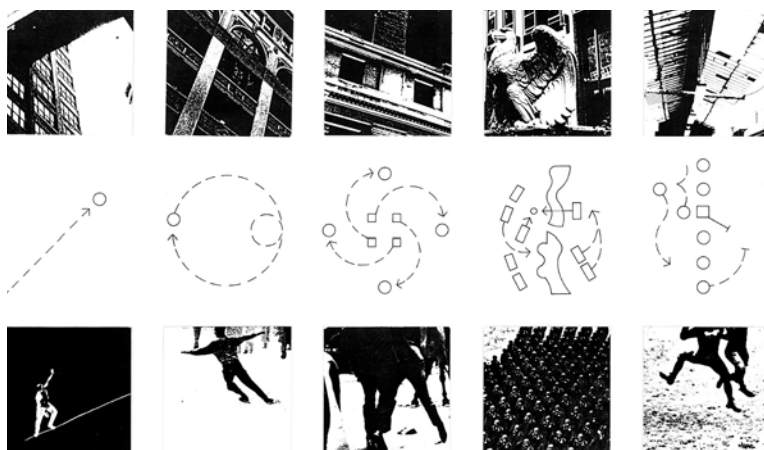
5.
Bernard Tschumi, The Manhattan Transcripts, Episode 4: The Block, 1981.
© Bernard Tschumi.

6.
William Forsythe with Dana Caspersen and Joel Ryan,
White Bouncy Castle, 1997, plastic, ventilators,
sound. Photo: Julian Gabriel Richter.

Tschumi thinks of architecture in close relation to its users, but instead of functionality he emphasizes an openness toward unforeseen dynamics and processes. If one now asks for the human subject at the centre of this conception, the image remains strangely obscure. Tschumi speaks about events and bodies, but not about individual participants or their identities. His is a cinematic perspective, a view from the outside, making the park appear as a kind of open film set or laboratory in which everything and nothing can happen. Compared to Le Corbusier, the architect here is less a designer than a facilitator of experience, while compared to Lawrence Halprin's communicative landscape architecture, his projects appear decentralized and neutral. It also seems significant that Tschumi, despite his focus on movement and events, does not refer to himself as a choreographer. One may even say that he is a choreographer who refuses to choreograph, very much in tune with Roland Barthes' prominent theory of the »death of the author«. With this radical renunciation of authority, Tschumi transfers all responsibility to the users or the choreographed, even at the risk of confusing or overwhelming them.

Deconstruction and participation are also major concerns for the choreographer **William Forsythe** (*1949). Forsythe became known for revolutionizing (neo-)classical ballet as the director of the Frankfurt Ballet in the 1980s, and later the *Forsythe Company*. It would be going too far to examine the breadth of his work here. Instead, a few focal points that correspond with the preceding examples in different ways will be highlighted. These concern questions of space and movement in space, the question of participatory choreography, and movement notation in the digital age.

Forsythe's ballets usually take place on minimalist stages, which may remind one of Oskar Schlemmer's stage concepts. Unlike Schlemmer, however, Forsythe's is a decentral concept of space that negates the central stage perspective, for example, when dancers turn away from the audience or disappear from their field of vision (e.g. *Heterotopia*, 2006, where there are two stages which are not visible at once), or when the audience is integrated in the stage action (e.g. *You Made Me a Monster*, 2005). Such choreographic twists transform the audience into active performers, blurring the conventional role attributions of theater (cf. Spier 2011). Similar to Tschumi, Forsythe also defines space not abstractly, but as a place of negotiation between aesthetic and social processes. Highly aware of choreography's inbuilt power dynamics, he aims to make these dynamics visible by turning its principles against themselves. As Mark Franko notes, Forsythe sees »choreography as

an enabling practice [...] From this vision emerges a political potential that also becomes visible in performance« (Franko 2006).

In relation to architecture, Forsythe's so-called *Choreographic Objects* are of particular interest. These objects – often large installations – follow an interventionist strategy that literally sets bodies in motion. These works are created for amateur dancers, illustrating basic principles of choreography which to Forsythe are never monocausal, but always relational. By incorporating objects into his choreographic thinking, Forsythe also breaks with the notion – which for example was key to Laban's *kinesphere* – that movement must necessarily come from a single center or body. Instead, he tries to figure out what happens when there are multiple centers of movement (Gilpin 2011: 120). Forsythe's *White Bouncy Castle* (1997)[13] which is a giant, inflated castle-shaped playground/stage made of a white plastic fabric (fig. 6), may demonstrate this approach best (cf. Maar 2019: 285). When participants enter this elastic space, they are not only moved by the architecture that surrounds them but also they also influence each other's movements. There is no predetermined choreography, no dancers, and no audience, but everything dissolves in an anarchic and playful choreography. Similar to Tschumi's projects, a refusal of choreographic authority can be observed here. At the same time, both experiment with decentralizing not only space but also the idea of the subject, including architecture and objects as non-human actors in their choreographies. This marks a turn away from modernist anthropocentrism and toward perspectives of new materialism. Offering a playground without specifying the rules of the game is a highly political and also ambivalent gesture. Similar to Tschumi's *Parc de la Villette*, Forsythe's *White Bouncy Castle* turns every movement into an event. Instead of passively consuming, the audience is forced into the role of the performer. The radical openness to everybody and anything that may happen signals inclusion, and at the same time, points to an increasing »eventization« of all areas of life.

Forsythe is, finally, a pioneer of digital dance notation. Looking for an adequate medium to communicate his ideas on dance and dissatisfied with *Labanotation* that requires a high degree of expert knowledge, he turned instead to computer-assisted visualization techniques. One result of this research is the *Motion Bank* project (founded in 2010 with David Kern), that uses motion capture technology to record dance. This form of notation makes

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13 The project's initial Title was Tight Roaring Circle and it was a collaboration with Dana Caspersen and Joel Ryan (cf. Spier 2011: 140f.).

it possible to work beyond a fixed repertoire of gestures, as did Lawrence Halprin's *Motation*, but also, to display a four-dimensional all-round view on a two-dimensional screen.[14] In principle, this is a cinematic approach indebted to historical movement studies (Fingerle/Woeste 1999: 31). At the same time, working with digital data opens op the possibility of processing and displaying the same material in many different ways. From a historical perspective this approach responds to the growing complexity of choreography (as exemplified in the *White Bouncy Castle*), and experiences of simultaneity and multi-causality in the age of global flows. Similar digital design tools have been developed and used in the field of architecture. A particularly interesting example in terms of choreography is the so-called *Space Syntax* project. In the tradition of economical movement studies, the project provides the software and methods to study complex movement patterns for efficient infrastructural planning.[15]

Conclusion: Concepts of Movement and the Politics of Space

This article's tour de force through the shared histories of architecture and dance focuses on three aspects: conceptions of movement in space and the underlying construction of the subject (1), questions of authorship and authority (2), and the corresponding design tools or forms of notation (3). To conclude, these aspects will be summarized and put into historical context, to then come back to the initial question concerning architecture and/as choreography and the politics of space.

(1) The examples demonstrated how, over the course of the 20th century, conceptions of space and movement became increasingly fluid and complex. Drawing a line from Oskar Schlemmer's geometrical stage concept via Anna and Lawrence Halprin's multi-faceted *Dance Deck* to William Forsythe's mobile *Choreographic Objects*, reveals a shift from the Euclidean box model toward a radically decentral conception of space. The imagined or projected quality of movement changed in close correspondence. The mechanical movement patterns embedded in Margarete Schütte-Lihotzky's *Frankfurt Kitchen* or Oskar Schlemmer's *Bauhaus Dances*, in keeping with geometric

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14 In parallel, the so-called Piecemaker software makes it possible to annotate the recorded scenes in writing.

15 The project's website is: https://web.archive.org/web/20211001173704/https://spacesyntax. com/, accessed October 1, 2021.

space, were countered by the more dynamic movement concepts of Rudolf von Laban or Le Corbusier. From here, approaches, as in Anna Halprin's decentral choreographies or Bernard Tschumi's open park design, open up toward free improvisation. When it comes to the conception of the subject/dancer/user, earlier examples such as Schütte-Lihotzky or Schlemmer tended to rely on a one-size-fits-all prototype, while later examples, such as the Halprins, took a strong interest in individuality. Following this path, the concepts of Bernard Tschumi or William Forsythe go even further, pointing toward an increasingly autonomous and self-designed subject. This freedom can be demanding in that it comes at the cost of high personal responsibility and a prerequisite to perform creatively in even the most mundane situations. In performance studies this phenomenon has been theorized as a state of »permanent performance«. When architecture becomes event-like, it reflects but also supports this process.

(2) Concepts of authority and authorship changed along with the sketched-out decentralization of space, movement, and subject. The examples discussed point to a continuous decrease in regulation or control on the part of the architect/choreographer. For example, compared to Margarete Schütte-Lihotzky's authoritarian kitchen design, the moving experience Le Corbusier's *promenade* offers is much more open, albeit still meticulously curated. Lawrence Halprin went on to create increasingly open-ended choreographies, and finally, Bernard Tschumi or William Forsythe intentionally avoided making any prescriptions. This process was accompanied by a decrease in the significance of singular authorship, an artistic self-image that was still prominent among actors such as Oskar Schlemmer or Le Corbusier. In the era of the »death of the author«, the concept of the choreographer as an unchallenged authority lost its appeal. The example of the Halprins best shows how participatory approaches and questions of shared authorship gained popularity in turn. Historically, this mirrors a paradigm shift in the ways that subjectivity and collectivity are negotiated in Western democracies. Spaces for improvisation and interpretation on the part of the users/choreographed radically increased, until, as in the projects of Tschumi and Forsythe, roles are reversed and participants become the authors of their own experience. Appearing at first as non- or even anti-authoritarian, such approaches rely on self-regulation. Therefore, they are inscribed with very complex and less visible forms of authority. In today's age of neoliberalism, where »shared spaces«, »inclusion«, or »access« have become popular buzzwords for investors and project developers, a sensibility toward these hidden

forms of authority and the related question of responsibility for our built environment is of particular importance.

(3) The tools or forms of notation in dance and architecture mirror the sketched-out development, becoming increasingly complex and multi-perspectival. Where the system of *Labanotation* focuses entirely on individual movements in space, *Motation* is able to note motion through space along with the design and quality of this space. Bernard Tschumi's deconstructive diagrammatics abandoned any linearity or narrative in favor of open-ended association. Finally, digital notation tools as developed by William Forsythe or the above-mentioned *Space Syntax* program are designed to capture increasingly individual and complex movement patterns in a de-centralized space. A striking phenomenon in relation to the development of choreographic strategies and notation tools are the recurring overlaps with economically motivated movement studies. Be it the machine-like move-ment patterns applied by Schütte-Lihotzky, the dynamic movement concept of Rudolf von Laban, or the design of relational movement by Lawrence Halprin and Space Syntax, all of these approaches demonstrate a close connection between choreographic knowledge and economic value. The changing conceptualization of movement reflects the economic paradigm shift from physical to immaterial labor. In a more general sense, it refers to the ambivalence of (artistic) movement research between empowerment and exploitation. Along with changing concepts of the moving subject, this points to the biopolitical dimension of architecture and/as choreography.

The examples here have shown how choreographies in dance and archi-tecture have been subject to historical change. From today's perspective, Schlemmer's mechanical dances or Le Corbusier's meticulously planned *promenade* may appear somewhat narrow and authoritarian, and we may sympathize more with the open-ended choreographies of Bernard Tschumi or William Forsythe. However, it is not the intention of this article to tell a story of progress. It seems well worth noting that within their historical contexts, all of the protagonists pursued emancipatory goals. Margarete Schütte-Lihotzky's aim was to save women time and energy, Oskar Schlemmer followed a quest for metaphysical truth, Le Corbusier worked on comfortable living for the masses, and the Halprins were looking for better ways of working together. At the same time, it became clear that any concept of movement in space is inevitably linked to questions of authority and therefore inherently political. By explicitly addressing those political

questions of the ordering of space, the prescription of movement and the shifting degrees of authority and participation involved, the concept of choreography helps us to reveal and understand the power dynamics built into architecture. Finally, the *Kitchen Dance* project points toward choreography's important potential as a practice. Whether dealing with modernist master narratives or today's fluid concepts of authority, it reminds us of the necessity to constantly re-read and re-evaluate our built environment.

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