Chapter 9: Movement Profile of *Duo*

"You relate through a sequence, more than to a person." Videoconference interview with Roberta Mosca, April 27, 2018.

> ROBERTA: [*Duo*] is hard, but very beautiful. I have a great memory of this. And I love this music. […] What timings we are using … no, not what timings, but how it was built. It is extremely complex. When is one doing something in relation to the other? The steps are the same and it is choreographed for both, but we are not doing the same thing at the same time. Somehow, this produces a complexity. You don't know. You just can focus on what you are doing. […] It's all you have. 'Cause you're exhausted. It's complex 'cause you're kind of doing the same [as your partner] but not. There is a total coherence, but at the same time, you don't know how to figure out how … what's happening, really. This is very in much *Duo*, I think. I don't know if I experienced it in other pieces. This sensation of: you're together with someone, and you're so linked into something, but you're so overwhelmed by what you are doing that you just only pay attention to what you are doing, but what the other person is doing … it also linked to what you are doing, but you can't even see it (*pause*) except some little breaths of moments when it opens up. And then you're like "Ok, you are there." (*pause*) "And I'm here." Those moments are so important […] This is a concentrated, like, tunneling. You deal with space and relations different than in other pieces, like [Forsythe's] *Quintett* [1993]. The relationship is out of these exact timings, and (*pause*) the sequence. You relate through a sequence, more than to a person (*she laughs*). It's much more abstract. It's on the realm of the physics, somehow with gravity and timings and repetitions, and then back and forth, back and forth, so you lose the sense of where you are. Did you do this again, or not?

This rich testimony of being moved by *Duo* points to an intensity of moments and streams of interaction, as dancer Roberta Mosca processes the choreography and discusses her relationship to it. This is a relationship *with* and *through* dance. It is an affective relationship. The dancer notes her happiness in taking part in the hard work of making something beautiful.

During this interview with Mosca, we are speaking as she watches a video of herself dancing *Duo*. Because of her sensitivity to coming in and out of sync, she remembers *Duo* as a complex arrangement of steps—producing relations of timings, space and persons. I have considered these under the rubric of entrainment in the previous chapter. But pocketed in Mosca's memories are not only discussions of time, but recollections of the existential struggle she experienced in performance, fighting exhaustion and feeling the vacillation between straining and regaining energy. Her testimony, both in content and in its narrative form, describes dilating from long streams of individual focus to brilliant bursts of joint attention. She focuses on herself, but always resurfaces to a world where she knows where she and her partner are working together.

One important theme within Mosca's testimony gives direction to this chapter. The topic of "sequence" is frequent in this interview, pointing to something that I have hitherto refrained from discussing: the importance of the *order* of the movements. The sequence of *Duo*—that is, the series of movements in time—according to Mosca, enables relation and gives the choreography a body. At another point in this conversation, Mosca refers to *Duo*'s "anatomy of sequence," which I understand as a knowledge of *where* things are located and *how* they fit together to form a whole. Common knowledge of this anatomy (shared with her partner) is what makes relation possible, as Mosca lives through the physical reality of gravity, body and balance. In this section, I will consider the sequence of *Duo* in greater detail to understand what this stringing along and between movement does and is comprised of—giving it terms and noting its potential.

Gaining insight into the dancers' experience of *Duo*, as I have attempted in the previous chapters, has reconstructed an array of activities and concepts involved in dancers' movement practices. It has shown how the dancers' movement skills accumulate collectively, through shared practice and investment in their project. I wished to know how *Duo*'s movement came about and explain the key features through detailed review of seminal movements, such as *showerhead*. Yet I also aimed to describe the piece's particular movement style and aesthetic, and how this had been arranged in a compositional structure (specifically, the sequence). The very nature of *Duo* made writing about it particularly difficult: How was I to specify this, when the dancers themselves admitted that the choreography was in-process and changing? Was this a choreography progressing from the first version? Or was it more open, and complex in its multiplicity?

This chapter provides two proposals for consideration of these issues: The first part (9.1) provides a catalog of movement principles found in *Duo*—the sort of list I hope might prove useful for dance educators developing a practice-based *Duo* curriculum. The second (9.2), titled *Charting the History of Duo*, presents graphics that visualize change in *Duo* longitudinally, continuing in the vein of Forsythe's digital projects. After observing the potential of *Duo* as a reserve of renewable ideas and inspiration, I concur with Brian Massumi: "Reality is not fundamentally objective. Before and after it becomes an object, it is an inexhaustible reserve of surprise. The real is the snowballing *process* that makes a certainty of *change*."[1] To find out about this "snowballing," I reconstructed *Duo*'s anatomy, attempting to find out about the momentum that keeps the force of choreography alive—like a body itself.

1 Massumi, *Parables for the Virtual*, p. 214.

9.1 Core Movement Values

Many dancers have asked me how this research around *Duo* could impact the teaching of dance practice. Responding to this concern, this section offers an overview of the movement principles that describe the movement style and choreography of *Duo* generally, providing a *Duo* curriculum. Developed after dance scholar Cynthia Novack's synopsis of the "core movement values" of the dance form contact improvisation,[2] the profile has been formulated by bringing the lens of Laban Movement Analysis into my ethnographic fieldwork and study of video sources. In doing this, I blend first-person and third-person perspectives of movement—that is, the experience of dancing and the experience of watching the dance—as is common with a Laban approach. Uncommonly, I foreground properties of moving *together*, showing how dynamics are cooperated upon. My emphasis on *Duo*'s shared and common attention to dynamics suggests how a Laban approach, which typically emerges through attention to the individual body, has the potential to be extended to look at co-movement.[3]

The core movement values of the *Duo* project can be categorized as follows:

Relational Movement: In *Duo*'s relational movement, the movement emerges contingently through mutual attunement of the dancers to one another, the context of performing, the audience and the ambient musical score. Connection is forged through practice. This involves listening to one's partner while dancing—neither dominating nor following passively—retaining at all times an awareness of the other. The connectivity between people, through mobile bodies, is an active component of *Duo's* movement, as well as the source of variation within the choreography.

Shared Intentionality: *Duo* can be described as an instance of "shared intentionality," that is, when two people share experience of moving and breathing together, while *knowing* that they are doing this.[4] The dancers describe the movement as a common "language"

2 Cynthia Novack takes this term from the movement analyst Billie Frances Lepczyk. See Novack, *Sharing the Dance*, p. 115. Contact improvisation is an international dance practice of improvisation that is practiced predominantly in pairs, in contexts outside of performance, i.e., not as a stage art. The form emerged through experimentation by American dancers in the late 1960s and early 70s, and was named in 1972 by Steve Paxton. Cf. Novack, *Sharing the Dance*, pp. 114–49.

3 Laban Movement Analysis is an analytic frame based upon the work of Rudolf von Laban (1879–1958). I draw predominantly from Laban's study of dynamics, known as *Eukinetics* and *Effort*. This approach to studying motion regards the emphasis the mover lays upon four factors, which blend mental and physical intention: weight, space, time and flow. An additional regard is shape, or the architecture of the body. In my approach, I reconsider the single-body effort of an individual mover, which is the basis of the Laban System (i.e., one person's attitude toward the motion factors) to consider the joint efforts that emerge in *Duo*. For further background on Dance Dynamics and the interrelation of these with Laban's notation and *Choreutics*, see Tomic-Vajagic, *The Dancer's Contribution*, pp. 65–73; see also the textbook Maletic, *Dance Dynamics*.

4 American Psychologist Michael Tomasello has described shared intentionality as a form of collaboration in which humans share goals, plans and knowledge to complete something together. This involves sharing of psychological states, affects and experience, and is different from the

between them, enabling them to stay in dialogue.[5] They rely on their shared histories of cultivated movement intention: involving joint practice; shared movement concepts, images and names; and cultivated sensation of their bodies, other bodies and movement.

Common Sequence: The movement of *Duo* follows a choreographic sequence that has been handed down from pair to pair. The partners practice this succession of movement until they can remember it easily. The structure involves phrases of unison movement, deftly synchronized, as well as solos and segments where the dancers perform different actions. Repetitions and variations of movement within the structure create loops, in which the dancers must pay attention in order not to get lost. Part of the skill-building and musicality of *Duo* comes through sharing the feel for these comings and goings of synchrony and assisting one another through the loops.

Improvisation: The dancers' practice of improvisation within *Duo* has changed over its history. In the Ballett Frankfurt version of *Duo* there was less improvisation. Only one section of the choreography involved an improvisation task: the dancers lay on the floor and intermittently slid their limbs into transpositions of standing movements from elsewhere in the choreographic sequence (see Fig. 10). In *DUO2015* this floor section has been cut. Yet overall there is much more task-based improvisation and dancers' cooperative adaptation—such as marking, referencing and phrasing the sequence.[6]

Breathing-Movement: *Duo* dancers share an implicit practice of audibly breathing together with the movement. This is done for the purpose of sensing the movement internally and progressing simultaneously through the sequence. The dancers use explicit breath cues to guide their timings. Forsythe names these acoustic aspects of the composition *Duo*'s "breath score."[7]

Balletic Tendencies: The movement constituting *Duo* is closely related to ballet steps and the general proclivities and aptitudes of ballet-trained bodies—such as the vertical alignment of the spine, turnout, the ability to shift weight seamlessly, the maintenance of balance, the skill to move lightly, extending the limbs with balanced tensegrity[8] and cross-lateral connection. In particular, the practice of *épaulement* gives *Duo*'s movement distinct torsional properties. The degree of turnout and leg work in *Duo* is one aspect

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chance occurrences of synchrony because the participants are *aware* of their sharing of plans. See Tomasello and Carpenter, "Shared Intentionality"; Tomasello, "Joint Attention as Social Cognition."

5 Dancer Brigel Gjoka specifies, a "language in permanent change and development." Brigel Gjoka, interview with the author in Dresden, March 6, 2016.

6 For greater elaboration on the different modes of improvisation longitudinally in *Duo* sketched here, see section 9.2.3 Counterpoint Model.

7 William Forsythe, phone interview with the author, January 30, 2019. Cf. Vass-Rhee, *Audio Visual Stress*, pp. 240–44.

8 Tensegrity, a term from Buckminster Fuller, is a structural property of systems in which tensions distribute sheering force throughout, making them resilient.

that has changed over the course of its history; the Ballett Frankfurt version of *Duo* stresses turnout and legwork more than does *DUO2015*.

Figures 21-28. Duo *rehearsal with Brigel Gjoka (black training clothes) and Riley Watts (blue and yellow training clothes) in 2013.*

Photo © Dominik Mentzos.

Sharing Space: The movement of *Duo* is rich in its exploration of the full range of space within each dancer's reach (see Figs. 21–28), termed by Laban the "kinesphere."[9] The dancers perform frequently side-by-side, shifting between facing toward and away from the audience. The proxemics of their nearness are sensed but not referenced; the dancers rarely make gestures that reach toward one another. Limbs activate complex relations towards multiple directions, instead of moving with simple gestures that are confined to one direction. Episodes of low-level movement on the floor are part of the introduction of the Ballett Frankfurt version of *Duo* (see Fig. 10) and solo elements of *DUO2015* (see Fig. 20).

Cross-Lateral Connectivity: The movement of *Duo* explores "cross-lateral connectivity"; that is, coordination between opposite sides of the body. Peggy Hackney defines this as "a sensation of connection along a diagonal pathway through the body's core between the body's four quadrants."[10] These contralateral chains often involve rotation as the dancers stretch and reach, following of arcs and curves within the body, in dialogue with pushing and pulling motion out of the floor. Cross-lateral connectivity brings the upper and lower body into an interplay, from fingertips to toes. Forsythe achieves this by coaching the dancers to articulate the feet and hands simultaneously.

Sharing Shape: Shapes of the body in *Duo* are dynamic, reaching and expressive, not angular and bound; the dancers' arms and legs articulate curves and lines. The dancers' active sense of proprioception enables them to know and sense the shapes through which they pass.[11] They perceive the shape of their bodies both individually and together, at times as an "echo" of their partner (see Figs. 6–9).[12]

Complex Coordination: The complexity of *Duo*'s movement is designed by: (*a*) amplified range of motion of the hips and shoulders, (*b*) usage of torsions and spirals, (*c*) spreading motion throughout the kinesphere, not just easy-to-reach places, (*d*) cultivating multiple rhythmic layers. As opposed to simple actions—such as isolations of one body part or the body following its own momentum around the center of mass—the complex movements of *Duo* often involve sending the hips in the opposite directions from the limbs, making biomechanics that appear complexly jointed.

Polyvalence and polyrhythm: As in dances of the African diaspora, in *Duo* there are multiple centers of the body (polycentrism), moving together rhythmically (polyrhythm).[13] In *Duo* these do not produce jointed, angular articulations but complex curvilinear chains.

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9 See Laban, *The Language of Movement*, p. 10; Tomic-Vajagic, *The Dancer's Contribution*, pp. 71–73.

10 Peggy Hackney uses this term to emphasize the connection, as opposed to opposition, i.e., contralateral. Movements can be contralateral without investigating connectivity. See Hackney, *Making Connections*, pp. 194–95. The prevalence of cross-lateral connectivity in Forsythe's oeuvre is a key signature of his style as well as ballet technique; it is less present in contact improvisation and other styles of contemporary dance, such as *Gaga* technique.

11 On proprioception see Section 6.2.2, footnote 27.

12 Jill Johnson, studio session dancing in Boston, December 6, 2016.

13 See Asante, *African Dance*, pp. 212–19.

Forsythe has described this generally in his movement style as "a many timed body as opposed to a shaped body."[14] Such interrelations of the body are a form of intra-entrainment: the rhythmical interaction and coordination between parts.[15] These rhythms are co-produced between pairs, independently of the musical score.

Sharing Time/Mutual Entrainment: The dancers' attention to aligning their movement and sound, when moving synchronously but also when performing different movements in counterpoint, makes *Duo* an example of mutual entrainment: that is, a process of interaction in which rhythms, in motion and sound production, are mutually attended to by partners. The partners share time in a nonhierarchical way without a leader. Together they push and play with time. The dancers strive to generate musical and novel timings as they reiterate the movement sequence.

Dynamic Equilibrium: Rather than posing or balancing in fixed positions (static equilibrium), *Duo* dancers delicately negotiate movement equilibrium dynamically and together. In *Duo*, the dancers perceive the shift and sound of *their* weight and *their* balance, and together search for lightness and sustainability, rather than heaviness, exhibitions of strength or explosive use of force. This is frequently combined with listening, as the sound of their bodies touching the floor and their breath reflect their effort towards moving their mass.

Sharing Flow: *Duo* dancers experience flow—the feeling of the "progression" or "continuity" of movement—most strongly when they perform unison movements at the same time, especially when they move through the space together.[16]

Shifting Dynamics: *Duo* is composed of scenes that foreground different dynamics. *DUO2015* has a "denser structure" than the Ballett Frankfurt version of *Duo*, with greater range in dynamics and phrasing.[17] Dancers of *Duo* participate in the modulations together, motivating each other for energetic passages.

Active Cooperative Phrasing: The movement of *Duo* has lulls, stops, resets, accelerations and decelerations that are produced by the dancers' attention to interpretation of the choreographic sequence.[18] They practice modulating their tempo and energetic level. This highly musical phrasing follows the logic of the couple's breathing-movement more than Willems' music. The phrasing and tempo are shaped and motivated by Forsythe's

14 Forsythe, "Observing Motion," p. 24.

15 Clayton, "What is Entrainment?," p. 51.

16 Maletic, *Dance Dynamics*, p. 20. Here, I mean flow in Laban's sense, not like Csikszentmihalyi as "the feeling when things were going well as an almost automatic, effortless, yet highly focused state of consciousness." See Csikszentmihalyi, *Creativity*, p. 110.

17 William Forsythe, phone interview with the author, January 30, 2019.

18 I use the term phrasing in a similar way to Maletic as "the manner of execution or the way in which energy is distributed in the execution of a movement or a series of movements." See Maletic, *Dance Dynamics*, p. 57.

coaching; he wishes for the choreography to remain interesting and not feel "lugubrious."[19] The range of phrasing, and especially the frequency of impacts, accents and sudden movements, has increased between 1996 and the present; it is a source of the distinct differences between *Duo* versions.

Sensorial Attunement: The dancers' practice of *Duo* activates a rich sensorium as they experience their bodily motion in relation to their partner and the environment. In doing so, they perceive across many modes: peripheral and direct vision, sound location and timbre, the body's orientation in relation to gravity, proprioception (sensing the location of one's limbs in space), the intensity of skin sensation and stretch, the visceral sense of internal organs, the sensation of breath, the temperature of the room, the warmth and direction of theatrical light, the sensation of one's clothes and the contact with the floor.

Listening Expressions: The dancers' facial expressions are typically one of pleasant concentration while conducting inner listening to their bodies and outer listening to the sounds in the space (see Figs. 21–28). The dancers do not look at or address the audience until the very last motion of the piece when they end *en face*—that is, directly facing the audience. The degree to which the dancers look directly at one another changes over the course of *Duo*'s history—with much more direct visual exchange, even expressions of joy and smiling, since 2013.

9.2 Charting the History of *Duo*

"I gave that cue," explained dancer Jill Johnson while reviewing an archival video of herself dancing the premiere of *Duo*.[20] Though the digitized video was grainy, Johnson could still decipher the pixelated moves of herself and her partner. Based on interview encounters like these in which I reviewed performances with the dancers, in this section I describe my endeavor to 'chart' the movement of *Duo*—graphically producing understanding in collaboration with a team of programming artists.[21] Working in an interdisciplinary framework between dance studies and creative coding, we developed a digital archive of the *Duo* dancers' and my own observations about their performances, systematized this vocabulary, and then mined these annotations through computer code, visualizing the outcomes. This was a highly constructed and cooperative practice of knowledge production, highlighting the multiple narratives and views of the *Duo* project. Here I delve into my research basis and findings; the important particulars of the innovative technical methodology and coding cooperation are highlighted elsewhere.[22]

19 William Forsythe, phone interview with the author, January 30, 2019.

20 Jill Johnson, videoconference interview with the author, June 28, 2018. Archival video of *Duo*'s premiere in the Ballett Frankfurt, January 20, 1996.

21 Florian Jenett, Mark Coniglio and Monika Hager.

22 See Waterhouse et al., "'I Gave That Cue.'"

The choreographic movement analysis presented in this chapter—though unusual in its digital mediation—builds theoretically and methodologically upon the precedent case study examining Forsythe's piece *One Flat Thing, reproduced* (2000). This short work often toured on the same program as *Duo,* serving as the finale. Forsythe likened the elaborate composition to "baroque machinery."[23] Wearing practice clothes of diverse colors, a group of dancers maneuver dangerously and deftly: swarming like bees upon a rectangular grid of 16 shiny metal tables. The choreography organizes movement within this highly structured space. Over time, the patterns accumulate: approximately two dozen movement themes and motifs—ordered roughly from simple to complex—before a development section and a high-pitched conclusion. The performers manifest these complex constellations of interaction by cueing and aligning with one another. They swerve around sharp corners, heave one another over the gleaming table surfaces and duck through the shadow underneath—regulating their timings independently of Thom Willems' industrial sound score of crashes and whistles. The dancers, according to Rosyln Sulcas, perform "an almost mathematical construction of complexity."[24] Dancing this work is a carnal and relational thrill, providing some of my strongest memories of teamwork in The Forsythe Company.

Duo is of course a more intimate and subdued example of relational movement, yet its choreographic expression of *counterpoint* has much in common with this virtuosic table dance. While *One Flat Thing, reproduced* is outstanding in its complexity, the *Duo* project is exemplary because of its nuance. Forsythe chose *One Flat Thing, reproduced* as the keystone of his second medial research project in part because the organizational complexity made the constructive principles elusive—even after multiple viewings. The piece thus warranted and rewarded close study, making order emerge from disorder. The website *Synchronous Objects for One Flat Thing, reproduced* (2009) (hereafter, *Synchronous Objects*) presents animations that make these organizational principles legible, rendering graphics upon a high definition film of the piece made by Thierry De Mey in 2005 (see Fig. 29).[25] The website presents a multifaceted performance archive in which many people's interpretations are merged and reflected upon: documenting observations *and* observation processes. The website also included a *counterpoint tool* in addition to further graphical visualizations of the data, exploring Forsythe's generative questions: "What else might this dance look like?" and "What else, besides the body, might physical thinking look like?"[26] As a member of the dancer cast and the project team, this research precipitated my investigation of the archival videos of *Duo*: seeding

23 Forsythe, unpublished interview with Thierry De Mey in Frankfurt, April 13, 2006. Transcribed by the author as part of the research for *Synchronous Objects*.

24 Sulcas, "Watching the Ballett Frankfurt, 1988–2009," p. 15.

25 The resulting website is available online, see https://synchronousobjects.osu.edu/. Since 2021 however the Flash based content is no longer operational. The project was developed at The Ohio State University. See Huschka, "Mediale Transformationen Choreographischen Wissens"; Groves et al., "Talking About Scores"; Shaw, "Synchronous Objects, Choreographic Objects, and the Translation of Dancing Ideas"; Manning, *Always More Than One,* pp. 99–123.

26 Shaw, "Synchronous Objects"; "Synchronous Objects, Choreographic Objects, and the Translation of Dancing Ideas," p. 208; see also Manning, *Always More Than One*, pp. 99–110.

how I could imagine linking dancer interviews and analytic video study of performance to come to an understanding of choreographic structure.[27]

Figure 29. Screenshot of the website Synchronous Objects for One Flat Thing, reproduced.

The website *Synchronous Objects* models *counterpoint* in *One Flat Thing, reproduced* as three interlocking systems: movement material, cues and alignments. Through this research collaboration, Forsythe developed his understanding of counterpoint, from the provisional definition of "kinds of alignments in time," to "a field of action in which the intermittent and irregular coincidence of attributes between organizational elements produces an ordered interplay."[28] By further exploring how counterpoint manifests in the case study of *Duo*, and how this changes longitudinally, I will show the importance of creative components—highlighting the role of practice and process.

Synchronous Objects was pioneering in many ways—in particular regarding how the project team integrated interview methods with procedures of digital design and computational analysis. The empiricism that I embraced to chart the history of *Duo* drew on the approach of *Synchronous Objects* in deriving "data" from a dance: defining observable features in the choreography, which were systematically catalogued and then studied through new means of linking and comparing these instances in the dance.[29] As in "mixed methods" research, I espoused this pursuit as a process of triangulation,

27 As a dancer consultant for the project *Synchronous Objects*, I made ethnographic field notes as I rehearsed and performed the piece, transcribed interviews with Forsythe and the dancers and helped the team to brainstorm how to visualize counterpoint. I also recorded interviews with the dancers about their roles, as they watched the video footage, providing the content that the animators then encoded and animated.

28 William Forsythe cited in Sulcas, "Watching the Ballett Frankfurt, 1988–2009," p. 15; Forsythe and Shaw, "Introduction: The Dance." On *counterpoint*, see section 1.1.2 Choreography, Dance and Counterpoint.

29 See Shaw, "Introduction: The Data"; see also Palazzi, "Introduction: The Objects."

with qualitative and quantitative methods on equal terms.[30] Rather than focusing on Forsythe's observations, I took my own and those of the dancers as seminal.

My aim was to study the structure and change in *Duo* longitudinally by systematically making annotations—what I could observe, based upon my interviews with the dancers, about what the dancers *do in practice*. From this practice-view of what the dancers are doing in performance, as well as their testimony about what else they could have done, or how the performance could have been different, I began to decipher this choreographic logic—suggesting the importance of entrainment within the choreography and the manner in which dancer interpretation leads to variation.

9.2.1 Hypotheses and Questions

To study change and structure in *Duo* longitudinally, I focused on three clusters of questions and hypotheses, centering on the topics of the different *versions* of *Duo*, the *variability* of the work, and the role of *entrainment* therein.

Versions: Based upon my fieldwork with the dancers and preliminary study of the archival videos of performances, I had observed two primary choreographic structures of *Duo*—that is, the Ballett Frankfurt version, performed from 1996 to 2004, and the *DUO2015* version since 2015—with an intermediary version during the reconstruction in 2013. Through video annotation, I aimed to become more precise about how these versions related—namely, the extent to which they shared common movement, approaches to interpretation, and so on.

Variability: My fieldwork suggested that while *Duo* was variable, aspects endured that constituted the choreography specifically. I predicted that performances would change or adapt as new dancers entered and partnerships shifted. I also expected that the interpretive practice might shift between Ballett Frankfurt and The Forsythe Company. It seemed that the process of *Duo* developing over time was not a linear evolution—but one vacillating with the dancers and touring contexts of production. Through systematic consideration of video records, I hoped to refine these observations.

Entrainment: A third hypothesis was that modes of entrainment featured strongly in *Duo*'s composition. This is because mutual entrainment—or the sustained attunement to synchronize or rhythmically relate motion and sound production through each other in the setting of dancing—permeated the dancers' testimony of their practice. I predicted that the following matrix of entrainment modes would apply to *Duo*: unison, turn-taking, concurrent motion, solos and breaks. I was uncertain what proportions these modes would take and the extent to which they would vary longitudinally. I aimed to use video annotation to explore this further.

30 See Johnson et al., "Toward a Definition of Mixed Methods Research."

9.2.2 Procedures

To address these hypotheses, a cross section of archival videos of *key performances* of *Duo* were analyzed, spanning the history of the piece longitudinally (from 1996, 1997, 2000, 2003, 2013, 2015 and 2016).[31] These videos were annotated by myself according to a system of observable properties defined in the following section. Different than a choreographic notation that inscribes the movement of the dancers for the purpose of analysis and preservation, I use the term *annotation* to designate inscription of my observations of select aspects of *Duo*'s choreographic structure, as in the secondary annotations of a primary text.[32] My annotations focused on three categories of markings: (1) modes of entrainment, (2) movement material and (3) transitions.

Each key performance was annotated completely using encodings of the terminology (see Appendix J). The data was recorded in a spreadsheet and transferred to a Piecemaker 2 server, allowing for filtering, sorting and visualization (see Fig. 30).[33] To improve accuracy, approximately fifty troublesome data points were error checked with the dancers—through discussions about them. Our work, analyzing and improving this data, is available online.[34]

9.2.3 Counterpoint Model

Modes of Entrainment

Dance scholar Roslyn Sulcas has observed: "Alignment is in fact a fundamental principle of Forsythe's work; it is one of the ways that complex—even chaotic—activities on stage are rendered subtly comprehensible." She defines alignments, after Forsythe, as "moments when the dancers' movements echo one another in shape, direction, or dynamic."[35]

Agreeing with the emphasis laid by Sulcas, in my research I explored a model of counterpoint (for *Duo*) foregrounding alignment based on *entrainment modes*. I observed that not only is movement aligned when dancing *Duo*, but there are also rhythmic structuring of movement-breaks: durations of inertia, holding a pose or when the dancers briefly exit the stage. Importantly, the dancer might not rest in the sense of recuperate, as some still-acts may be strenuous to hold.[36] In my model, I explored counterpoint as the general set of permutations of two dancers performing movement and movement-

31 See the Introduction, in the section Key Performances, for explanation of the criteria of the selection process. See also Appendix F, section 2. A cross section method was used, because study of the entire video record was too labor intensive. Complete annotation of the choreography from start to finish was desired and not analysis of excerpts. The quality of the data relied on my expertise as a Forsythe dancer, and could not be automated or distributed to assistants.

32 On dance notation, see the informative introduction: Guest, *Labanotation*, pp. 1–4. Reflecting on annotation process, see Rittershaus et al., "Recording *Effect*."

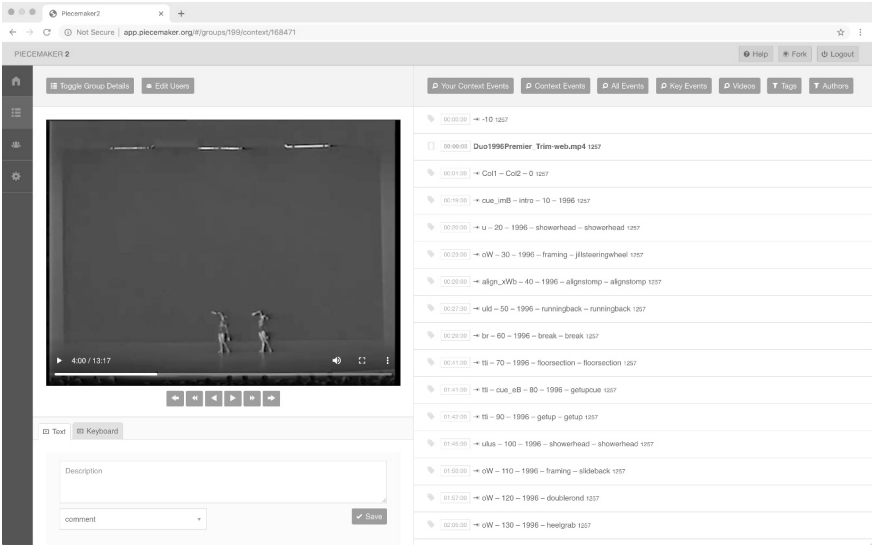
33 On these software developments, see Waterhouse, "'I Gave That Cue.'"

34 See https://duo.motionbank.org/.

35 Sulcas, "Watching the Ballett Frankfurt, 1988–2009," p. 15.

36 Throughout, I use the term movement and motion interchangeably.

Figure 30. Screenshot of the Piecemaker 2 archive of Duo *annotations, showing the 1996 key performance and the encoded markings.*



breaks in relation to one another at the same time. These permutations are modes of entrainment, spanning:

Unison: Dancers performing the same movement synchronously.

Concurrent motion: Dancers performing different or related movement at the same time, while attuning to one another's rhythms.[37]

Solo: One dancer moves, while the other takes a movement-break or frames the foregrounded mover.

Break: Both dancers perform a movement-break.

Intermittent motion/turn-taking: The dancers perform intermittent movement—alternating movement and rest, taking-turns. These movements may be identical, related or different.

Other: A mode not fitting the above categories.[38]

For the purpose of assessing the validity of how well these categories apply to *Duo*, the additional category named *other* was included. This enabled marking instances of the choreography that did not fall into the categories named above.

37 Forsythe and the dancers call this *counterpoint*.

38 Rhythms superimposed by chance, without the dancers' interaction, would have been in this category. This is a feature of Forsythe's practice of counterpoint more generally, but as I shall show, not pertinent for *Duo*.

Movement Material

The choreographic structure of *Duo* involves a prescribed sequence of interactions, including passages of structured improvisation. To understand the longitudinal change of this sequence, the movement material was parsed into small units (between 1–10 seconds) and then annotated.[39] The analysis yielded 116 movement 'building blocks' in the first 1996 key performance. The subsequent key performances were then annotated chronologically, noting the changes to the existing building blocks and additional elements. This enabled tracking of the genesis of the original elements and the addition of new material chronologically.

The dancers' practical approach to interpreting the prescribed sequences in each performance was also annotated—subtleties of *how* they enacted the choreography. I named these categories of movement transformation. These features were discovered through studying the videos *with* the dancers.[40] Through this, the following subtypes of transformation were defined:

Set: A planned sequence of movements/steps that performers reproduce as accurately as possible in performance.

Modified: A sequence in which one movement/step is briefly altered, while preserving the sequence order—that is, a deliberate change made to adjust balance or one aspect of the movement form. These did not affect entrainment between partners and were usually made by one dancer. Some modifications were due to injury.

Adapted: A sequence in which many seconds of movements/steps are adjusted while preserving the sequence order—such as changing the movement facing, dynamic, scale, body parts, fragmentation, and so on. Apart from adaptation of solo material, these required interactive negotiation.

Improvised: Invention of movement (based upon a task) or an open improvisation inventing movement (without a task or a sequence referent).

Each building block was assessed according to the above scheme, individually for each dancer.

Transitions: Cues, Prompts, Alignments

Transitions between modes of entrainment are important parts of the choreographic structure of *Duo*. Metaphorically speaking, if you think of the choreography of *Duo* as composed from sections of fabric, then the modes of entrainment describe the different

39 For this purpose, it was not necessary to divide the sequence into singular movements—chunks or short phrases sufficed. Initially, I named the building blocks using a consistent labeling scheme that mixed the dancers' and my own terms (such as *goldfinger* and *umpadump*). In the end, this was replaced with numerical identifiers, to enable computational comparison of the elements.

40 For example, watching the key performance from 2015, dancer Riley Watts noted the flexibility of the choreography. Referencing one instance in the archival video, he noted: "Those were always, like playful moments that were improvised. We're just playing with where it comes from. Like expansions on the material." At another point, he cautioned: "We never transformed that." This indicated an Alignment that stayed more regular. Such statements proved insightful to the regularities of practice. Video elicitation with Riley Watts, January 11, 2017.

elastic weaves of the fabric, and the transitions form the seams between the different fabrics. Three forms of transitions were cataloged: *cues*, *prompts*, *Alignment* (short instances of Alignment I designate using the capitalized form of the word to distinguish this from the ongoing process of aligning via entrainment). One could also describe these transitions as choreographed modulations of the performers' intention and attention, on which the choreographic structure relies to take form.

Cue: This term is used by Forsythe and the dancers to describe timing signals: usually practiced strategies of communicating timing information in order to initiate moving together. Cues interweave practice, communication, action and ethics. Many, but not all cues are perceivable to a public. To discern these transitions, I relied heavily upon video elicitation with the *Duo* dancers.

Along with annotating when the cues took place, I noted their different mediums: audible breath, stomps, vocalized short phrases and movement itself. I also observed how they vary in their "leadingfollowing," specifically who attunes to whom, or whether the attunement is mutual or hierarchical.[41] In the annotation of cues in *Duo,* it was found that cues may be doubled or have more than one medium; for example, a cue that is both an inhale of breath and movement. It was also possible that two cues are given simultaneously, by both partners. The annotation system was flexible enough to encode these complex instances. Ambiguous cues were also marked, such as when a voice was heard giving a verbal cue, but the speaker could not be identified.

Prompt: This term was introduced to name instances when the dancers spoke to each other on stage. These exchanges, which were intended for one's partner and not the audience, were reminders of where one was (such as "new beginning," "first," "snakedress") and sometimes included supportive words (such as "Almost there!").[42] Prompts functioned in a similar way to cues but might be uttered in the midst of *doing* as opposed to a causal signal, as previously distinguished.

Alignment: This term is used by Forsythe and the dancers to describe particular instances of aligning. An Alignment is a specific transitionary instance of movement that helps the dancers to bind their time and transition entrainment modes: for example, when the *Duo* dancers are performing different movements and then arrive in the same pose, this is recognized as an Alignment. Forsythe and Shaw have described Alignments as "short instances of synchronization between dancers in which their actions share some, but not necessarily all, attributes" such as "analogous shapes, related timings, or corresponding directional flows."[43] In contrast to cues and prompts, which are typically audible communication, Alignments are movements or poses. To use a metaphor, they

41 Drawing on terminology from Erin Manning, see Lepecki, "From Partaking to Initiating," p. 34.

42 Citations of the dancers: Jill Johnson, videoconference interview with the author, June 28, 2018. Riley Watts, videoconference interviews with the author, May 22, 2018. Allison Brown, videoconference interview with the author, May 8, 2018.

43 Forsythe and Shaw, "Introduction: The Dance."

function like joints in carpentry. The design is purposeful but also may take on an aesthetic quality (such as can be seen in the beauty of a dovetail joint). A 'good' Alignment, the dancers noted, was often surprising; when it was unexpected to the dancers, they believed it would also be surprising to the audience.[44]

Subcategories of Alignments were also cataloged, distinguishing their form and partner relation. Alignments took the form of taking on the same or related poses, performing the same or related movements, such as stopping or tapping the floor together or in call and response. Their partner relation varied: sometimes they were achieved together; other times one partner or the other would take lead. It was found that for certain tricky Alignments, pre-Alignments were built into the choreography—key information preceding an Alignment, used to synchronize the action. These pre-Alignments can be metaphorically understood as signposts. In *Duo*, pre-Alignments take the form of attention—listening to rhythms preceding the Alignment—to arrive in-sync.

9.2.4 Analysis

Two approaches were taken to analyze the annotation markings. First, employing a statistical method, the data was mined to compute the cumulative duration for each annotation category's markings and graph this information; for example, to answer: How much unison was there? or: How many cues? This also enabled study of the relative proportions, namely: What percentage of the performance was in unison? We gained understanding from this an overview of change and continuity (Tables 4 & 5 and Figs. 31 & 32).

The second approach looked chronologically at the dis/continuity of the annotations, taking a graphical approach. Given the expanse of information we were considering, the online interactive view generally proves more insightful that the limits of the page.[45] For this book, we have included two overviews of this material (Figs. 33 & 34). In these, each staff shows the movement building blocks (numbered dots) vertically, progressing from the beginning of the *Duo* (top) to the end (bottom); some of these components had annotations rich with sub-information, which are marked with double dots.[46] Horizontal lines were added to show continuity and change: rendering continuities (solid line), adjustments (dashed line), and omissions in the order of these elements visible. An adjustment was defined as when a movement element or transition was repeated with variation—such as a unison section being changed to concurrent motion, or a cue delivered in a new way. These markings of discontinuity were made using a computer algorithm, programmed to compare my annotations chronologically and thus come to a more precise state of assessment.

44 Riley Watts, video elicitation, January 11, 2017.

45 See https://duo.motionbank.org/.

46 Note, the time scale is not preserved in this rendering (pertaining to the duration of the segment), just a sequential relation (order).

Table 4. Entrainment modes (percent) of Duo *key performances*

	1996	1997	2000	2003	2013	2015	2016
Unison	42.5	44.7	46.9	47.6	53.5	34.1	46.0
Concurrent	17.0	16.7	17.0	18.5	22.4	35.1	28.5
Turn taking	22.0	22.7	18.1	16.4	0.7	1.4	2.03
Solo	11.6	9.6	10.2	12.3	13.0	24.6	21.9
Break	5.2	4.6	5.39	3.4	6.1	0.4	0.6
Other	1.8	1.6	2.36	1.75	4.3	4.33	1.04

Table 5. Number of cues, Alignments and prompts of Duo *key performances*

	1996	1997	2000	2003	2013	2015	2016
Cues	12	15	12	13	19	5	15
Alignments	29	35	30	33	27	34	35
Prompts	1	0	0	1	3	4	1
Total	41	40	42	47	49	43	51

Figure 31. Graph showing relative proportion of entrainment modes in Duo *longitudinally.*

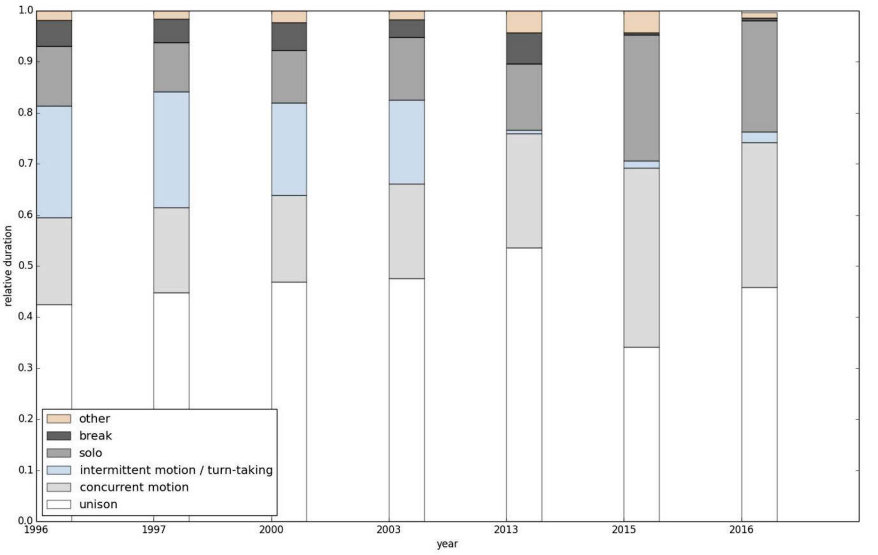
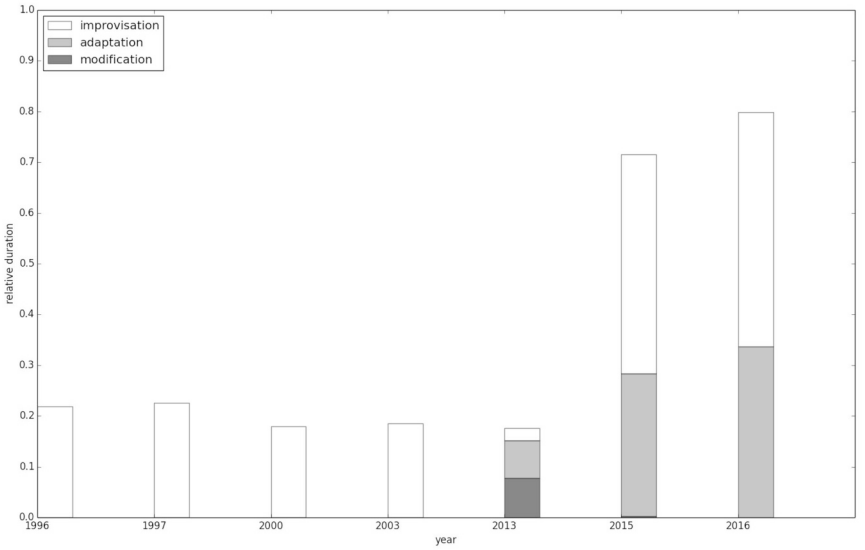


Figure 32. Graph showing duration of movement transformation in Duo *longitudinally.*



9.2.5 Conclusions

The statistical and graphical analysis of the annotations, as well as the process of making the annotations themselves, provides an unprecedented inspection of a choreography's longitudinal history, showing *Duo*'s vicissitudes of (dis)continuity. Returning to the clusters of questions and hypotheses regarding *Duo versions*, *variability* and *entrainment*, the following conclusions can be emphasized:

Versions: The analysis confirmed that despite some dancers' testimony to the contrary, I observed two predominant versions of *Duo*—the Ballett Frankfurt version (1996–2004) and the *DUO2015* version (2015–2016)—with the reconstruction in 2013 serving as an intermediary. Most dancers viewed these versions not as gendered styles but as different interpretations. In my view, they exhibited distinctions between the artistic practices of Ballett Frankfurt and The Forsythe Company; these are found to modulate with general shifts in Forsythe's work and contemporary dance aesthetics, as discussed below.

The dancers, depending on how and when they participated in *Duo*, had a different assessment of the project overall. Johnson—who was part of the original *Duo* pair and observed Watts/Gjoka performing in 2018—is particularly well positioned to make judgements. In her view:

> There aren't eras in this work. Only ongoing explorations that continually connect the infinite possibilities of the ideas within it. It's so clear that these experiences are all

> mapped onto each other, in concentric circles and networks of shared embodied ideas across time.[47]

Here Johnson models *Duo* not as a vector, but as a complex of ideas in networking, circular time. Supporting Johnson's view, one of the most surprising findings within my research was that there was more continuity than expected in *Duo*'s movement sequence. The annotation process, and in particular the data shown in Figures 33 & 34, revealed that throughout the different versions of the *Duo* project, the pairs still essentially referenced a commonly agreed upon sequence of interactions with their partner—one that has been passed down from pair to pair. Across its history, this makes *Duo* much more about negotiation and agreement upon a shared movement sequence than I had expected. In other words, an important aspect of the choreography itself is how the dyads *agree* to interpret unison sections and timing choices *together*. In performance, this is discernable in how pairs use signals to communicate and modulate their attunement. Though some strategies of signaling are passed on from pair to pair, these also vary pertaining to each pair's particular language of communication and practiced tactics.

Thus, a surprising finding was that, even though the choreography of *Duo* and *DUO2015* versions may—to outsiders—appear and sound different (with distinctive phrasing, emphasis on ballet technique, rhythm and style of breathing-movement), the dancers are in fact referring to much of the same, inherited unison movement sequence and Alignments. My ethnographic interviews also confirmed that the dancers share a great deal of common information about the movement—even with naming variation and increased explicit focus on sensation within The Forsythe Company. This shows that the *processing of choreography* by the partners (specifically, interpretation of what they have inherited) is a significant part of the development of the piece.

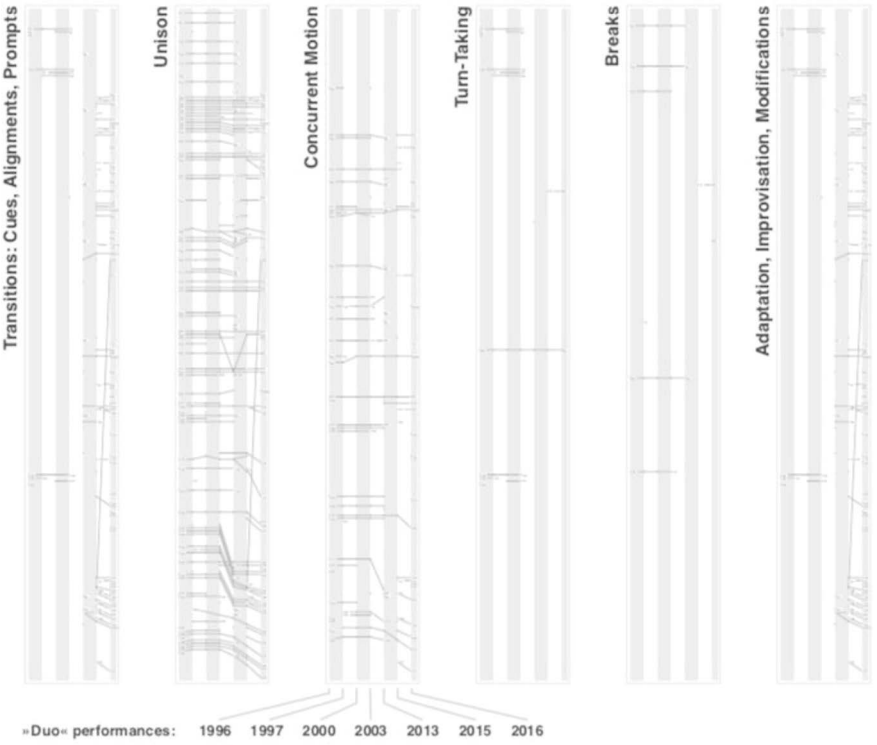
Variability. Change in *Duo* varied in degree and kind. The small changes within performance took place in part because of their 'liveness'; as *Duo* dancer Jill Johnson explained: how the structure will "play out on any given night is never the same."[48] This is because the dancers' bodies are always transforming; additionally, the audience contributes to the performance with their attention and micro-movements. Notably, the context of performance varies, leading to adaptation of the dancers' movement according to the various sizes of stages. The practice of entering into performance is never a perfect routine. In addition to all these elements, variability was also introduced because the dancers valued creativity within their practice of interpretation.

With regard to *Duo*'s variability, the dancers' changing practice of interpretation is particularly salient. The amount of flexible material (that is, modified, adapted and improvised) in *Duo* increased longitudinally: from approximately 20 percent, to almost 80 percent (see Fig. 32). In *DUO2015*, when the dancers referenced a sequence, there was interpretive freedom to adapt or develop the movement sequence—changing level, facing

47 Johnson, email to the author, September 12, 2021.

48 Jill Johnson, videoconference interview with the author, June 28, 2018.

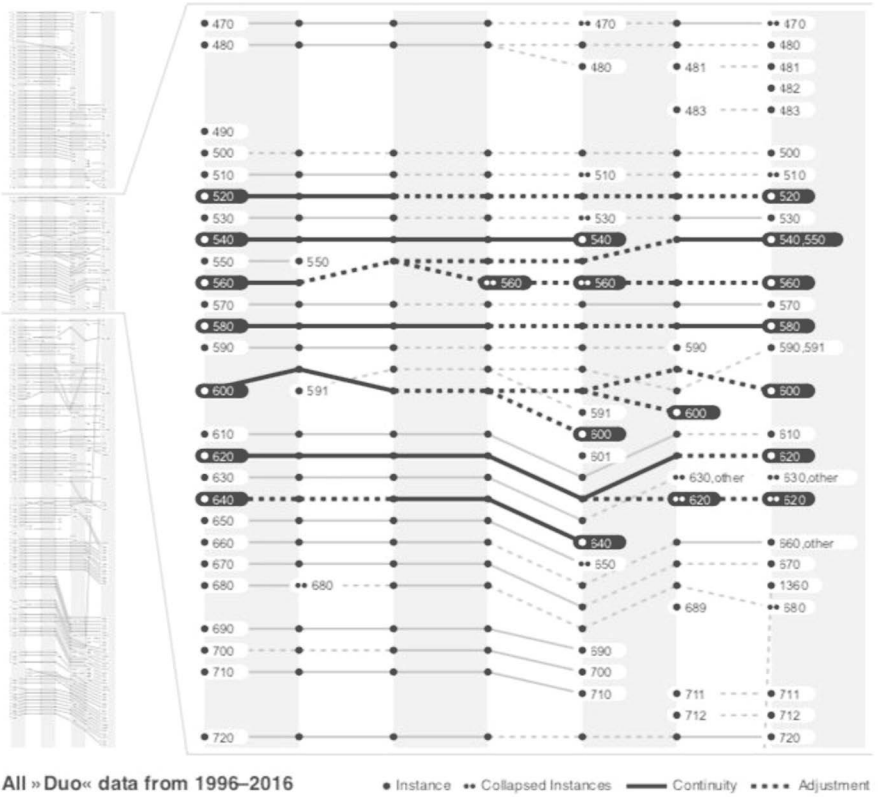
Figure 33. Overview of change and continuity in Duo *longitudinally.*



and dynamic. While the Ballett Frankfurt version of *Duo* had only one section of improvisation, in *DUO2015* there were more instances of task-based improvisation and also one open improvisation at the beginning of the piece. Generally, these findings are understood to reflect differences between approaches to choreography in Ballett Frankfurt and The Forsythe Company. In the latter, the dancers were less frequently performing set material and more often engaging in relational improvisation, involving real time composition of alignment. These modalities were different from the procedures of Ballett Frankfurt, which are archived in Forsythe's *Improvisation Technologies: A Tool for the Analytical Dance Eye*.

Another aspect of change in *Duo* was, as one would expect, the choreographer's explicit structural revisions of the choreography. The proportions of entrainment modes are quite stable in the Ballett Frankfurt version (see Table 4; Fig. 31); they change in 2013, when Forsythe cuts the introductory section. They shift again in 2015, when Forsythe edits *Duo* for the touring program, *Sylvie Guillem – Life in Progress*. For *DUO2015*, a new introduction to the piece is made and many solos are added, lengthening the work. Dancers Watts and Gjoka performed the piece more frequently than any other dancers before them (in 52 cities internationally between April and December 2015), developing a fluency of partnering that enabled cues and transitions to become minimal (see Table 5). They also toured without Forsythe, allowing for the piece's emergence to follow

Figure 34. Duo *longitudinal data at a glance.*



their interpretation practice before an audience, and agency in self-directed rehearsal. Overall, the *Duo* project thus points to different conditions and phases in which the choreographer *and* performers shape a work's manifestation, usually in dialogue with one another.

The changes evident in the charts of *Duo* also reflect the revisions Forsythe made in collaboration with the costume, sound and light designers—which I have highlighted already in section 5.2. Of particular significance is the changing musical composition by Thom Willems. As I have described in section 2.4.1, Thom Willems' initial score for the Ballett Frankfurt version of *Duo* highlighted the dissonance between independently clocked movement, a score for live piano (which was often modified), live acoustic elements and the dancers' breath. *DUO2015* had an even more minimal musical score of extended tone intervals, and greater volume of breathing-movement. *Dialogue (DUO2015)* changed the sonic atmosphere for the piece to a background of bird calls—highlighting the stochastic sounds and their relation to breathing-movement. These contextual elements were significant aspects of the fluctuations of the *Duo* project.

Entrainment: Overall, the model of counterpoint—based upon alignment as entrainment modes—had a strong fit to the *Duo* performances, with only between one to four percent of the material laying outside this matrix (see Table 4; Fig. 31). The annotation process suggested that the rhythms within entrainment were pair specific, shifting as new dancers entered the work, and established via consensus.

The proportion of entrainment modes were found to vary between versions, with more changes in entrainment modes and less pure unison in *DUO2015* than in the Ballett Frankfurt version of *Duo;* that is, there was evidence of greater complexity in the structure of entrainment in *DUO2015*. Possibly this reflects the influence of *Synchronous Objects* (2009), which enabled Forsythe to look at variations in kinds of alignment and take more interest in "intermittent and irregular coincidence" of movement.[49] It may also stem from Forsythe's tendency to increase the complexity and speed of his choreographies as he comes to understand them—in order to refresh and break *his* own expectations.

The annotation process enabled study of the important movement-breaks within the choreography. In the Ballett Frankfurt version of *Duo,* movement-breaks are frequently structural lulls after the dancers descend to the floor. In the 2013 key performance, they take the forms of resetting positions and shorter rests in standing (such as when the dancers catch their breath with hands resting on their knees, like winded basketball players). In the 2015 key performance, there is only one break in which the performers stand outside the light marking the stage. These movement-breaks reflect the general shifts within aesthetics of contemporary dance since the 1990s, in which still-acts and rupture have come to play an increasing role.[50] The structure of *DUO2015* also generally presents the performers as more self-aware in its coding and frame-shifts, allowing for the dancers to play with their status as performers through role-breaking shifts in dynamics.

The charts enable examination of how the modes of entrainment also changed longitudinally. Consistent with the dancers' testimony that practicing unison together was the central means of learning to dance *Duo,* sections of Alignment and unison exhibit the most continuity throughout all seven key performances; this mean that these are the elements that have remained most consistent and constitutive in this longitudinal history. My observations added to the understanding that practicing unison is the component central to the choreography, even as the complexity of the contrapuntal structure and degree to which the dancers improvise within this structure increases over time. Adaption and improvisation are more prevalent in performances from 2013 onwards, while turn-taking and breaks show up mostly in the early performances prior to 2013. Sections of concurrent motion show a similar overall proportion before and after 2013, but there are almost no connections running across this year, showing counterpoint to be a generator of change. The choreography of *Duo* thus emerges through *processing choreography*, the dancers' negotiation of movement practices passed on from pair to pair and creatively enacted in the immediacy of each performance context.

49 Forsythe and Shaw, "Introduction: The Dance."

50 See Brandstetter, "Still/Motion"; Schellow, *Diskurs-Choreographien*, in particular pp. 154–63.

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This chapter has undertaken an in-depth longitudinal analysis of *Duo*'s movements and sequence. Overall, the chapter has highlighted the potential for new sources and methods of conducting movement analysis in dance studies, blending first-person and third-person perspectives on movement and encompassing digital tools and software to study choreographic histories.

Bringing the lens of Laban Movement Analysis into my ethnographic fieldwork and study of archival videos of *Duo*, Section 9.1 presented a matrix of 18 movement principles that outline the movement style in *Duo*. The analysis has been informed by dance scholar Cynthia Novack's synopsis of the "core movement values" in contact improvisation. My emphasis on *Duo*'s shared and common attention to dynamics has suggested how a Laban approach—which typically focuses on how movement emerges through the individual body—may be developed to look at co-movement. This rubric also specified changes in the *Duo* project's movement over time.

Section 9.2 reported on new digital methods for performance analysis. Drawing from the precedent *Synchronous Objects for One Flat Thing, reproduced*, I have systematized a vocabulary for the components of *Duo*'s movement sequence and evaluated how these aspects have shifted over time. The analysis considered a cross section of seven key performances of *Duo* (from 1996 to 2016). After conducting *talk-through* interviews with the dancers, my inspection assessed the project's versions, variability and the role of entrainment in the choreographic structure, building on annotation categories such as cues and alignments used previously in the project *Synchronous Objects*. My observations were visualized through statistical and graphical approaches, offering an unprecedented view of one choreography's evolution and change over two decades. In order to reflect critically upon these graphical products, I triangulated to first-person testimony from my fieldwork, questioning the extent to which these images corresponded to the dancers' memories and perspectives.

The boon of this analysis has been discovering that despite the stage elements and movement aesthetic of Ballett Frankfurt and Forsythe Company performances of *Duo* varying significantly, the sequence of movements in *Duo* has been surprisingly well conserved over its history. The partners' *processing of choreography*, that is their creative interpretation of what they have inherited, was a significant factor in the changing appearance of the dance.

A second argument supported by this modeling was the fundamental role of entrainment as alignment. I came to understand *Duo* as a structure of shifting alignment, based upon the constraints of shared knowledge of the choreographic sequence. In contrast to Forsythe's *One Flat Thing, reproduced*, in *Duo* cues were more nuanced, focusing on sensitivity rather than on cause and effect. *Duo* dancers showed great attention and care for one another, bonding intimately and emotionally. The performance videos illustrated that the dancers' interpretation of the duet increasingly emphasized dialogue and play, suggesting the value of improvisation as a means for learning to entrain.

Returning to the testimony of dancer Roberta Mosca with which I began this chapter, I would like to conclude by testing a speculative notion. This is the idea that within Forsythe's ensembles, bodies and counterpoint define "fractal" persons. According to

Chris Fowler, fractal persons come about when: "Parts of a person, and people as parts of a community, may carry the same features as the whole."[51] We have seen this in Mosca's testimony, where she describes the sequence of *Duo* as resembling a body—one possessing an anatomy. We have also discovered counterpoint in *Duo* as within bodies, between bodies and between bodies and the specific materiality of the theater. Caspersen confirms: "A company of performers and creators can be seen as a kind of body, and the work that a company creates can be viewed in the same way; as a body that is composed of our thoughts and the differing ways that our individual bodies are thinking."[52]

The entwinement of persons, bodies and counterpoint gives Forsythe's repertoire dynamic properties—changing significantly as the artists themselves learn and develop. The concept that I would like to suggest is critical to the sort of organization of *Duo*, being held together and yet plastic towards change, is creativity. In the final part of this manuscript, I turn to *creation* practice.

51 Fowler, *The Archaeology of Personhood*, p. 51.

52 Caspersen, "Decreation," p. 94.