

# Cagean Structures

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In “Looking Myself in the Mouth,” a 1981 essay rethinking her relationship to the legacy of John Cage, the dancer, choreographer and filmmaker Yvonne Rainer decried the absence of more sustained critical and theoretical reflection on Cage’s work, given his enormous impact on artists of her generation. Obviously, the critical situation has changed considerably since Rainer’s essay appeared. Yet the questions she raises remain important for thinking through some of the implications of Cage’s work for art and music today.

Rainer’s concern lay in attempting to determine whether what she viewed as Cage’s “refusal of meaning” was congruent with a post-structuralist “refusal to fix meaning,” as articulated in the late 1960s by Roland Barthes, Julia Kristeva, and others who sought to rethink textuality as an incessant productivity of language, signification, and power that implicitly undermine the unity and coherence of “author” and “work.”<sup>1</sup>

1. Yvonne Rainer, “Looking Myself in the Mouth,” *October* No. 17, Summer 1981, p. 76.

Rainer’s loosely-structured text ponders whether Cagean “methods of non-hierarchical, indeterminate organization,” by randomizing sequences of signifiers and excluding subjective operations of selection and control, ultimately “attempt to deny the very function of language” altogether. And she wonders whether Cage’s programmatic “indifference” and refusal of authorship, posed as the strategic rejection of artistic genius and authority, become complicit with a suppression of subjectivity and political contestation. Rainer then concludes that “Cage’s efforts to eliminate and suppress meaning should in no way be confused with the refusal to fix meaning of which Barthes speaks.”<sup>2</sup>

2. *Ibid.*, pp. 67, 68, 76.

As a female artist whose own career embodies a set of historical transitions from Cagean and minimalist principles in the 1960s towards engagements with narrative and personal and political

histories in the 1970s and 1980s, Rainer may be ideally posed to comprehend the potentials and limits of certain compositional strategies. And her questions, about the historical effects of anti-referential and de-subjectifying strategies, remain with us. And yet, much about her account remains unsatisfying, perhaps stemming from her understanding of Cage's project as a relatively unified, systematic set of principles.<sup>3</sup>

3. Of course, in the context of dance in the 1960s, in and around Merce Cunningham, Cage's practice may indeed have been experienced as a coherent aesthetic; one gets a more vivid sense of this from the recent autobiography of Carolyn Brown, *Chance and Circumstance: Twenty Years with Cage and Cunningham*, New York: Knopf, 2007.

Having put Rainer's critique on the table, I propose to step back and look, not at some overall "philosophy" of Cage's work, but at a set of compositional strategies and devices. Rainer's effort to "examine certain troubling implications of Cage's ideas" tends to present as homogenous and fixed a set of strategies whose historical elaboration was far more tentative – and more closely implicated with emerging poststructural paradigms – than Rainer acknowledges.

I will outline here a series of moves generated in Cage's work up to the early 1950s, at the moment when he is still moving away from musical structure and conventional musical language. This period – roughly 1939–52 – is extraordinarily fruitful not only in Cage's own work, but in the models that it provides for pulling apart a set of conventions and, in so doing, generating a whole set of materials, structures and practices. It is also crucial for us, at this moment, to resuscitate the early Futurist and modernist dimensions of Cage's project, not only to better understand the historical roots of post-1960s art practices, but also to understand how they arose in part from a profound encounter with the structural reorganization of both "sound" and "time" under the pervasive impact of then new technologies of sound production and recording.<sup>4</sup>

4. The importance of this earlier Futurist moment in Cage's trajectory has been insisted on by several writers, perhaps most notably: David Nicholls, *American Experimental Music, 1890–1940*. Cambridge: Cambridge University Press, 1990. See also the essays in: David W. Patterson, (ed.), *John Cage: Music, Philosophy and Intention, 1933–1950*, New York: Routledge, 2002.

5. Branden W. Joseph, "The Tower and the Line: Toward a Genealogy of Minimalism," *Grey Room* No. 27, Spring 2007, p. 60. While I may not agree with his diagnosis of Cage's development, Joseph's work is among the most acute recent efforts to theorize Cage's practice and its implication for wider arts practice.

While many have sought to comprehend the systematic and coherent nature of Cage's endeavors – Branden Joseph describes "the logical, self-critical and utterly consistent development of the first two decades of Cages career"<sup>5</sup> – in what follows I hope to emphasize a model of fragmentation, or even crisis, rather than development. Despite Cage's own efforts to instill a measure of philosophic coherence, the ruptures, breakthroughs and countless failures of his career are hard to contain within a consistent narrative. His constantly changing compositional practice is not a system, and efforts to render it into anything like a systematic body of ideas or strategies, I fear, risks losing its radically exploratory, anti-systematic potential, as a series of fragments, or a set of moves, that

continually shift depending on the project. Instead, in Cage's early work, we can locate a series of crucial compositional strategies and operations, models that will be taken up in different and conflicting ways in his own work, and – from the 1950s on – in the work of other artists. These moves are potentially overlapping, and potentially contradictory, and in many respects Cage is by no means the “originator” of them but a vital collector, user, and disseminator, whose relentless efforts helped permit previously marginalized ideas and possibilities to be re-circulated and remobilized amidst the crucial transformations and breakdowns of mid-twentieth-century modernisms.

My own analysis has often departed from *4'33"* as a crucial precedent for a number of strategies that have been re-circulated, in very different forms, in diverse projects in the visual arts, writing, sound, film and video, since the late 1950s. As we know, by the early 1960s, Cage himself would promulgate a free-form version of *4'33"* that he could “perform” in the woods while searching for mushrooms, which could last any amount of time and consists simply of attentively listening to the world around one – as if the score simply read “Listen.” Given Cage's growing discomfort with any imposed structure, many of his later remarks effectively deny the formal specificity of *4'33"* as a composed work with three movements consisting of externally generated durations.

What are some of the key aspects of this piece – for later art practices and for practices that may yet emerge?

1) The conceptualization of the work of art as a durational experience, and as a kind of temporal container, based on externally or arbitrarily established time brackets that determine how long an action or event will be carried out – a move taken up and reinterpreted, for instance, in the early camera roll films of Andy Warhol or the numerous early videos that use the external frame of the standard lengths of tape stock to determine the duration of a work

2) By emptying out any overt content, the implicit focus on the situation itself, both in a *perceptual* sense – the way a performance of *4'33"* invites us to listen to ambient sounds and experience the existing sound world as a kind of music – and also arguably in a more *conceptual* sense, in the way that this absence of “music,” in the conventional sense, also might invite us to focus on the

framing conventions of the music concert and to reflect on it as an institution.

3) Because of its evacuation of conventional musical materials, the function of notation changes and becomes an operational model, one of describing things to do, placed within a time structure (and in this reconfiguration, language plays an increasingly central role).<sup>6</sup>

6. As I have argued elsewhere, in its use of language, the linguistically-notated typewritten version of the piece inaugurates a practice of the *text as score* – a practice that places language in the ambivalent temporality of musical notation, where it functions as both prescription and record – while simultaneously crystallising a practice of pure durational structure. Written, it would seem, perhaps as early as 1953 and certainly by 1958, Cage's text score for *4'33"* offers a precedent not only for the short written text scores and performance instructions produced by Fluxus artists in the early 1960s, but also for the projects of Conceptual art that emerged in the later 1960s. Liz Kotz, "Post-Cagean Aesthetics and the 'Event' Score," *October* No. 95, Spring 2001, p. 54–89.

4) The isolation of the score as a separate graphic/textual object, no longer dependent upon performance, for which reading itself may constitute "realization" – a move that helped propel the interest in "language pieces" in the 1960s, including the event scores associated with Fluxus – just as, along with others in experimental music, Cage's work helped propel the extension of musical notation into a more general concept of scoring and "score practice," in which myriad devices (from graphics, drawings and diagrams to fabrication instructions) could generate artistic activities or serve as a template for a potentially repeatable work.<sup>7</sup>

7. This tendency to compare the musical score to other notational schemas was not uncommon in the 1960s, most notably in philosopher Nelson Goodman, *Languages of Art: An Approach to a Theory of Symbols*, New York: Bobbs-Merrill, 1968. Also in architect Lawrence Halprin's treatise, *The RSVP Cycles: Creative Processes in the Human Environment*, New York: George Brazillier, 1969.

5) And, perhaps most radically, the way that *4'33"* puts the very notion of the "work" in crisis. In so many respects, a genealogy of Cage's earlier work cannot account for the explosive arrival of *4'33"* and the rupture that this event introduces.

Thus what to me seems most important about the relation of Cage's work to the visual arts is not so much the visual art that he made, or even necessarily his myriad interdisciplinary efforts, as the series of moves, or series of structures, developed in his musical practice that could be transferred and translated to other media.

To trace some of Cage's earlier projects that could be seen as preparing the way for *4'33"*, we might start with two key works from 1939, the *First Construction (in metal)* and *Imaginary Landscape No. 1*. These early compositions drop clusters of percussion sounds into pre-determined temporal grids, organized by a macrocosmic/microcosmic structure. It is beginning with these works, as James Pritchett argues, that "musical structures based on lengths of time... became the basis of all Cage's percussion music from 1939 onwards," a practice that relied on "the conception of compositions or performances as time structures."<sup>8</sup> And, as Paul Griffiths proposes: "...the advantage of structuring music by lengths of time rather than harmonic system... is not only that silence can be

8. James Pritchett, *The Music of John Cage*, Cambridge: Cambridge University Press, 1993, p. 13.

9. Paul Griffiths, *John Cage*, London: Oxford University Press, 1981, p. 11.

treated according to the same rules as sound but also that those rules can be applied indifferently to pitched sounds and to noises, as they are in the *First Construction*.”<sup>9</sup>

10. Pritchett, p. 16.

As Cage moved toward unorthodox non-tonal instruments, clusters of uncodifiable and fundamentally unstructured “sound events” displaced the pitched, timed and conventionally defined musical note. *First Construction* saw the complete fragmentation and dispersion of sound events into a complex, mathematically derived structure, relying exclusively on percussion instruments. Pritchett’s reconstructed diagram shows how the *First Construction* is broken down into a series of arbitrary yet systematic phrase lengths: in Cage’s early efforts to produce form with such disparate materials, a macrocosmic/microcosmic patterning requires that each bar obeys the same 4-3-2-3-4 structure used to organize the piece as a whole. As Pritchett notes: “...the piece consists of 16 units, each with a duration of 16 measures, for a total of 256 measures.”<sup>10</sup>

11. *Ibid.*, p. 12.

This grid-like formal structure, initially imposed on both overall (“macrocosmic”) and note-to-note (“microcosmic”) levels, is a system that works independently of and indifferently to sounding material. Within this system, any audible material may function as a “sound event,” even test tone records or snippets of prefabricated musical material, as in the *Imaginary Landscapes*. Thus, it is the very rigidity of the pre-determined, durationally based structures of the earlier works that permits the apparent “freedom” of much of Cage’s subsequent efforts. As Griffiths elucidates, regarding the peculiar coexistence of rigid quantification and apparent “free play” in Cage’s compositions of the 1940s: “With a fixed framework, fixed materials, and fixed ways of working, Cage allowed himself freedom in how he placed events within the durational grid.” As early as 1941, in *Third Construction*, the “internal division of the sections show no regularity... [and this] was to be the pattern of the future.”<sup>11</sup>

Thus already in these early pieces, we have a latent model not only for a practice of pure durational structure, but of the implicit equivalence of materials within that structure. In addition, this reconceptualization of the musical composition as a predetermined time structure, available to be filled by any content, inevitably recalls the operations of a sound recording mechanism, in the way that a disc or tape makes available a pre-set, predetermined quantity of time to be filled with whatever happens to occur during

that time. And, as these “new sounds” move to the fore, in all their singularity and dispersion, the role of the composer is to some degree backgrounded, as an organizer of sounds, with a certain pragmatism that echoes Varèse. Cage gradually reconciles the role of the composer as system-builder with the reality and singularity of these sounds, leading to the radical consequence that structure is detached from sound.

*First Construction* would soon be followed by the more aggressively Futurist *Imaginary Landscape No. 1* “for Records of Constant an Variable Frequency, Large Chinese Cymbal and String Piano... to be performed as a recording or broadcast.”<sup>12</sup> As Cage would later recall, the series: “...employed records of constant and variable frequencies on turntables, the speed of which could be varied. Durations were controlled by lowering or raising the pick-up. This was a use of recording equipment for creative rather than customary reproducing purposes... [including the use of] small sounds which to be heard required amplification.”<sup>13</sup>

Perhaps due to his persistent lack of access to equipment and studios, relatively few of Cage’s early compositions use such identifiably “high tech” means. But it is important to recall to what extent his early compositions – and his understanding of music – emerged in relation to new technologies of sound production, transmission and recording. As David Nicholls and others have noted, Cage’s early manifestos reveal him in an avowedly Futurist vein, championing the new technical resources advocated in Luigi Russolo’s 1913–16 *The Art of Noises*, Henry Cowell’s 1919/1930 *New Musical Resources*, and Mexican composer Carlos Chávez’s *Toward a New Music: Music and Electricity*, which had just been published in 1937.<sup>14</sup> In Pritchett’s analysis, “following Russolo... Cage’s model for the composer was the inventor of new sounds and new instruments, and... the necessary invention of new forms and methods for composition,”<sup>15</sup> a project Cage extends by reconceptualizing music as the “organization of sound” and proclaiming percussion as the logical vehicle for the “musical reclamation of noise.”<sup>16</sup>

Cage’s key early manifesto, “The Future of Music: Credo” (which Leta Miller has persuasively re-dated to 1940, making it a retrospective summing up of his late 1930s efforts, rather than a prospective exploration), explicitly relates his interest in durational structures to emerging technical capacities – electrical instruments that will provide complete control of overtone structures,

12. Cage’s catalogue description, “Notes on Compositions I (1933–1948),” reprinted in Richard Kostelanetz, (ed.), *John Cage: Writer*, New York: Limelight Editions, 1993, p. 7.

13. “A Composer’s Confessions” (1948), in *ibid.*, p. 33.

14. Luigi Russolo, *The Art of Noises (1913–16)*, translated and with an introduction by Barclay Brown. New York: Pendragon Press, 1986; Henry Cowell, *New Musical Resources*, New York-London: Knopf, 1930; and Carlos Chávez, *Toward a New Music: Music and Electricity*, New York: W. W. Norton, 1937.

15. Pritchett, p. 12. Of course, the “Futurist” project Cage draws on itself has vastly deeper roots. In “A New Musical Reality’: Futurism, Modernism, and ‘The Art of Noises’,” Robert P. Morgan explores the precedents provided in composer Ferruccio Busoni’s highly-influential 1906 *Sketch for a New Aesthetics of Music*, which already insists on the exhaustion of Western musical language, its tonal system and instrumentation, noting: “Many, if not all, of the principal ideas associated with Futurism, as well as the larger Futurist movement, developed and intensified over a long period, going back at least to the early years of the nineteenth century.” In *Modernism/Modernity* No. 1.3, 1994, p. 131.

16. “For More New Sounds” (1942), in Richard Kostelanetz, (ed.), *John Cage: An Anthology*, New York: Da Capo Press, 1991, p. 66.

17. Cage, "The Future of Music: Credo" (1937/1940), *Silence*, Middletown, Conn.: Wesleyan University Press, 1961, pp. 6, 3. While this essay has long been dated to 1937, Leta E. Miller has persuasively argued that Cage could not have given the Seattle talk until 1940; see Miller, "Cultural Intersections: John Cage in Seattle (1938–1940)," in David W. Patterson, (ed.); and "Cage's Collaborations," in David Nicholls, (ed.), *The Cambridge Companion to John Cage*, Cambridge: Cambridge University Press, 2002.

18. Cage, "The Future of Music: Credo," p. 5.

frequency, amplitude and duration, and new film-based recording capacities that make it possible to measure minute time brackets – and called for centers of experimental music that would provide "the new materials, oscillators, turntables, generators, means of amplifying small sounds, film phonographs, etc, available for use," allowing modern composers "to capture and control these sounds, to use them not as sound effects but as musical instruments."<sup>17</sup> Seeing percussion music as "a contemporary transition from keyboard influenced music to the all-sound music of the future," Cage predicts that in the future, the composer will be faced "not only with the entire field of sound but also with the entire field of time."<sup>18</sup>

As Nicholls's detailed comparison of Cage's manifesto to the writings of Russolo and Chávez makes clear, Cage at this moment was not so much a path-breaker as an enthusiastic champion of the more unorthodox musical currents of an increasingly international modernism. Yet Cage's use of percussion to move from the "keyboard influenced music" of the past to the "all-sound music of the future" would eventually propel a complete rethinking of the nature of sound, abandoning what Cage terms the "cautious stepping" of discrete notes for the continuous "field" made possible by the new technologies of amplification, microphony, radio and magnetic tape. In this language of discrete steps and continuous properties, we cannot fail to recognize the transition from a conventionally-based, linguistic system to the operations of the mechanically (re)produced index – with all the enormous challenges to the production of meaning that this latter introduces.

In addition to relying on an emerging model of the composition as a neutral temporal container, we might note how, in works like the *Imaginary Landscapes*, the unorthodox instrumentation makes Cage's scores increasingly dependent on verbal annotation. One important effect of Cage's embrace of new technologies was the way that this changes the function of notation. In *Imaginary Landscape No. 1*, we can see this in embryonic form: although the first page of the score of looks like fairly conventional musical notation, the instrumentation is decidedly unorthodox. As a result, what notation does starts to change: a note on a page, rather than being a representation of an ideal note, instead starts to become something more like a direction for an action.

This "operational" model of musical notation comes to the fore as Cage's musical materials become increasingly unorthodox.

Although Cage's score for the *Sonatas and Interludes* still looks conventional, the function of notation has increasingly moved away from representing sounds towards this operational model, indicating actions. The culmination of nearly a decade of work with the prepared piano, the *Sonatas and Interludes* saw Cage abandon the mathematically-generated relations of whole to parts used in earlier compositions like the *Constructions* and *Imaginary Landscapes*, to adopt procedures representing what he would later describe as "the shift from music as structure to music as process."<sup>19</sup> In "Forerunners of Modern Music" (written after completing the *Sonatas and Interludes*), Cage proposes a model of "coincidences of free events with structural time points" in which specific events occur within, but independent of, the larger temporal container:

Rhythm in the structural instance is relationships of lengths of time... In the case of a year, rhythmic structure is a matter of seasons, months, weeks, and days. Other time lengths such as that taken by a fire or the playing of a piece of music occur accidentally or freely without explicit recognition of an all-embracing order, but nevertheless within that order... Any sounds of any qualities and pitches... any contexts of these, simple or multiple, are natural and conceivable within a rhythmic structure that also embraces silence.<sup>20</sup>

Abandoning earlier efforts to impose complex formal relationships, Cage now announces the complete independence of "event" and "structure": events are now fully singular entities, which do not rely on position within the structure or relation to one another. We can see how the concept of the "sound event" itself emerges from this use of structure as a pre-existing matrix that functions solely as a container, an all-inclusive temporal frame, which can embrace all sounds, including silence. Rather than actively imposing a structure, organization or hierarchy on these elements, time instead is a neutral container within which anything can happen – as Cage demonstrates in his 1950 "Lecture on Nothing," given as a formalized delivery within pre-established rhythmic structures: "As you can see, I can say anything."<sup>21</sup> It is this new model of completely de-hierarchized non-continuity that prepares the way for Cage's embrace of both "chance" and "silence." As Pritchett argues, where Cage previously had used silence primarily to articulate groupings of sounds – essentially, as punctuation – he now claims the interchangeability of sound and silence, as "events of equal standing."<sup>22</sup>

As we know, the *Sonatas* "preparation" entailed an extraordinarily detailed supplementary notation that significantly recasts these figures, taking the form of a carefully diagrammed and measured

19. "Interview with Richard Kostelanetz" (1984), in Richard Kostelanetz, (ed.), *Conversing with Cage*. New York: Limelight Editions, 1988, p. 162.

20. Cage, "Forerunners of Modern Music" (1949), *Silence*, p. 65.

21. Cage, "Lecture on Nothing," *Silence*, p. 112.

22. Pritchett, p. 71.



“table of preparations.” Not surprisingly, it is this second “score,” the graphic, grid-like table of preparations, that is more often reproduced as an illustration of the work, as the explicatory functions of annotation – historically, the province of parenthetical linguistic and mathematical instructions on how a score is to be performed – increasingly overtake the representational functions of musical notation proper. In its precise tabulation of measurements, materials and methods of placement, the “table of preparations” exemplifies the shift toward notation as the specification of actions, objects and procedures.<sup>23</sup>

23. This new function of notation, and the relative unpredictability of the prepared piano as an instrument, can be seen as the forerunners of more programmatic “indeterminacy” in Cage’s work. Griffiths proposes that Cage’s first solo for prepared piano, *Bacchanale* (1940), inaugurates a newly “oblique relationship between sound and scores”; for while “on the printed page such a piece... looks like ordinary piano music,” he notes that the “whole meaning of notation is thus changed. No longer is it an accurate representation of sound, but only a system of instructions to the performer.” Griffiths, p. 14.

Cagean “indeterminacy” represents one outcome of this reconfiguring of notation, from an idealized representation to something resembling an “operational” model, like a list of instructions or a set of procedures. And although subsequent artistic projects of the 1960s, such as the proto-Fluxus event scores, would associate this instructional or procedural function with language, it is interesting to note that this operational mode first arises within conventional-looking musical notation, and is only subsequently transferred to numbers, graphic inscription and written text. And yet – while the table of preparations may still serve to describe the prepared piano pieces, the illustrative function of the score vis-à-vis the work is displaced. Viewed in retrospect, the *Sonatas and Interludes* perhaps represent a crisis, an indication of the breaks to come.

Some of the effects of these shifts in the function of notation and the role of the performer can be seen in Cage’s composition *Water Music*, written in 1952 several months before *4’33”*. Composed “for a pianist, using also a radio, whistles, water containers, a deck of cards, a wooden stick, and objects for preparing a piano,” *Water Music* was arguably the first of Cage’s “theater pieces,” predating the untitled “Theater Event” at Black Mountain College by three months, as William Fetterman has pointed out.<sup>24</sup> The piece debuted at the New School in May 1952, and initially carried the title of the date or place of its performance – e.g. “66 W. 12” or later, “Aug. 12, 1952”<sup>25</sup> – a constant re-titling (later suspended) that was presumably designed to name each performance a distinct “work.” Pritchett notes that Cage incorporated deliberately theatrical actions into the charts used to compose the piece: for example, at one point the pianist deals playing cards into the strings of the piano; in addition, *Water Music* was “the first piece in which Cage used clock time rather than metrical time in his durations.”<sup>26</sup> Mounted as a poster, to be viewed by the audience during the performance, the

24. See William Fetterman, *John Cage’s Theatre Pieces: Notations and Performances*, Amsterdam: Harwood Academic Publishers, 1996.

25. In Robert Dunn, (ed.), *John Cage*, New York: C. F. Peters, 1962, p. 43.

26. Pritchett, p. 89.

idiosyncratic format crystallized Cage's use of the musical score as a unique visual object that resists translation into conventional notation. And the functional autonomy of this notation, as a visual object, perhaps serves as a marker for this changing status of the work, which can no longer be illustrated or represented by its score.

Culminating a long series of efforts to use newly available technologies of sound generation, it would be with the *Williams Mix* (1952), "a score... for making music on magnetic tape," that Cage had his most sustained encounter with audiotape technology. As has become almost legend, Cage's work with tape altered his understanding of the nature of sound and time, and decisively transformed his use of notation. By its material structure, audiotape manifests time as a spatial continuum, and renders it subject to intense manipulation. Yet frustrated by his failure to achieve control through tape splicing and synching, Cage paradoxically would find in audiotape "an omen to go unfixed," give up control, and move toward more process-based procedures. In its absurd complexity and precision, *Williams Mix* represents the culmination of a series of crises that will be answered by 4'33".

By all accounts, the process of collecting and hand-splicing the recorded sounds that make up the work was arduous: "It took about a year, with help, to splice the *Williams Mix*, which was itself a little over four minutes of music."<sup>27</sup> Cage's intensive fragmentation of sound materials apparently arose from his desire to integrate the new technical means of magnetic tape into the process of composition, rather than use such means to make anything resembling conventional music.<sup>28</sup> Working in the studio of recording engineers Louis and Bebe Barron, and with the assistance of composer Earle Brown, Cage insisted not only on subjecting each sound parameter to laboriously-conducted chance determinations, but on working physically, by hand, with the audiotape, exploring "ways of changing the sound not with dials but, rather, by physically cutting the tape."<sup>29</sup> While it seem be a truism that new sound technologies potentially decompose the discrete note or unit of time, Cage's recollection of working on *Williams Mix* illustrates this graphically: "What was so fascinating about tape possibility was that a second, which we had always thought was a relatively short space of time, became fifteen inches. It became something quite long that could be cut up. Morty Feldman... took a quarter of an inch and asked us to put 1,097 sounds in it, and we did it – we *actually* did it."<sup>30</sup>

27. Interview with Richard Kostelanetz, (ed.), *Conversing with Cage*, p. 162. The version played at Cage's 25-Year Retrospective was 5'43".

28. Christian Wolff recalls that Cage was familiar with the tape music of Oscar Luening and Vladimir Ussachevsky at Columbia, but found it wanting: "It may have been interesting because of using the tape, but musically they were using tape in ways that seemed too much like other kinds of music. This was the whole problem with the earlier tape music; one really had to rethink the whole process because of the technology." In David W. Patterson, "Cage and Beyond: An Annotated Interview with Christian Wolff," *Perspectives of New Music* 32/2, Summer 1994, p. 64.

29. Kostelanetz, (ed.), *Conversing with Cage*, p. 162. Wolff confirms that: "In Cage's work, he wanted sounds that could not be done on a recording, and, for example, he discovered that if you cut the tape at an angle, it would affect the decay envelope of the sound. So when he composed *Williams Mix*, the angle of the cut at which the splice was made became part of the composition." (Patterson, "Cage and Beyond," p. 65).

30. Kostelanetz, (ed.), *Conversing with Cage*, p. 164.

The score, which came to nearly 500 pages, was never published. Cage famously described it as “like a dressmaker’s pattern – it literally shows where the tape shall be cut, and you lay the tape on the score itself.”<sup>31</sup> Yet the extremely detailed composition, rather than working as an exercise in control, instead produced the opposite: sounds became distorted, measurements were never quite the same twice, sections that were supposed to sync up would be off by small but perceptible increments. While this was no doubt partly due to the arcane procedures and primitive technologies employed, Cage evidently came to understand such discrepancies as intrinsic to the apparatus. He would later declare that, during the *Williams Mix*: “I began to move away from the whole idea of control, even control by chance operations. It was a cross-roads for me. I took our failure to achieve synchronization as an omen to go to the unfixed, rather than change my methods so as to make it more fixed. Now of course they have equipment that makes possible much more precise control, and a lot of people are using it to go in that direction.”<sup>32</sup>

Thus, over a decade before the first sustained experiments with tape-phasing would be carried out by Tony Conrad, Steve Reich, Terry Riley and others, Cage would interpret this failure to achieve perfect synchronization, even with complex, multi-tracked tapes, as a license to free-up the relationships between simultaneous elements in order to permit unplanned superimposition and chance encounters, proclaiming in a 1957 text: “Those who have accepted the sounds they do not intend – now realize that the score, the requiring that many parts be played in a particular togetherness, is not an accurate representation of how things are. These now compose parts but not scores, and the parts may be combined in any unthought ways. This means that each performance of such a piece of music is unique.”<sup>33</sup>

Uniqueness, non-interference, non-selectivity, perceptual openness to whatever occurs: these would become the hallmarks of a distinctly “Cagean” aesthetics. Yet, however unified this project may sometimes appear in retrospect, the practices it authorized within Cage’s work alone would proceed down a number of diverging tracks. One, perhaps the most-commonly-emphasized, led “toward theater,” as even the provisional perceptual unity of sound or audibility gave way to hybrid activities that would “engage the eye as well as the ear.” By the 1960s, Cage’s theatrically oriented projects would erode distinctions between composer,

31. “Interview with Michael Kirby and Richard Schechner” (1965), in *ibid.*, p. 163.

32. Cited in Calvin Tomkins, *The Bride and the Bachelors*, New York: Penguin, 1976, p. 116.

33. Cage, “Experimental Music” (1957), *Silence*, p. 11. As Griffiths suggests: “...the composer becomes a proposer, one who creates ‘opportunities for experience’ while denying himself those intentions of expressing, limiting and shaping which Cage had willingly claimed in his works up to 1951. No less radically altered are the functions of the performer and listener... His major undertakings of the 1950s... [were] invitations to Tudor to exploit the furthest limits of a formidable virtuoso technique, to discover the unpredicted and unpredictable. The listener, too, is challenged to attend with minute concentration, not relating what he hears to any previous experience but maintaining a state of unfettered receptiveness in which events may be tranquilly accepted.” Griffiths, p. 37.

performer and audience in series of participatory and multimedia spectacles. Another, less acknowledged track, was the rise within new music of a new virtuosity in performance, as Cage's emphatic deskilling of compositional procedures paradoxically placed unforeseen demands of physical dexterity, technical rigor and conceptual innovation on performers – perhaps revealing the disciplinary underside of the utopian, liberatory project of indeterminacy. And, for minimal and post-minimal artists, Cage's explicit activation of the recipient, in all its ambivalently participatory and disciplinary dimensions, would shift attention from the internal organization of the object toward what Rosalind Krauss has termed the "phenomenological vector," engaging the "activity of organization and connection through which a subject engages with a world as meaningful."<sup>34</sup>

34. Rosalind Krauss, "A Voyage on the North Sea": *Art in the Age of the Post-Medium Condition*, London and New York: Thames & Hudson, 1999, p. 59.

Cage's own compositions of the 1950s and 1960s elicited this newly activated receptiveness through multiplication and dispersion of phenomena: "...attention moves towards the observation and audition of many things at once, including those that are environmental – becomes, that is, inclusive rather than exclusive – no question of making, in the sense of forming understandable structures, can arise."<sup>35</sup> Yet the compression and radicalization of these strategies in *4'33"*, the work which most clearly crystallize the new role of the listener, offers other possibilities: one which produces both a perceptual focusing – on the vicissitudes of sound in its most subtle and dramatic variations, and all the other things that might be going on at the same time – and also a conceptual reframing – as the withdrawal of overt musical "content" potentially directs attention to underlying structures and conventions of performance and enactment. In the interdisciplinary practices that emerge in the late 1950s and 1960s, artists will increasingly explore duration, repetition, serial structures, and process, moves echoed in Cage's longstanding efforts to present the first public performance of Erik Satie's infamous *Vexations*, resulting in the now legendary nearly nineteen-hour concert.<sup>36</sup>

35. Cage, "Experimental Music: Doctrine" (1955), *Silence*, p. 13.

36. It was apparently during his 1949 trip to Europe that Cage found the score for Satie's *Vexations*, which proposes 840 repetitions of a short musical phrase; according to Calvin Tomkins, Cage had wanted to have it performed since 1950, but was only able to arrange for its world premiere in 1963 in New York, in an eighteen-hour-and-forty-minute performance undertaken by ten pianists including dancer Viola Farber, and musicians John Cale, Christian Wolff, Phillip Corner, and James Tenney, as well as Cage; Tomkins, pp. 138–39. According to George Plimpton's account, Warhol apparently attended the concert and claimed to have "sat through the whole thing"; in Jean Stein, *Edie: An American Biography*, edited with George Plimpton, New York: Dell, 1982, p. 191.

Looking back on Cage's formative early period, there is something about this series of moves that feels very relevant for our own present – in the interplay between advanced technologies and low-tech means, and between structure and indeterminacy, finding free-play and "the permission to go unfixed" amidst the most rigidly determined structures. One moment Cage (or David Tudor) is blowing

bubbles in a bowl of water, the next he is spending months hand-splicing audiotape. Part of what continues to intrigue us about Cage is that these are not discrete or opposed projects, but impulses that occur at the same moment, in a complex relation – so that the spare operational notation of 4'33" (in its various versions) emerges more or less at the same moment as the baroque hand-drawn figures of *Water Music*.

Placed in this trajectory, 4'33" is a kind of hinge, both a logical culmination of the compositional experiments leading up to it and a genuine breakthrough making way for completely new ways of thinking of practice and work. By the time he arrives at 4'33", the very status of "the work" is in question, notation no longer defines the work but is a device that gets the piece going, producing realizations. Perhaps one of the lessons of Cage's own progression by fits and starts and continued crises is that a living artistic project cannot be boiled down to a set of rules or concepts, or even the seductive toolkit that Rainer lays out, of "repetition, indeterminate sequencing, sequence arrived at by aleatoric methods, and ordinary/untransformed movement," that was so productive for her work, and so many others, during the early 1960s. Instead, perhaps we can understand Cage's project as fragmentary and open-ended, offering a set of tools for taking languages and structures apart, and making new structures and new realizations.<sup>37</sup>

37. An earlier version of this essay was presented on the panel "John Cage: Repercussions" in Los Angeles in February 2009; I thank Sandra Skurvida for inviting me. It draws on ideas and materials originally developed in *Words on Paper Not Necessarily Meant to Be Read as "Art": Postwar Media Poetics from Cage to Warhol*, PhD dissertation, Columbia University, 2002, and my book *Words to Be Looked At: Language in 1960s Art*, Cambridge, Mass.: MIT Press, 2007. I thank Mark So for his insights and challenges over many years.