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# Plans, Takes, and *Mis-takes*

## Summary

This paper analyzes what may have been a mistake by pianist Thelonious Monk playing a jazz solo in 1958. Even in a Monk composition designed for patterned mayhem, a note can sound out of pattern. We reframe the question of whether the note was a mistake and ask instead about how Monk handles the problem. Amazingly, he replayed the note into a new pattern that resituates its jarring effect in retrospect. The mistake, or better, the *mis-take*, was “saved” by subsequent notes. Our analysis, supported by reflections from jazz musicians and the philosopher John Dewey, encourages a reformulation of plans, takes, *mis-takes* as categories for the interpretation of contingency, surprise, and repair in all human activities. A final section suggests that mistakes are essential to the practical plying and playing of knowledge into performances, particularly those that highlight learning.

*A mistake is the most beautiful thing in the world.*

*It is the only way you can get to some place you've never been before.*

*I try to make as many as I can. Making a mis-take is the only way that you can grow.*

Drummer E.W. Wainwright  
(conversation with Klemp, 2001)

*Conceptions and systems of conceptions, ends in view and plans, are constantly making and re-making as fast as those already in use reveal their weaknesses, defects and positive values.*

John Dewey (1929b: 133-134)

This paper analyzes a difficult moment in a jazz solo performance by pianist Thelonious

Monk (b. 1917, d. 1982) on a recording of “In Walked Bud,” from the album, *Misterioso* (1958). Our descriptive goal is to situate Monk’s performance in relation to two kinds of data: most importantly, sequential data from notes played before and after the difficult moment; and secondly, comparative data from the same solo played on two other occasions, one in 1957, the other in 1959, both in remarkably similar, but not identical ways, but neither of them showing any signs of the struggle that marked the 1958 recording. The ideal reader of this paper would listen to the recordings.

Artistic work is demanding because it lives off – indeed, it requires – difficult moments that performers can use, as John Dewey said, to throw back “the covers that hide the expressiveness of experienced things” and to build “relationships that sum up and carry forward” (1934: 166, 104). In his artistic work on a piano keyboard, Monk had to coordinate past and future in a continually evolving activity sequence rapidly executed in real time. Notes upon notes had to be made somehow to “sum up and carry forward.”<sup>1</sup>

There are two reasons for borrowing Dewey’s theoretical language to articulate Monk’s situation and achievement. From Dewey’s earliest work on perception (1896) and even logic (1893), he always insisted that activi-

<sup>1</sup> Dewey’s “sum up and carry forward” appears hereafter with quotations marks, but without citation.

ties are organized in time, at a particular time, often at just the right time, and always with a simultaneous concern for both the future and the past.<sup>2</sup> The opening line of his mid-career essays on logic reported that the “key” to his work “lies in the passages regarding the temporal development of experience” (1916b: 1), and his late-in-life volumes address topics – art, education, ethics, and logic, topics all too easy to treat statically – as on-going temporal achievements. Change and uncertainty are the only constants in Dewey’s thought, and he identifies movement, direction, and rhythm as essential resources for anyone figuring out what to do next. To those who listen carefully, jazz musicians (along with, from a long list, poets, comedians, spies, and con artists), exemplify this view of life perhaps most miraculously. Real time inhabits the iterative, reflexive, and reticular work of sequencing activities with activities. It is distinct from linear clock-time that passes by one pre-set unit at a time. In real time, a moment is momentary, fleeting and without character, and it takes its identity in a sequence of moments of which it is not just a part, but a constitutive part. Activities help build their own environments, albeit under conditions well structured in advance; by their very occurrence, they reflexively constitute the conditions of their own significance. Moments, like notes played on a keyboard, become consequential – even momentous – by their simultaneous connections to things that have already happened and are about to happen.

Dewey’s is not the only twentieth century celebration of the relentless temporality of human activities (consider James, Bergson, Heidegger, G.H. Mead, Merleau-Ponty, Der-

rida), but its power is receiving appreciation of late (Sleeper, 1986; Hickman, 1992; Burke, 1994). John McDermott says that Dewey offers “a metaphysics of transiency, in which human life is seen as a wandering, a traveling, a bemusement which rocks side to side, comedy and tragedy, breakthrough and setback – yet, in all, a purposive, even progressive, trip” (2007: 157). The “transiency” is most apparent in actual performances, in people rocking “side to side,” and this paper uses Monk’s “purposive, even progressive” solo as such an opportunity.<sup>3</sup>

A second reason for using Dewey is that his ideas on thinking, doing, and performing in real time are at the heart of his theories of inquiry, knowledge, learning, and education. If Monk’s solo is a site for the exploration of temporality in the organization of behavior, it can be used to rethink learning and education as well. Given his prominent place in educational theory, it is surprising that Dewey thinks of learning as secondary to the rest of what people do, as less a thing in itself than a sidebar to other and likely more important activities. Across his work, Dewey relentlessly wrote of learning as a progressive activity among activities rather than as a stockpile, the latter being what he called “mere learning”: useful for taking tests in school perhaps, but rarely helpful in pressing situations requiring growth. For

2 In this way, he presaged the work of the neuroscientists Karl Lashley (1951) and Lashley’s student Donald Hebb (1949), whose pioneering advances related to the organization of time in neural networks; see also Miller, Galanter, and Pribram (1960).

3 Attention to Dewey’s sensitivity to timing in human activities should not hide a sophisticated literature combining linguistic and phenomenological analyses of music, talk, and body movement in various combinations (Schutz, 1953; Sudnow, 1978; Byers, 1985; Attali 1987; Kendon, 1990; McNeill, 1992, 2007; Feld and Fox, 1994; Lindsay, 1996; Monson, 1996; Sawyer, 2000; Erickson, 2004; Levitin 2006; Solis 2008). See the rich descriptions of “sequential relevance” in conversational analysis (Sacks, 1990), particularly on error repair (Schegloff 1992). Dewey and G.H. Mead (1932) have an added attraction: that they make time and creativity central to any organization of activities while they simultaneously articulate theories of learning, education, and democracy (e.g., Joas 1992; Bredo 1994, 1997; Manicas 1998; J. McDermott, 2007).

Dewey, learning is “a necessary accompaniment” to getting something done, something other than learning for its own sake. In a late statement, he calls learning “a product,” but only to emphasize that it is secondary:

Learning is the product of the exercise of powers needed to meet the demands of the activity in operation... [a performer’s] primary aim is to do his work better, but learning is a necessary accompaniment, the more so as being largely the unconscious effect of other acts and experiences. (1937: 238)

Even when conceived of as a product, learning, for Dewey, is secondary to getting on in life; it is not so much a product as a by-product, a product by and by, of more pressing engagements.

The bulk of this paper describes Monk organizing his behavior in real time, and at the end we speculate briefly on the implications of Monk’s performance for Dewey’s attention to, first, sequential organization and, second, learning and education. We proceed in three sections: we derive categories for understanding Monk’s performance; then we use them in the description; finally, we focus on the importance of time in theorizing activities, particularly learning.

## Terms, off and on key

*I made the wrong mistakes.*

Thelonious Monk, after a disappointing performance (wikiquote.org)

*There were no wrong notes on his pi-a-no had no wrong notes, oh no...*

*He played not one wrong note, not one.*

*His pi-a-no had none, not one.*

Chris Raschka, on Monk (1997: 6-9, 14-17)

Notes that sound out of place are a constant threat to performance. Coordination can break

down, and wrong notes can halt a performance (particularly in rehearsal sessions). Monk’s solo builds to a threatening moment, and a note gets played seemingly out of sequence. What Dewey calls its “whence and how” – as in “whence and how the quality proceeds” (1934: 138) – gets disrupted and threatens the discernable order<sup>4</sup> Any note might be a mistake or not depending on context, the rules of harmony, the player’s intention or the audience’s expectations. If not a wrong note played by mistake, it could have been a wrong note played intentionally, or a right note in a coherent scheme Monk had yet to display or even to discover. Whatever it was – never to be known for sure – Monk reshapes it into an opportunity for a new sense of “whence and how.” Whatever it might have been, it becomes, for a period of time immediately following its occurrence, a challenge for Monk and his listeners.

Before describing Monk’s *mis-take*, we reframe the terms in our title to fit the demands of analyzing improvisation. If a song has a plan, a particular performance constitutes a take, and any take is ripe for a *mis-take*. The more we listened to Monk, the more our analytic focus shifted from presumed plan to actual take. At first, we heard the music as a mere mock-up of what Monk had in mind; the plan seemed more real than the take, performance a pale copy of competence. “When arts follow fixed models,” complained Dewey, “and when the element of individual invention in design is condemned as caprice, forms and ends are necessarily external to the individual worker” (1929a: 92). When forms and ends, says Dewey, precede “any particular realization,” the worker, the artist, the person and their activities are ana-

<sup>4</sup> Dewey’s “whence and how” (1934: 135) is a workman’s take on William James’s more poetic “whence and whither,” as in: “An activity-series is defined by its whence and whither” (James 1905: 257). “Whence and how” appears hereafter with quotations marks, but without citation.

lytically pushed aside, and the world in which events happen becomes invisible. The actor is cut off: lost in thought, lost in ought. The more we listened to Monk, the more the world of his music reemerged. The music became analytically more central than our version of his plans. We were experiencing in our analysis what Chuck Israels says he experience in playing jazz: “No matter what you’re doing or thinking about beforehand, from the very moment the performance begins, you plunge into that world of sounds. It becomes your world instantly, and your whole consciousness changes” (quoted in Berliner, 1994: 348). Fingers and notes became the story. They had their own biography. Monk produced the notes, but he was their servant as well, for once played, he had to hew to their consequences. Monk both created and underwent their demands, and they told their own story.<sup>5</sup> Analytically, plans and their mistakes grew small, and takes and *mis-takes* more prominent. Our analysis was overtaken by a web of connections created, summed up, and carried forward by Monk.

From here forward, we use the term mistake to refer to what might be heard as a wrong note; because we are unsure it is a mistake, or unsure of the grounds for calling it a mistake, we usually modify it as “apparent” or

“seeming.”<sup>6</sup> When we refer to an apparent deviation from patterns established by previous notes and used in turn, and in time - just in time - to build a new pattern, we write the word in italics with a hyphen: *mis-take*. The difference between a mistake and a *mis-take* is never clear when a jarring note occurs, but it can become clear upon analysis in the same way it becomes clear to a performer: with effort, over time, in the course of renovation, with relation to what came before and after, with relation to “whence and how.” In the descriptive section, most every use of the term *mis-take* represents as much an accomplishment for the analyst as it once was for the performer. We are not defending bad performances. Rather we are noticing that good and bad are difficult terms to use without a specification of the context and purpose at hand.

By commonsense, a mistake is easy to understand; a clinker, like a missed line in a recitation, interferes with how a performance sounds and contrasts with a less strident note that did not occur, but should have in a more carefully planned or better played performance. What originally made Monk’s performance interesting was an apparent mistake. Despite the dissonance and occasional melodic chaos of a typical Monk composition, there is great discipline, and a note can sound out of pattern. In the *Misterioso* solo of 1958, the sequence of “whence and how,” both structure and its promise, were disrupted.

Was the mistake one of plans or hands? We cannot answer the question, although we have tried. A better question to ask concerns how the performer uses what was right about the mistake to “sum up and carry forward” and

5 Music cognition theorists have similarly argued that music listening requires memory of the actual notes that have come before (absolute values) as well as their roles and functions in the ongoing development of musical harmony and changing tonal centers (Narmour, 1990). It is a normal part of composition that new notes retrospectively influence an understanding of those that came before (Levitin, 2006). In jazz improvisation, the performer *is* the composer, and recontextualization can either be planned or executed in a post-hoc or ad hoc basis. From an ethnomethodological tradition, consider David Sudnow: “Having a visual-conceptual means for going places, incorporated into a tactilely managed set of easeful maneuvers and the development of varieties of dexterities in engagement with the terrain, there was enough ‘jazziness’ to my actions that I felt at the piano I was essentially doing what jazz players do” (1978: 34; for another take on embodiment, see also Bowman and Powell, 2007).

6 The words “apparent” and “seeming” do not modify the notes as much as they refer to the likely uncertainty of Monk as he played and the resultant uncertainty of our analysis. We are less interested in establishing just what a mistake is than we are in raising the question of whether a mistake is a useful category to begin an analysis.

delivers a second excitement: that the mistake did not linger. A few seconds after hearing the mistake, we could no longer tell whether we had heard a mistake. In the language of jazz theorists, the mistake was “saved” by subsequent notes (Berliner, 1994). The mistake was a *mis-take*. If a *mis-take* can be replayed into an erasure of itself as a mistake, storehouse theories of mastery can be replayed into descriptions of the delicate and mutually enhancing relations between skills and fast-paced changing environments.

Jazz greats have strong advice along these lines. Saxophonist Don Byas reported pianist Art Tatum’s opinion: “Just remember there is no such thing as a wrong note... What makes a note wrong is when you don’t know where to go after that one. As long as you know how to get to the next note, there’s no such thing as a wrong note. You hit any note you want and it fits any chord” (in Taylor, 1993: 52).<sup>7</sup> A description of the notes making up, and taking up, the immediate context of Monk’s apparent mistake confirms Tatum’s wisdom. A *mis-take* is rarely a lone event. For a skilled player, it is a systematic development of *whence* it came, and it can be saved, in turn, by *how* it connects to what follows.

In the paragraphs that follow, we offer a formulation of plans, takes, and *mis-takes* three times each: (a) as commonly theorized, (b) as talked about by experienced jazz musicians who know better, and (c) as each has emerged in our descriptive work. Figure 1 offers the same reformulations in summary form.

Plans (a). A plan is often understood as an executive function that, once in place, gets followed one step at a time. Miller, Galanter and Pribram defined a plan as “any hierarchical process in the organism that can control the order in which a sequence of operations is to be performed” (1960: 17). This position

assumes an environment that stands predictably still, enough for all eventualities to be anticipated, taken into account, and, upon reflection, appropriated. A student of planned activity, complains Lucy Suchman, “need only know the predisposition of the actor and the alternative courses that are available in order to predict the action’s course. The action’s course is just the playing out of these antecedent factors, knowable in advance of, and standing in a determinative relationship to, the action itself” (1987: 51). Such a view is inherently partial and incomplete; it leaves no room for the lively complexity of activities in time. Plans are an object of analysis only for activities that unfold by decision tree and do not require fast action in reflexively shifting environments.

Plans (b). Jazz musicians must adjust to changing environments of their own making. They understand, and often articulate, that plans are over-rated. It is not that they cannot, or do not, play pieces identically across years, but they often abandon plans for nuanced innovation; they tinker to make the song better, where “better” may either mean more musical or more responsive to and reflective the artists’ mood at the moment of performance. For jazz musicians, a plan is less an exact calculus for what must happen next and more a description of expectations not exactly followed while making last gasp adjustments to new patterns cascading from a newly definite past to an emergent future. Berliner (1994) reminds us that improvisation typically shifts between the performance of pre-composed ideas and those conceived in the moment of performance.

Plans (c). A plan can be redefined as always emergent and contingent, never exactly as stated, and sensitive not just to surrounding environments, but *to the very environments of which it is partially constitutive*. Human engagements are organized this way. Suchman (1987) has offered a precise account:

<sup>7</sup> Lester (1994) claims Tatum rarely made mistakes. If he did, he “saved” them faster than people could hear.

Figure 1. Terms, off and on key

	By Common-Sense	By Jazz Talk	By Analytic Categories
Plans are	Executive and determinative formulations	Contingent formulations: just “abandon the past idea and develop a new one.”*	Reflexively consequential, a part of what has to be worked with
Takes are	Diminished plans	Where the action is: “you just keep weaving”; “let’s wrap it up.”	Reactive and emergent
Mis-takes are	Errors, or corrupted plans	A problem to be solved: “something that happened”; “the only way you can grow.”	An opportunity to save, improvise and learn

\* The five short quotes in this column are from jazz musicians cited in the text. They are general enough to be equally applicable to redefining Plans, Takes, or *Mis-takes*. The first quote is used in the text as part of a longer quote to comment on the word Take, but in this chart, with less context, it comments on Plans.

Plans are efficient formulations of situated actions... As efficient formulations, however, the significance of plans turns on their relation back to the unique circumstances and unarticulated practices of situated activities. (1987: 186)

Takes (a). A take is understood as a dependent and unruly child of the plan. Dictates from the throne of competence are defiled by the realities of performance always limited by messy particulars – including one’s own or others’ mistakes – of moment.

Takes (b). Jazz musicians have a thicker analysis of a take. Information that guides performance can come from many places within a performance system. Along with a preset plan, performers get information most generally from “vibes and venue” (Berliner, 1994) and most particularly from what has just

been played. Pianist Keith MacDonald stresses past, present, and future as the nexus where he plays music. “Everything is a reaction to what was just done. When I improvise, I think in phrases. If one of these phrases is interrupted, I abandon the past idea and develop a new one” (conversation with Klemp, 2000). Berliner cites drummer Max Roach to point:

From the first note you hear, you are responding to what you’ve just played: you just said this on your instrument, and now that’s a constant. What follows from that? And then the next phrase is a constant. What follows from that? And so on so forth. And finally, let’s wrap it up so that everybody understands that that’s what you’re doing. (1994: 192)

The last note played is not the only context for what can be done next, but it is crucial.

Takes (c). A take is the site of reality, where organism-environment relations are worked on and worked out, where possibilities of and constraints on what can be played next define each other, where structure and emergence do battle. From the beginning of a take, the physical acoustic past is set, and anything that follows must be integral to what has already happened, but its retrospective contextual interpretation is malleable. Anything that follows must “sum up” or face further revision. Pianist Randy Halberstadt says, “You’ve probably heard the axiom: there are no wrong notes in jazz. But the most rigorous perspective is that there is only one right note: the one that I hear at that moment” (1994).

*Mis-takes* (a). The standard view is that a mistake is the same as an error, a break from plan due to a faulty head or hand. It is to be avoided, recontextualized, hidden, or conceded with chagrin as an embarrassment.

*Mis-takes* (b). Jazz performers know better. Consider Don Byas:

There is no such thing as hitting a wrong note. It’s just that when you hit that wrong note, you’ve got to know how to make it right... you just keep weaving and there’s no way in the world you can get lost. You hit one. It’s not right, you hit another... As long as you keep going you’re all right, but don’t stop, because if you stop you are in trouble. (in Taylor, 1993: 52).

Performers do not have time to explain what has just happened. Their work is to continue in real time – the pulse of the rhythm section creates demands for new input every second. Questions of “what and why” pale before questions of “whence and how.”

*Mis-takes* (c). A *mis-take* is a sensible move within a system of moves so tuned to circumstances it can be used to explore the “whence and how,” the constraints and possibilities, of what happened before articulated with what happens next. Anything spontaneous, says Dewey, even an errant note, is “the result of

long periods of activity, or else it is so empty as not to be an act of expression” (1934: 72). A wrong note is errant only to what has already happened, and it can be made less errant by rearranging what happens next. A *mis-take* is in this way a spontaneous move in a system of moves in search of connections that carry forward.

Recasting terms in our title weakens the borders of their commonsense meanings and reverses the analytic figure/ground that puts plans and mistakes first and actual activities and their consequences second. When we listen to music, we hear neither plans, nor mistakes, but takes in which expectations and difficulties get worked on in the medium of notes, tones and rhythms. Notes live in connection with each other. They make demands on each other, and, if one note sticks out, the logic of their connections demands that they be reset and realigned. Analyzing Monk from the perspective of the notes invites an account of the “save.”

A save can be understood as a cover-up, an effort to hide an embarrassment before others notice and remember, but jazz musicians think more productively. They do not let a mistake interfere with the production of music. The only mistake, warned Tatum, is to stop. A real mistake leaves a musician without knowing “where to go.” Pianist Herbie Hancock has reported a seeming mistake Miles Davis cleaned up for him, for them, for the audience:

The music was building, the audience was right there with us, and at the peak of Miles’ solo on “So What” I played a really wrong chord. Miles took a breath and played a phrase that made my chord right. Miles didn’t hear it as wrong, but instead as something that happened. (in Eskow, 2002)

By this account, Hancock’s mistake was not a mistake for Miles Davis, but just “something that happened,” another in a continuous stream of musical events for the musician to react to

and bring to order. A save rebuilds connections (across seconds of time and dozens of notes) in relation to both a further past and a not yet patterned sequence of notes. A save is a learning moment for artists who challenge themselves with problems.

## A take, a *mis-take*, and a save

*Working with Monk brought me close to a musical architect of the highest order.*

*I felt I learned from him in every way—through the senses, theoretically, technically.*

*I would talk to Monk about musical problems, and he would sit at the piano and show me the answers just by playing them.*

John Coltrane (1960)

Along with Charlie Parker and Dizzy Gillespie, Monk was in New York for the start of bebop—a 1940's jazz movement marked by great experimentation, both tonal and rhythmic: tonal, "less symmetrical, more chromatic (that is, drew on all twelve notes of the octave)" (Szwed, 2001: 164); and rhythmic, seemingly "erratic" with "staggered, unusual use of silences... along with offbeat accents and sudden shifts in speed" (pp. 165-166). Monk pushed bebop perhaps further than anyone. Consider John Szwed's description of Monk in 1948 playing behind vibraphone master Milt Jackson's bluesy lead on the song "Misterioso" (not the album by the same title):

A repeated interval of a seventh... breaks up the flow of Jackson's solo, or restructures it, depending on how you hear it. Monk's solo on the other hand is shocking in its resistance to the logic of conventional views. Phrases seem to end on the wrong note, the intervals he chooses sound wrong, he seems to fall behind at one point, and he repeatedly sounds crashing seconds. Then a return to the melody, this time with only Jackson playing it, while Monk drops unpredictable single notes all over the keyboard, scattering the melody, turn-

ing a realistic painting into a pointalistic shocker... (p. 174)

Monk's style influenced most pianists who followed. His compositions, "Straight No Chaser," "Round Midnight," and "Well You Needn't," have become standards of the jazz canon. Monk brought adventure to any constant rhythmic or harmonic base: "instead of peacefully stating a key and a tempo, Monk sticks absolutely ambiguous chords in the most incomprehensible places" (De Wolfe, 1996: 61).

"In Walked Bud" was composed by Monk in 1947 as a new melody over the harmony of the hit tune, "Blue Skies" (Gourse, 1997: 29). Using a traditional jazz quartet configuration, Monk's recordings begin and end with a melody surrounding a middle of improvised saxophone, piano, bass, and drum solos. Monk's melody weaves choppy, almost harsh rhythmic textures together with rich melodic lines. The group plays the melody first, and then uses the chords as a framework for creating improvised rhythmic and melodic themes before returning to the melody at the end. The melody section (what jazz musicians call "the head") is 32 bars long and can be divided into four eight bar sections. "In Walked Bud" follows the standard jazz AABA form with four sections. The A section is played twice, then B (often called the "bridge"), and then A once more. This AABA structure remains a consistent chordal and harmonic structure over which the group improvises throughout all three recordings we analyzed. As is standard jazz practice, each performance begins and ends with a statement of the head.

We examined Monk's solo for evidence that he might be attempting to "save" a *mis-take*. In jazz, as in conversation, there is no exact calculus for what happens next—only well organized constraints and possibilities negotiated by participants *in situ*. Wanting to know what Monk was attempting to do is an endless prob-

lem for analysts, listeners, and participants alike. Monk himself probably could not be certain. We cannot solve this problem, but we can circumscribe it, literally, to write around it. Posterity has left us with three live recordings of Monk’s solo on “In Walked Bud,” from the albums *Live at the Five Spot* (1957), *Misterioso* (1958), and *San Francisco Holiday* (1959). Within these versions, we have a Rosetta Stone of performed jazz. They reveal less what Monk had in mind than the “whence and how” of his fingers in systematically various contexts. On each recording, he elaborates and reshapes part of his improvised solo in *nearly identical* ways. The *identical* shows how much structure and well-rehearsed constraint move with Monk from one performance to the next, and the *nearly* shows how much each performance is contingent and emergent.

The solo fragment consists of a series of licks (jazz parlance for a short phrase or motif) played over the first two A sections of the song (the first 16 bars). It is based on a series of repeated triplet figures terminating each time by referring to a note from the head. In all three performances, the fragment lasts through the first two A sections (see Figure 2). In the B section, the improvisations diverge from the initial pattern, recapitulating during the final A section.

Finding common motifs across solos enables us to establish an outline of what linguists call marked and unmarked pairs. Unmarked pairings are unremarkable, as expected, uneventful, without modification, and marked pairings are different, in need of comment, and

modified. The first and third recordings (1957, 1959) are unmarked and offer a patterned contrast set for the analysis of the second recording (1958). The second recording carries the apparent mistake – likely it was a surprise to listeners, and perhaps to Monk – but what makes it marked are the notes that follow the mistake and make it a *mis-take*. Together, the three versions of the theme, and the responses to how they were played, provide an analytic baseline, if not for identifying wrong notes, then at least for highlighting the conditions for their occurrence and, more importantly, their transformation.

The first and third lines of Figure 3 offer transcriptions of the unmarked performances (beginning at 4:41 on *San Francisco Holiday* and 7:32 on *Live at the Five Spot*). The theme lasts for approximately 18 seconds. The transcripts cover the 16 measures of the first two A sections, each containing four iterations of a lick. In the transcript, each lick is numbered (*L1* to *L8*).

Figure 3 shows that the licks on the unmarked recordings (1957, 1959) begin and conclude at the same time. These recordings add context to the middle performance (1958) with the marked note—the *mis-take*—and its emergence and repair. The second and marked theme is made more complex when Monk strikes the *mis-take* that falls outside the pattern of the unmarked theme during the sixth lick (Figure 3, measure 11). The errant note makes the 1958 recording less identical to the other two; the *nearly* in the *nearly identical* threatens to run amok. Monk uses the tension

Figure 2. Diagram of each recording. *H* indicates the head (melody). Each box represents a cycle of the AABA structure. *X* marks the solos transcribed in Figure 3.

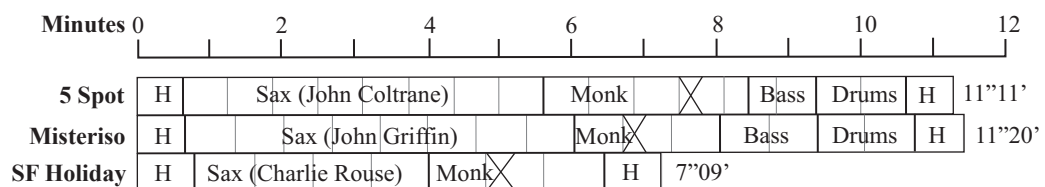


Figure 3. “In Walked Bud” (three takes, played by Thelonious Monk)

The musical score is organized into six systems, each containing three staves for different takes: I. Five Spot, II. SF Holiday, and III. Misterioso. The key signature is B-flat major (two flats) and the time signature is 4/4. The score is annotated with various musical features:

- System 1:** Lick<sup>1</sup> and L<sup>2</sup> are marked above the first two staves.
- System 2:** L<sup>1</sup> and L<sup>2</sup> are marked above the first two staves. The annotation "displaced second lick" is placed below the third staff.
- System 3:** L<sup>3</sup> and L<sup>4</sup> are marked above the first two staves. The annotation "no third lick" is placed below the third staff.
- System 4:** L<sup>5</sup> and L<sup>6</sup> are marked above the first two staves. The annotation "indicates dissonant note" points to a note in the third staff, with "The mistake" written below it.
- System 5:** L<sup>7</sup> and L<sup>8</sup> are marked above the first two staves.

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and dissonance of the *mis-take* to develop what follows: he “saves” the mis-take by introducing half-step dissonance (minor seconds chords consisting of two notes played a half-

step apart) that alter the rhythm of the pattern and echo the dissonance that looms from Monk’s original mis-take. The use of half-step dissonance plays a dominant role from lick six

through the end of the solo. Monk is known for his use of minor seconds, perhaps in an effort to emancipate himself from the rigid pitch class choices imposed by a fixed-pitch instrument, such as the piano, and in an attempt to emulate the continuous pitch choices available on wind instruments such as the saxophone and the human voice. We offer now a more systematic account of the structure of both the unmarked and unmarked themes.

**The unmarked theme:** The most apparent similarity in the two performances is the symmetry of rhythmic couplets. In both takes, the starting point of each lick is identical. L1, L3, L5, and L7 start on the first beat of the first bar, and are coupled with L2, L4, and L6, respectively, which begin on the third beat of the following bar. Each couplet is followed by a bar of rest, as the drums and bass mark time (measure four, eight, twelve, and sixteen). One exception, where the lick is displaced slightly in time and the notes changed can be seen in L8.

Along with rhythmic symmetry, the unmarked themes share tonal and melodic qualities. Some licks employ slightly different rhythms, but all begin with a short triplet figure. At L1 Monk plays a descending three-note pattern twice. Each of these patterns is composed of the same three notes (A flat, G, and F). While these triplet patterns are not always played in exactly the same way, the first two beats of Monk's licks never stray from these three notes.

**The marked or more complex theme:** Figure 3 also offers a transcription of the marked performance from 1958. Similar to the other two in its basic melodic and rhythmic structure, the most apparent difference is the divergent note in L6 (on the *Misterioso* recording, the transcription begins at 6:53, and the *mis-take* happens at 7:04). The triplet figure is shifted up a whole-step on the keyboard. Instead of playing A flat at the start of the triplet, Monk plays a B flat.

It breaks the triplet pattern found throughout all the themes, and the intriguing changes that both precede and follow the irregular note make it worthy of analysis.

We begin with what precedes the *mis-take* in Figure 3. Monk's *mis-take* begins long before the offending note, just as it ends long after it. L1 begins on the first beat of the A section, exactly the same point as before. After that, a difference emerges. L2 is played two beats later than before. That is, Monk waits two beats and shifts the start of L2 to the third bar. The changes further diverge from the unmarked themes at the end of L2. Instead of playing a single descending eighth note figure at the end of the lick, he prolongs the ending of L2 by repeating himself (twice, using different notes). With the delay in L2, he starts L4 before it begins in the two unmarked themes. Instead of playing L3, as per the unmarked themes, he plays L4 earlier. The first A section closes earlier, with the consequence that there are two additional beats of silence in the piano part before L5 (measures 7 and 8). The rhythmic irregularities alter the structure of the solo and the starting point of each lick, and results in a three lick first A section – a clear departure from the four-lick A section of the unmarked theme.

The second phrase returns to the structure of the unmarked themes. Monk begins L5 on the first beat of the measure. At the end of the lick, where the eighth note interval is played, he introduces a half-step dissonance (when two notes a half step apart are played together). Just before he plays the second to the last note of L5 (see boxed note following L5), he strikes the note a half-step below to create a more dissonant sound (this is often called a 'grace note' or 'blue note'). This sets up L6 in which the *mis-take* occurs. During the second descending triplet of L6, Monk strikes a jarring note a whole-step above all other notes in the pattern. In all variations, the first two beats of Monk's lick are limited

to three notes (A flat, G, and F). In L6 of the marked theme, Monk moves up a whole-step to begin the second descending triplet on a B-flat, a note he does not play in other iterations. For the first time listener, a whole step jump is a shocking deviation. Not only does the *mis-take* break the pattern set by previous iterations, it is made more prominent by the sharp accent.

Following the *mis-take*, Monk plays another half-step chord to recreate the dissonance and then an even more extreme dissonant half-step chord in the second to last note of L6 (see second boxed note in L6). Instead of playing a half-step chord as just prior to and following the *mis-take*, Monk plays a minor second chord, which consists of the melody note and the note a half-step below. By playing the two notes as a chord, Monk creates an even stronger dissonance.

Following L6, Monk continues to develop and expand the half-step dissonance. In L7, he strikes two more grace notes located a half step below the note in the pattern (see the two boxed notes in L7). Finally, in L8, Monk substitutes dissonant half-step chords for the descending triplet lines he normally plays. Instead of playing the three notes separately, he clumps the first two notes together into a dissonant chord and then plays the third note alone. He returns to the dissonant sound in the third beat of the lick (see the third boxed note at L8) by repeating the half-step chord one last time and then completes L8 as in the two unmarked themes. The general pattern that emerges after the mistake creates a new environment enabling the hearer to locate the mistake as the beginning of a larger pattern that fuses the dissonance of the mistake with the existing melody. Monk creates a coordination of parts and a whole in which a future following a mistake has the opportunity to reshape the past preceding the mistake.

Following his *mis-take*, Monk does not continue the pattern set by the unmarked theme.

The jarring dissonance of the *mis-take* seems to reconstruct his improvisational plan; it prompts him to change the normal pattern by developing new melodic ideas. The *mis-take* becomes not so much a momentary interruption of his improvisational imagination as an occasion for a new take, a reconceptualization of where he is going melodically and harmonically, one that swallows the *mis-take* by developing the harsh dissonance of the wrong note. In L7 and L8, Monk increases the amount of tension and dissonance and transforms the *mis-take* into a seemingly intentional aspect of the dissonant pattern.

## The Sequential Organization of Activities

*[The] vital part is thinking while you're moving,  
and once the momentum has been started,*

*I don't like to break it. I'm concerned with the  
continuity in motion...*

*If you're not affected and influenced by your own  
notes when*

*you improvise, then you're missing the whole es-  
sential point.*

Saxophonist Lee Konitz  
(in Berliner, 1994: 193)

Timing is a primary consideration in all human activities, but lived time, time as it is handled by people in their dealings with each other and the world, is not central enough to mainstream social and behavioral science inquiries. Dewey's metaphysics of transiency offers a definition of time operated on and experienced by people living lives: "the organized and organizing medium of the rhythmic ebb and flow of expectant impulse, forward and retracted movement, resistance and suspense, with fulfillment and consummation" (1934: 23). By contrast, in the social sciences, time is simple duration; it marks off intervals before and after a particular event. By a methodologically mandated metaphysics of assumed

stability, entities are frozen in time; they are what they are, they occur when they occur, and then they are correlated, networked, shown to be caused, and even explained. Their play in time—not just when they might happen, but by the play of what “expectant impulse... [and] suspense” they happen—is rarely described or theorized.<sup>8</sup>

In this paper, we have analyzed a single piano note – a seeming entity – and shown how its quality is sequentially dependent moment to moment on its “whence and how.” The note comes from a specific whence and builds to a specific whither, and the summing up and carrying forward – the *sumhow* – gets done with dazzling speed. A single note cannot make a song. A single muscle cannot make a moving finger. All movement and performance demand coordination of a past and future with the circumstances of moment. *Sumhow* is the primal take of engagement with the world.

The terms organism and environment do not gloss separate realities only occasionally brought into interaction in varying proportions. More than a century ago, Dewey added timing and reflexivity—what he called circuitry—to the analytically limiting divide between stimulus and response, between organism and environment. For Dewey, they relentlessly conduct activities with each other. Mutual adjustment and learning are constant and necessary. Stimulus and response live in ongoing entanglements that render a stimulus only in anticipation of a response and a response only in anticipation of a next stimulus. The insight came early to Dewey, but when he wrote the

following key text,<sup>9</sup> he could have been writing for Monk playing decades later:

The distinction of sensation and movement as stimulus and response respectively is not a distinction which can be regarded as descriptive of anything which holds of psychical events or existences as such. The reflex arc theory... gives us literally an arc, instead of a circuit; and not giving us the circuit of which it is an arc, does not enable us to place, to centre, the arc. This arc, again, falls apart into two separate existences having to be either mechanically or externally adjusted to each other. (1896: 147)

With a change of only a few words, we can inscribe Dewey’s words on Monk’s *mis-take*:

<sup>9</sup> We borrow and manipulate a text from “The reflex arc in psychology” (Dewey, 1896). Perhaps Dewey’s most popular essay, it had great impact on psychology and philosophy early in the century and again at the start of the cognitive revolution in the 1950s (see Miller, Galanter, and Pribram, 1960). The text could appear in any Dewey book. He would often introduce the strengths and weakness of both sides of a sensible, but misleading dichotomy (like stimulus and response), then critique their easy opposition and the world that drives them asunder, and end by proposing a way to move beyond, to a more inclusive circuit of which the two sides are a part. Theory/practice, nature/culture, individual/social, and ideal/real take a beating in most of his writings, but he would tackle new dualisms for each problem addressed; see *Democracy and Education* (1916a) for 38 troublesome pairings and, for a commentary, Elizabeth Flower’s “Dewey: Battling against Dualisms” (in Flower and Murphey, 1977). Substituting vocabulary from other realms of activity into our borrowed text allows us to approximate Dewey’s view on still more dichotomies.

European traditions were voicing the same complaint. Lev Vytogsky, for example, critiqued any “attempt to occupy a middle ground between two extreme perspectives,” because it “fails to gain a position above the other two and assumes a position between them. To the extent that it overcomes the extremes of one perspective, it assumes the extremes of the other. It rises above the first false theory by yielding to some extent to a second which is equally false. It overcomes the extremes of the second by yielding to the first. This type of theory has an inherent duality. By occupying a position between two contradictory perspectives, it leads to a certain unification of these points of view” (1934: 197).

<sup>8</sup> Fifty years ago, paying analytic attention to time distinguished ethnomethodology from mainstream sociology and generative grammar (items in process) from stochastic linguistics (items in arrangement), but most schools of social research have proceeded as if things could be studied out of time: in isolation or in simple combination.

The distinction of *planning* and *playing* as stimulus and response respectively is not a distinction which can be regarded as descriptive of anything which holds of psychical events or existences as such. A *cognitive learning theory*<sup>10</sup>... gives us literally a *plan and performance errors*, instead of a *circuit and its mis-takes and repairs*; and not giving us the circuit of which it is a *momentary plan*, does not enable us to *coordinate*, to *time*, the *relations among the notes*. This *planning and playing*, again, falls apart into two separate existences having to be either mechanically or externally adjusted to each other. (1896: 147; alterations in italics)

By shifting the focus from plans and mistakes to takes, *mis-takes*, and saves, we can describe musical activities as participants recognize, identify, and use them to organize themselves. This significant difference stresses the organism in action without a resting place between stimulus and response. Past and future push and pull on each other—Dewey’s “forward and retracted movement” – without relief. This is as true of talk as music. In conversational analysis, turns at talk are shown to be “recipient designed,” “mutually constituted,” and held together by self and other repair (Sacks, 1990; Schegloff, 1992, 1996). There is no immaculate conception available to speakers, no immaculate reception available to listeners. Planning to do anything in particular – in conversation or in a jazz solo – brings risk and requires relentless attention to repair. Cast a suspicious eye on plans and mistakes as autonomous phenomena.

10 Cognitive theory is often a latter-day reflex arc theory, albeit with stimulus and response separated by a mental way-station (although see Footnote iv). In a predefined task, stimuli still show up first and responses second. Building models of decision-making minds inside S-R sequences does not break down the conceptual distance between organism and environment, a distance that might systematically misrepresent how organism-environment relations work in real time. Dewey’s reflexive circuitry of efference and afference (stimulus an anticipation of response and response an anticipation of stimulus) remains methodologically unavailable to experimental psychologies that rely on a predefined task.

They occur, but only in time, in relation to visible and hearable other events, reflexively tied to what has happened, what is happening, and what is about to happen.

If coordination with emerging environments partially of our own making is the primal task, and if precariousness is a constant opportunity, what might learning and education be? Novelist (and trumpeter), Ralph Ellison, insists that “dance halls and jam sessions along with recordings are the true academy for jazz” and that teaching it “formally might well have imposed stability upon a developing form” (2001: 23).<sup>11</sup> Most learning happens *outside* school. Languages acquire their native speakers without school, technological revolutions acquire their engineers by an invisible extracurricular hand, and most art forms take root in cracks between formal institutions. Schools are organized to miss the edgy, the up for grabs, the what’s happening now, and the what might happen tomorrow. To the extent that schools document the very mistakes they repress and subsequently use them to sort students institutionally, the very place that promises learning instead produces also constant and often debilitating failure (see Varenne and McDermott, 1998).

For Dewey, and for the jazz community, learning is ubiquitous and continuous. This would be a non-controversial position if learning were not taken, and mistaken, to be a thing – an entity, and a measurable one – rather than something people must do

11 On jazz as a teaching/learning community, see Berliner (1994, especially Chapters 2-3). Cornell West (2004) sums up and carries on:

... all foundational figures of the blues and jazz heritage... created and enacted a profound democratic *paideia*—a cultivation of critical citizenry—in the midst of the darkness of America. If the blues is the struggle against pain for transcendence, then, as Duke Ellington proclaimed, “jazz is freedom.” (pp. 91-2)

On appreciating the complex place of music in a distant community, see Ebron’s (2002) careful exposition.

constantly in the course of getting their lives to “sum up and carry forward.” Progressive thinking – whether in education or jazz – relies on accounts of learning as a point of reorganization in the real-time pull and push of past and future. Learning is best understood as more in the moment, than in a stockpile of competencies. Learning is less a state of mastery than a constant process of disruption and renovation, the momentary product, as Dewey said, of “the exercise of powers needed to meet the demands of the activity in operation,” operation after operation (1937: 238).<sup>12</sup>

Isolated and recorded mistakes rarely lead to “relationships that sum up and carry forward.” They rarely reshape the flow of activities. In schools, students are too often tracked and diagnosed and spend their days arranging not getting caught not knowing something. If schools catch and record mistakes and use them to sort kids institutionally, the very place that promises learning produces also constant and often debilitating failure.<sup>13</sup>

We rewrote Dewey’s argument for a circuitry connecting stimulus and response to critique the division between planning and

playing, and we can rewrite the same text to critique the duality of learning and doing:

The distinction of *learning* and *doing* as stimulus and response respectively is not a distinction which can be regarded as descriptive of anything which holds of psychological events or existences as such. *A cognitive theory...* gives us literally a *learner*, instead of a circuit of *engagements in real time*; and not giving us the circuit of which it is a *learner*, does not enable us to *situate*, to *nurture*, the *learner*. This *learner*, again, falls apart into two separate existences having to be either mechanically or externally adjusted to each other. (1896: 147; alterations in italics)

Children and teachers sometimes know better than to separate learning from doing, but rarely have means to alter their situation, the very situation schools have created with static ideas about plans and mistakes. Jazz musicians know better than to separate learning from doing, and for a few moments in 1958, Monk did some things that organized an environment – a circuit of engagements – in which learning could happen: nothing for sure, not in the stockpile sense of learning, but possibly learning in process for Monk, or his musicians, or their listeners decades later. We can use jazz to rework analytic instincts around sequence and learning with an articulation of engagements that celebrate the possibility of learning. Dewey’s project was to complicate the divisions between stimulus and response, between plan and play, between doing and learning, and it is fun to think that, in a verbally vague and musically precise way, it was Monk’s project as well.

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This paper began when Levitin analyzed for his class at Stanford University a wrong note played by McCoy Tyner. McDermott was a student in that class and became excited by

12 Dewey complained that for Aristotle, and for contemporary school based theories, “learning meant *growth* of knowledge, and growth belongs in the region of becoming, change, and hence is inferior to *possession* of knowledge” (1920: 31; italics in the original). For Dewey, learning also means growth in the context of becoming and change, but this makes learning a constant and in no way an inferior state.

13 For improvisation as a complex coordinated social practice in which *mis-takes* are organized for the good of all, see Powell (2005) on taiko drumming and Thi-beault’s (2007) contrastive analysis of learning by eye (violin) and ear (fiddle) ☒ the same instrument named twice for its bifurcated social functions—in and out of a music school. Attention to mistakes can keep a learner from hearing the work. A better alternative is to steer the performer to take “his or her lead from the work. The work, so to speak, also speaks, and at times it is the artist who listens” (Eisner 2002: 77-78). Mistakes are not a focus among Balinese musicians (McPhee, 1955).

similarities in the analysis of mistakes in jazz and repair in social interaction. Powell and Naoki Ueno aided the analysis of Tyner's mistake, and Fred Erickson gave valuable advice. Raley introduced Monk's wrong note as a more complex object of analysis. Klemp transcribed and wrote a detailed descriptions of three Monk recordings, and Paul Berliner discussed them with us. Thibeault created a second transcript and transformed the visuals. McDermott carried the final voice, but everyone contributed thinking and editing. Nick Fiori, Reed Stevens, and Scott Stonington offered great comments. Eric Bredo, Shelley Goldman and Morten Nissen pushed us on learning. Roy Pea supplied the nice quotes from Monk and Coltrane.

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