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How Hooker found his boogie: a rhythmic analysis of a classic groove

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Abstract

This article closely analyses the rhythmic components in John Lee Hooker's boogie. We show how Hooker recasts a signature riff from a ternary to a binary beat subdivision, paving the way for the triple-to-duple shift that characterised mid-century American popular music. Further, we attribute the boogie's 'hypnotic' feel to two psychoacoustic phenomena: stream segregation and temporal order misjudgement. Stream segregation occurs when the musical surface is divided by the listener into two or more auditory entities (streams), usually as a result of timbral and registral contrasts. In Hooker's case, these contrasts occur between the guitar groove's downbeats and upbeats, whose extreme proximity also blurs their temporal order. These expressive effects are complemented by global and gradual accelerandos that envelop Hooker's early performances.

Introduction

John Lee Hooker's recording of 'Boogie Chillen' in November 1948 stands out as one of the greatest, and most unlikely, hits in the history of blues music. Composers of popular songs often claim that a 'hook' is essential to a successful recording, so if 'Boogie Chillen' had a hook, surely it was a rhythmic one.¹ The song's melodic and harmonic content is practically nil. It is mostly an up-tempo talking blues, spoken or semi-spoken in a type of blues recitative. Nor did Hooker rely on clever arrangements and slick studio effects – so common during these post-war years – to secure a hit song. He performed solo, with only his guitar and stomping foot for accompaniment. Yet this stark, idiosyncratic song proved to be a runaway hit. 'Boogie Chillen' climbed to the top spot in *Billboard's* R&B charts, and propelled Hooker from obscurity to fame almost overnight. It is hard to imagine the lyrics as the source of the song's appeal; they are simple, almost simple-minded, little more than a series of short declamatory sentences such as:

I heard everybody talking about . . . the Henry Swing Club . . .
I decided I'd drop in there that night . . . and when I got there . . .
[Sung] I said yes, people . . . yes, they was really having a ball . . .
[Spoken] Yes, I know . . . [Spoken rapidly] Boogie Chillen!

The song, in fact, is more a loose improvisation, a stream-of-consciousness monologue let loose over a repetitive guitar groove. This groove, or what Hooker

called his 'boogie', proved to be so irresistible that it eventually formed the basis of more than one third of his early recorded output. Why did the boogie hold such appeal for audiences, who purchased the recordings of 'Boogie Chillen' and its many knock-offs and imitations?

Blues historians have described Hooker's boogie as a 'rhythmic drone, twisting and turning the sound' (Oakley 1997, p. 220), a 'jumping, polyrhythmic groove' (Murray 2002, p. 127) that can 'rattle your bones' (Davis 1995, p. 218). Equally colourful is the rhetoric of popular magazine writers. According to *Downbeat* magazine's obituary, Hooker's boogie had a 'soulful, grinding edge. Once Hooker locked into a boogie . . . the most powerful hurricane could not knock him out of his groove' (Koransky 2001, p. 16). To sound like him, advises *Guitar Magazine*, try 'dispersing with everything but the upbeats [to] get unadulterated, driving syncopation' (Ellis 2005, p. 110).

Hooker himself had difficulty in describing the origins of his boogie. 'It's just there. I can't explain it. And it just comes out' (O'Neal and van Singel 2002, p. 204). When pressed, he would sometimes cite his step-father Will Moore, a guitarist who played in the Clarksdale, Mississippi area before World War II, as the originator of this distinctive boogie rhythm. But Moore is a puzzling figure who does not figure in any of the oral histories related to the Delta blues, making it difficult to trace specific linkages between Hooker's own style of playing and the Delta tradition.²

Although the early history of Hooker's sound may elude us, this paper hopes to unravel some of his boogie's visceral and hypnotic aspects by focusing on its rhythmic properties. The blues literature has allocated limited space to the subject of rhythm, but a salient feature that has received some attention is the irregularity of metre and hypermetre in the music of bluesmen Blind Lemon Jefferson (Evans 2000) and Robert Johnson (Ford 1998). Tilton's (1994, pp. 144–52) insightful rhythmic analyses of 'downhome' blues cover some of the topics addressed in this paper, including tempo fluctuation and the interplay of duple and triple rhythms. This last topic is central to Stewart (2000), who lays out the rhythmic transformation of popular music in America as a transition from shuffle ('swing') to duple ('even') rhythms. Our aim here will be to focus on only a fraction of the rhythmic components that make up Hooker's boogie, all the while recognising that his boogie is greater than the sum of its parts. We shall undoubtedly overlook important elements, unintentionally in unforeseen ways which we hope other writers will address, and intentionally in several ways, one of which requires mention. Our analysis is restricted to the first four years of Hooker's recorded output (Detroit 1948 to 1951), mainly because this period finds his boogie in its most original and bare form.

Two tempo regions

Prior to delving into the boogie's rhythmic detail, it will be helpful to gain a bird's eye view of Hooker's overall rhythmic landscape by examining his choice of song tempos. These span a wide spectrum of metronome markings ranging roughly from 60 to 220 beats per minute – a testament to the blues' 'enormous potential for tempo transformation' (Kubik 1999, p. 86). In the middle of this range, however, there is a narrow strip of unused tempo markings: of the 180-plus songs that Hooker recorded between 1948 and 1951, none is faster than 110 and slower than 130 beats per minute.³ In other words, there is a gap between these two metronome values that provides a clear-cut separation between the slow and up-tempo songs. This divide allows us to categorise

Hooker's early oeuvre according to two tempo regions, which we will call *blues* (60–110 bpm) and *boogie* (130–220 bpm). The sizeable buffer zone between the two regions underscores their stylistic differences. A blues may be as fast as 110 bpm; speed it up further and its inherent rhythmic makeup becomes – to Hooker's ears, we must presume – unacceptably agitated. Likewise, a boogie begins to sound languid once it dips below 130 bpm, the tempo of Hooker's slowest unaccompanied boogie, 'Talkin' Boogie'. (This hypothesis can be tested by artificially slowing the song's tempo to 120 bpm with a time-expansion algorithm that retains the original pitch level, an operation that disintegrates the boogie's rhythmic feel.)

That Hooker's boogie should comprise the fast-tempo category is obvious but not trivial. Fast tempos are generally associated with two characteristics not readily attributable to the slower paced blues: dancing and physical restlessness – which may explain why younger people prefer fast tempos (LeBlanc *et al.* 1988) and why, in a 1968 *Downbeat* interview, Hooker explained that his 'jump' style was intended 'for the kids' (quoted in Evans 1982, p. 84).⁴ Besides raw speed, a distinguishing feature between the blues and boogie tempos relates to the 'free' speech-like rhythms. In Hooker's blues, these brief passages usually consist of a unison (almost heterophonic) melody line shared by the guitar and voice, during which the otherwise unambiguous beat often evaporates momentarily. This rhythmic device occurs only within the blues tempo region (although not in every song). Of course, it makes sense that these free rhythms should be absent from the boogie, since their unpredictability would jar the groove- and dance-inducing regularity of up-tempo music. Even though the spoken and sung passages in boogies do exhibit considerable rhythmic freedom, they float above a steady pulse without impinging upon it.

Duplets, triplets, and the mutable isoriff

With the exception of the free rhythms mentioned above, the principal organising force in Hooker's blues and boogies is the triple subdivision of the beat, sometimes completely filled in and sometimes with a tacit middle subdivision that produces a long-short rhythm. 12/8 is generally recognised as the *de facto* metre of blues music,⁵ although many exceptions can be cited. For instance, Charley Patton's first country blues recordings from 1929 omit the triplet entirely (Stewart 2000); 12/8 metre does not figure prominently until his final recordings in 1934. Blind Lemon Jefferson's introduction to his (1927) 'Matchbox Blues' makes explicit use of even quavers; the mostly-triplet feel that ensues in the accompaniment is frequently warped into moments of duple subdivisions. Robert Johnson's (1936) 'Cross Road Blues' also shifts back and forth between two's and three's, although the governing metre is clearly compound (as in all his other slow blues from that decade). Sometimes, Johnson's rhythm undergoes a gradual microrhythmic morphing from triple to duple and back, as in the alternate take of 'Ramblin' On My Mind' (Benadon 2007).⁶ And the first-ever recorded vocal blues, Mamie Smith's (1920) 'Crazy Blues', inhabits the metrically liquid zone of duple-triple ambiguity typical of jazz. Thus, we are reminded that within the (nominally) duple/triple divide, there exists a rich amalgam of beat subdivisions.

We also find exceptions to ternary subdivision in Hooker's music. Within the blues tempo region, instances of duple subdivision are rare, and they tend to be microrhythmically derived rather than metrical, as in Robert Johnson's example above. In other words, Hooker sometimes tones down the 2-to-1 ratio of the ternary

The image shows a musical score for guitar and foot. The guitar part is in treble clef, key signature of one sharp (F#), and 4/4 time. The tempo is marked as 185. The foot part is in bass clef. The guitar line consists of eighth notes, with a circled note and a note below it. Above the first two notes of the guitar line are brackets labeled 'a' and 'b'. Below the first two foot beats are brackets labeled 'x' and 'y'. A note 'gtr slide is always delayed' points to the circled note in the guitar line. The word 'sim.' is written above the guitar line. The score is divided into two systems.

Example 1. 'Boogie Awhile' (0:58–1:03).

long-short pattern by evening out the durations of the two notes, a feature of jazz rhythm (Friberg and Sundström 2002; Benadon 2006) and possibly of rhythm production in general (Collier and Wright 1995).

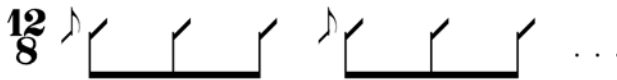
The boogie also exhibits the expected microrhythmic variance typical of long-short pairs. For instance, in 'Boogie Awhile' (Example 1), scarcely any beats break down cleanly into a triplet – the long-short ratio being frequently skewed in favour of the second note in the pair – so much so, that at times the durations are unambiguously even. More significantly, Hooker challenges many assumptions about musical logic by producing a rhythm that sounds long-short no matter how it is approached – upbeats to beats or *vice versa*. Normally, if a rhythm's beat/upbeat pattern is long-short, then its upbeat/beat pattern should be the reverse, short-long. But not here. The duration ratios for Example 1 are shown in Table 1. Values near 2.0 represent a ternary long-short 2-to-1 ratio between two adjacent notes, values near 1.0 represent an even 1-to-1 ratio (two equidurational quavers), and intermediate values (such as 1.5) denote evened-out long-short patterns. Two concurrent relationships are at play: beat/upbeat ($x:y$) and upbeat/beat ($a:b$) pairs. The foot acts as a metronome that provides the beats; they are subdivided by the guitar's upbeats. These $x:y$ ratios are usually tripleted (shown in bold type), but enough of them are not to preclude a tidy triplet feel from forming. Still, the overall feel produced by foot beats and guitar upbeats is long-short (x greater than y), as expected in compound time. But the guitar line in isolation reveals a puzzling piece of evidence. The $a:b$ ratio measures the guitar's upbeats (a) against its – rather than the foot's – beat attacks (b). To agree with the long-short $x:y$ ratio, the $a:b$ ratio should be short-long and therefore less than 1.0 (a short upbeat followed by a longer duration on the beat). In other words, the value of a should be smaller than the value of b . However, in this case the guitar follows the opposite route: a is almost always longer than b , yielding $a:b$ ratio values above 1.0. This occurs because the downward guitar slides lead to constant delays with respect to the foot. The result is a kaleidoscopic rhythm consisting predominantly of long-short patterns regardless of whether one listens to pairs of beats/upbeats ($x:y$) or upbeats/beats ($a:b$).

Beyond microrhythm, duple subdivision often plays a central and explicit role, as with the transformed version of the motive shown in Example 2(a). Commonly referred to as the Elmore James riff (because he featured it on 'Dust My Broom' in

Table 1. Durational ratios for 'Boogie Awhile' (see Example 1). The $x:y$ ratio measures beats/upbeats between foot and guitar; the $a:b$ ratio measures upbeats/beats in the guitar. Values above 1.0 denote long-short patterns.

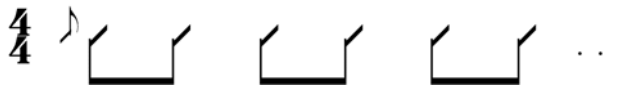
Beat	Measure 1		Measure 2		Measure 3		Measure 4	
	$x:y$	$a:b$	$x:y$	$a:b$	$x:y$	$a:b$	$x:y$	$a:b$
1	1.6		1.2		1.1		1.5	
2	2.0	1.4	1.9	0.9	1.1	1.0	1.9	1.1
3	1.7		1.3		0.8		1.9	
4	2.0	1.2	1.7	1.3	2.0	1.3	2.1	1.2

blues



Example 2(a). Triple isoriff.

boogie



Example 2(b). Duple isoriff.

1951), this motive was in fact used rather extensively more than a decade earlier by Robert Johnson.⁷ This riff, which we will refer to as the *isoriff* because it is isochronous and 'isophonic' (a single note or chord comprised of pitches from the tonic triad or tonic dominant), appears in almost all of Hooker's Detroit recordings. Even though the isoriff is inherently a triplet, Hooker's boogie often converts it into a duple construct, as shown in Example 2(b). The reason for this might be purely practical, since maintaining the speed of the triplet at a boogie tempo may have translated into a technical feat beyond Hooker's reach.⁸ Instead of abandoning the isoriff during the fast songs, Hooker essentially retains the motive's basic *physical* speed, allowing it to fit comfortably into a binary rather than ternary subdivision of the beat. In a sense, the slower note value compensates for the faster tempo. As mentioned previously, the spontaneous alternation of two- and three-way beat subdivisions is hardly exclusive to Hooker's boogie. But the importance of his duple isoriff should not be understated, for it lies at the heart of what Stewart (2000, p. 296) calls a 'sweeping metric shift in popular music that began in the 1950s'. He notes that as the decades passed, 'the underlying rhythms of American popular music underwent a basic, yet generally unacknowledged transition from triplet or shuffle feel (12/8) to even or straight eighth notes (8/8)' (*ibid.*, p. 293).

Figure 1 illustrates the changing note values that comprise the isoriff as it migrates across tempos.⁹ Notice how the isoriff operates within well-defined temporal boundaries. Its notes are about 300 milliseconds at their slowest and 150 ms at their fastest – regardless of their actual music notation values. No boogie contains

triplet-quaver isoriffs because they would be too fast (less than 150 ms per note). Conversely, quaver isoriffs are too slow (more than 300 ms) for the blues and are therefore absent from that tempo region. Hence, the isoriff can take on either form provided it lies within the rather narrow temporal band of 150–300 ms. It is interesting to note how the quaver (■ in the graph) dovetails roughly where the trendline of the triplet-quaver (◆) trails off, providing a link across the blues/boogie tempo gap mentioned earlier. The graph also shows that at sufficiently fast tempos, the isoriff can take the form of crotchet triplets (●), or even crotchets (×) if the tempo is faster still. This metrical fluidity suggests that the isoriff's character is defined more by the raw physicality of successive strokes than by the actual note values, which result from accommodating the riff's technical demands to the given tempo. Thus, a 194 ms-per-note isoriff can comprise quavers at 156 bpm (as in 'Good Business') or crotchet triplets at 206 bpm (as in 'Devil's Jump', not shown). Some tempos make it possible for more than one type of isoriff to appear within the same song, as in 'My Baby's Got Something', 'Talkin' Boogie', and 'Goin' Mad Blues'. At times, the boogie begins with a fanfare-like isoriff that is so metrically nondescript that the tempo remains a mystery until the isoriff subsides and the foot stomping joins in. For instance, the opening isoriff of 'She Left Me By Myself' can be heard as being made up of triplets (if this were a 92 bpm blues) or quavers (a 'slow' 140 bpm boogie); instead, the entrance of Hooker's foot, which will tap at a rate of 184 times per minute, reveals the thumb downstrokes to have been crotchet triplets. A similar guessing game opens 'Boogie Chillen 2 (Jump Chillen)', where the isoriff accelerates as much as it disorients. In 'Boogie Chillen 2 (I Gotta Be Comin' Baby)', the metric relationship between foot-stomp and isoriff is so tenuous – likely a result of Hooker changing his mind as to the song's appropriate tempo – that one must wait another minute-and-half for the return of the isoriff to confirm the crotchet triplet guess as correct. The isoriff, then, is a *metrically malleable* figure par excellence (London 2004). Metric malleability occurs with melodic or rhythmic figures that can be interpreted in more than one metric context, although performers usually disambiguate these kinds of patterns with such cues as expressive timing and dynamics (London 2004, p. 79). In the isoriff's case, the disambiguating detail consists of a grace note-like slide or hammer-on that Hooker sometimes injects every three or six strokes if the isoriff is a triplet or every eight if it is a duplet.

Even though a detailed analysis of blues guitar technique is beyond the scope of this article, our discussion of the isoriff leads naturally to some brief observations about Hooker's right hand approach. There are several versions of the isoriff, ranging from single-string picking to multiple-string chord bashing. Two of the isoriff types employ the thumb only, either to pick a single-note rhythm in the low or middle register, or to brush full chords with thumb downstrokes. In another version of the isoriff, the thumb and index finger work together isorhythmically, with the thumb providing the chord's bass note and the index finger brushing two or three treble strings upstroke to complete the chord. Sometimes the thumb rests, leaving only the index or middle finger to brush upstroke dyads or triads in the treble register. According to Cohen's (1996) classification of blues picking styles and hand postures, Hooker's mixed approach to timekeeping places him in the 'utility-thumb' category, in contrast to the 'dead-thumb' and 'alternating-thumb' players, who confined the thumb to basic beat-keeping either on a single bass string or alternating between two low strings.¹⁰ More specifically, Cohen sees Hooker's boogie as a hybrid of utility- and dead-thumb approaches, 'a younger style' of the post-War era (*ibid.*, p. 472).

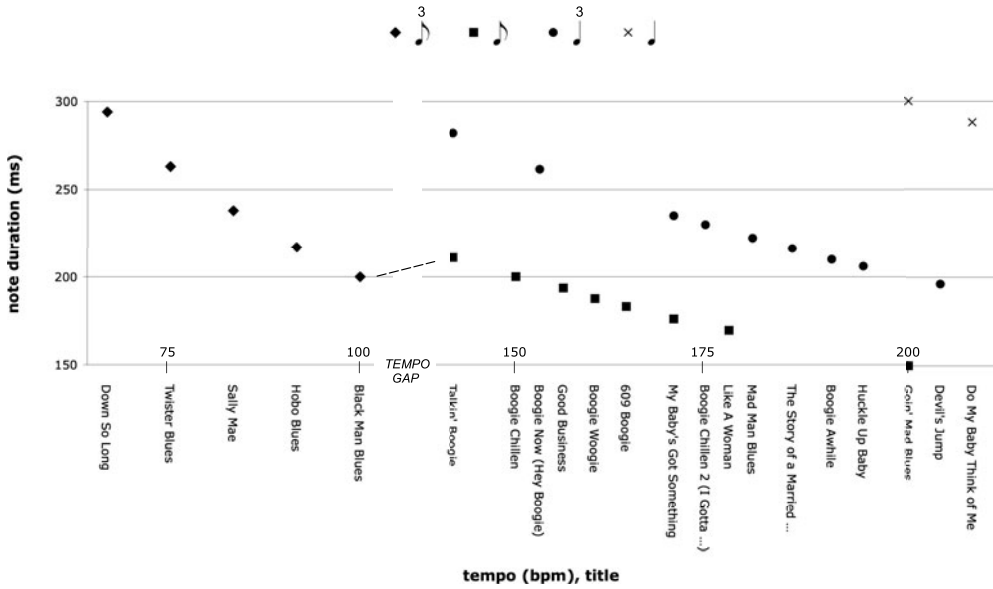


Figure 1. Isoriff note values at different tempos.

Hearing double

The underlying rhythmic engine of Hooker’s boogie is the perpetual cycle of alternating long beats and short upbeat. This pattern appears in many composite guises that include strumming, foot taps, muffled strings, picked monophonic lines, staccato chords, and even ‘loud’ rests, a term devised by London (2004, p. 87) to describe unexpected silences on strong beats. Iyer (2002) believes that long-short patterns are conducive to stream segregation, the phenomenon whereby the mind separates the auditory stimulus into two or more ‘auditory objects’ (Bregman 1990). Such rhythmic unevenness is also present in jazz, where the ‘swung’ eighth-note

facilitates the perception of higher level rhythmic structure. An immediate consequence of the swing feel is that it suggests the next level of hierarchical organization. In conventional terms, the swung eighth-note pairs are perceptually grouped into the larger regular interval, that is, the quarter note. If all subdivisions were performed with exactly the same duration, it would be more difficult to perceive the main beat. The lengthening of the first of two swung notes in a pair amounts to a durational accentuation of the beat. . . . The observation that swing enhances the perception of the tactus is no surprise, given its primary function in dance contexts. (Iyer 2002, pp. 404–5)

In Hooker’s boogie, the syncopation generated by the omnipresent upbeats is so prominently featured that one is led to wonder whether they, and not the beats, carry the groove’s timekeeping function.¹¹ Hence, the boogie can be seen as a dichotomous framework in which beats and upbeats vie for control of the listener’s internal clock via stream segregation. Moore and Gockel (2002) have suggested that stream segregation is dependent on the degree of perceptual difference between successive sounds. According to this paradigm, the more two adjacent sounds differ in duration, pitch height, timbre, and/or loudness, the more likely it will be for the sounds to segregate. Such is usually the case in Hooker’s boogie, whose beat/upbeat cycle features all of the above-mentioned perceptual differences. Added together, this

Table 2. Stream segregation as a result of beat/upbeat perceptual contrast.

	BEAT	UPBEAT
Duration	<i>Longer</i> Approximately in a 2:1 ratio to the upbeat	<i>Shorter</i> Approximately in a 1:2 ratio to the beat
Pitch	<i>Lower</i> Usually a drone-like bass string	<i>Higher</i> Usually a treble chord or single-pitched note
Timbre	<i>Darker</i> Thumb on low string or percussive foot stomp	<i>Brighter</i> Brushed chord or single-pitched note
Loudness	<i>Softer</i> Sometimes silent	<i>Louder</i> Usually accented

creates the ear-boggling illusion of two parallel, quasi-simultaneous pulse keepers (Table 2).

Moreover, Bregman and Campbell (1971) have shown that listeners can have a difficult time determining the order of tones within a fast repeated cycle of highs and lows. This is because a further consequence of stream segregation is that it hinders temporal order judgements, especially given a close temporal proximity between events – as in the boogie’s upbeats and beats (see Moore 2003, pp. 288–9 for a review). Consider what happens to the long-short pattern as the tempo is increased, say from a slow blues to a fast boogie: the temporal interval between the upbeat (short note) and the subsequent downbeat (long) decreases. In theory, we could increase the tempo as much as we please to bring the upbeat closer and closer to the downbeat. At a sufficiently fast tempo, the two notes’ extreme proximity renders their temporal ordering ambiguous – that is, the listener becomes unsure of which of the two notes is played first and which second. This ‘temporal order threshold’ has been determined to be as large as 200 ms (Warren *et al.* 1969) and as little as 50 ms (Winckel 1967), depending on how the experiment is constructed. Within the range of boogie tempos, the duration of the upbeat triplet-quaver ranges from 100 to 142 ms, which suggests that at least some temporal ambiguity is likely to arise. Examples of this beat/upbeat diffusion abound in Hooker’s boogies, as in ‘Momma Poppa Boogie’ (Example 3). Like a dog chasing its own tail, the upbeat guitar note precedes Hooker’s foot taps by such a narrow margin (about one tenth of a second) that one is dizzied by the blur of their cyclical alternation. Indeed, at times it appears as if the foot is providing the upbeats and the guitar the downbeats.

A potent mix

Although other blues guitarists employed boogie rhythms, they typically imitated the stylistic devices of piano players. This was a popular recipe with blues fans. During a seven-year period, for example, Jimmy Reed enjoyed no fewer than eighteen hits that reached the *Billboard* R&B charts, building most of these performances off simple piano-type boogie riffs translated to the guitar. Other blues artists – Muddy Waters, Howlin’ Wolf, Elmore James – may have earned more respect from serious blues fans and music writers, but none of them could match Reed’s sheer popularity in

The image shows two staves of musical notation. The top staff is labeled 'guitar' and the bottom staff is labeled 'foot'. Both are in 4/4 time with a key signature of one sharp (F#). The tempo is marked as ♩ = 188. A bracket above the guitar staff indicates a duration of approximately 110 ms for a specific rhythmic figure. The foot staff shows vertical tick marks representing the beat. The guitar part consists of a sequence of notes, with some notes occurring slightly before or after the foot ticks, illustrating the 'blurred temporal order' mentioned in the caption. The word 'etc.' is written below the foot staff to indicate the continuation of the pattern.

Example 3. Blurred temporal order as a result of beat/upbeat proximity in 'Momma Poppa Boogie' (2:19–2:25).

the late 1950s. Many garage bands and aspiring blues guitarists imitated Reed's performances, which employed simple figures, easy to learn and play. Hooker's boogie rhythms were also popular but, in contrast to Reed's, proved far more difficult to imitate. He had transformed the boogie from a simple jam session beat to a taut system of feints and counter-feints that not only played the beat, but played *with it* as well.

To be sure, the rhythmic features mentioned above – upbeat/downbeat proximity, up-tempo vamping, long-short rhythmic patterns – can be found in other musical styles during the decades leading to Hooker's first recordings. But Hooker's (or Will Moore's) contribution lay in the innovative rhythmic concoction of these elements. More specifically, Hooker's boogie conflated features from two dance-oriented black styles of music from the preceding decades: piano boogie-woogie and big band swing. Piano boogie-woogie is characterised by a relentless left-hand *motto perpetuo* within an up-tempo 12/8 feel. This two measure cycle – sometimes referred to as 'the sixteen' because it contains that many quavers – constitutes the style's principal driving force. As with Hooker's boogie, the accented triplet upbeat is a recurring element. But there is a crucial difference between the two styles. As discussed earlier, Hooker's boogie tends to use upper-register (usually chordal) accents on the upbeat, providing a stark timbral contrast to the lower-register thumb notes and/or foot taps that mark the beat. Boogie-woogie lacks this perceptual differentiation. A style that *is* replete with accented triplet-upbeats is big band swing. But those upbeats which do form part of the essential driving force in the rhythm section, such as the ride cymbal or piano's chordal comping, are not incessantly cyclical and therefore not an integral ingredient of the overall groove. And they are not loud enough, either. The truly salient upbeat accents belong to the brass and saxophone sections, which, though frequent, are even less systematically cyclical. Hence, Hooker's boogie can be said to combine the best of both worlds because its main rhythmic cell, the tripleted long-short module, employs the pronounced perceptual distinction of upbeats found in big band swing and the non-stop cyclicity of piano boogie-woogie. Moreover, the static, drone-like harmony of Hooker's boogie acts as a foil to its rhythmic syncopation, a quality that is absent from the harmonic mobility of the other two styles.

When Hooker's boogie came face to face with the piano boogie-woogie in 'Do the Boogie' (recorded in 1949 and originally unreleased), his electric guitar avoided the stylistic contradictions by relinquishing the leading role. This first accompanied boogie finds him mainly as vocalist and bandleader, with pianist James Watkin and drummer Curtis Foster carrying most of the rhythmic momentum. Later that year, Hooker let his groove mingle with that of his two accompanists in different versions of the instrumental '609 Boogie'. What ensued can be described as (i) a harmonic free-for-all of mismatched tonics, subdominants, and dominants; and (ii) a rhythmic tug-of-war that pitted Watkin's formulaic handwork against Hooker's personalised approach. Things would improve slightly over time as, in the words of Neil Slaven (2001, p. 6), '[Watkin] more or less adapted himself to the vagaries of Hooker's performance'. The later recordings show that Hooker also made efforts to reach a stylistic compromise with his bandmates, even if this meant distilling some of the complexities of his groove.

Accelerating tempos

Without exception, Hooker's tempos are always on the rise. The thrill infused by the boogie's relentless beat is further heightened by a pervasive accelerando that gradually ups the tempo by anywhere from 6 to 20 metronome points. Even when the recklessness of the opening tempo seems immune to quickening, Hooker still insists on cranking up the pace, as in the 200-to-220 bpm boost of 'Goin' Mad Blues'.¹² These unidirectional tempo transformations are not unique to his boogie; they are a universal trait of Hooker's early recordings, blues included. Admittedly, many performers and styles of music allow for some degree of tempo drift. Perfectly stable tempos can only be the outcome of machine-led renditions, such as those structured around the dictates of a metronome click or drum-machine track. Nonetheless, tempo stability is generally positively valued, since being accused of 'rushing' or 'dragging' the tempo is as ego-damaging as being told that one's playing is uninspired or out of tune – the stuff of amateurs. What is particularly striking about Hooker's accelerandos is their ever-presence, which suggests that they are as fundamental to his musical persona as his stationary harmonies and original strumming patterns.

Tempo acceleration appears to be an inherent feature of much blues music. David Evans' blues transcriptions reveal widespread 'acceleration of the tempo across the course of the performance' (Evans 1982, p. 45), as do Tilton's (1994) transcriptions of forty-four 'downhome' blues. Tilton's sample, which includes recordings made between 1926 and 1930, includes tempos that speed up in magnitudes comparable to John Lee Hooker's. Other writers have also pointed to specific instances of accelerando in the performances of Robert Johnson: Ford (1998, p. 73) in the second take of 'Ramblin' on My Mind' ('a tempo that accelerates by a proportion of 5:4 in the third verse'), Boone (2002, p. 64) in 'Cross Road Blues' ('Johnson's rhythm is similar to [Fred] McDowell's in its intensity, its regular, swinging beat, and its gradually quickening tempo'), and Backer (2002, p. 120) in Johnson's overall output ('The playing is assured; the time is solid although the tempo increases. This has the effect of building excitement as the acceleration is gradual and consistent'). Evans (2000, p. 94) also noticed it in Blind Lemon Jefferson's 'Tin Cup Blues', 'with the metronome reading fluctuating from $qn=98$ and $qn=106$, tending overall to accelerate from the slower to the faster tempo'. And Keil (1966, p. 54) alluded

indirectly to this trend, pointing out that as blues music evolved over time, 'a broader spectrum of tempos is found, and the tempo selected is more rigidly maintained'. To expand this list, we add, in chronological order, four classic recordings that also undergo a tempo increase: Mamie Smith's 'Crazy Blues' (1920, 110–114 bpm), Pine Top Smith's 'Pine Top's Boogie Woogie' (1928, 166–176 bpm),¹³ Muddy Waters' 'I Can't Be Satisfied' (1948, 196–218 bpm),¹⁴ and Bo Diddley's 'I'm A Man' (1955, 80–86 bpm).

Accelerandos have also been noted beyond the realm of the blues. 'Most black song', writes Alan Lomax (1993, p. 232), 'both post- and antebellum, even when its mood is somber and serious when the song begins, usually picks up tempo and is transformed into music that can be danced to before it has been sung to a conclusion'. A 1940 report by the Georgia Writing Project's Savannah Unit describes drum music at a Daddy Grace religious service in the Georgia sea islands: 'At first the procession is orderly and fairly quiet, but as time passes the music becomes increasingly loud [and] the pulsating rhythm of the instruments increases in tempo' (quoted in Bastin 1995, p. 158). Another employee of the Federal Writers Project, folklorist Zora Neale Hurston, describes a prayer ritual at a southern black church:

There is in the body of the prayer an *accelerando* passage where the audience takes no part. It would be like applauding in the middle of a solo at the Metropolitan. It is here that the [preacher] artist comes forth. He adorns the prayer with every sparkle of earth, water and sky, and nobody wants to miss a syllable. He comes down from this height to a slower tempo and is borne up again. (Hurston 1934/1995, pp. 873–4)

Given the foregoing quotes, one is tempted to suspect the *accelerando* phenomenon to have been a prominent feature of early American black musical culture. But accelerating tempos are also prevalent in numerous musical cultures from around the world, including Native American powwow (Goertzen 2005, p. 289), Hindustani rag (Clayton 2000, p. 88),¹⁵ and the chanted bargaining procedure of Venezuela's Yanomami Indians (Epstein 1995, p. 344). Why accelerate in the first place? In music, gradual increases seem to be preferable to decreases, as may be observed in other musical parameters besides tempo. For instance, Bach fugues add voices gradually but remove them suddenly (Huron 1990a), and Beethoven's piano sonatas contain more crescendos than decrescendos, with the former usually lasting longer than the latter (Huron 1990b). In his 1804 *Treatise on the Art of Teaching and Practicing the Piano Forte*, composer/theorist Daniel Gottlob Türk wrote that 'in pieces of a fiery, violent, and furious character, the strongest passages must be hastened a little, or played *accelerando*' (plate shown in Hudson 1994, p. 123).¹⁶

As hinted by Türk's didacticism, musical tempo correlates with cardiovascular and respiratory rates (Bernardi *et al.* 2006). Gilbert Rouget, in his book *Music and Trance*, has noted that trance-inducing music is frequently marked by *accelerando* and *crescendo*, and that these processes are linked to the intensification and dramatisation of sound as music reaches a climactic moment (Rouget 1985, p. 84). Comparable situations are not unknown in Western concert music. For example, musicologist Reinhard Kopiez and his colleagues (Kopiez *et al.* 2003, p. 249) noticed a slight tempo increase halfway through a twenty-eight-hour piano performance of Erik Satie's 'Vexations', at which point the pianist reported being in a state of trance. A suggestive body of work studying the process of entrainment, the tendency of brainwave patterns to imitate external rhythms – a drum beat, a flashing light – still offers us more questions than answers (Gioia 2006), but the process itself is well known, measurable

and repeatable. The literature surrounding the ecstatic trances of shamans is especially rich with examples, and it is perhaps revealing that Hooker's biographer Charles Shaar Murray (2002, p. 371) likens Hooker to a shaman, although Murray seems unaware of the systematic tendency toward tempo acceleration in the blues musician's work.

Housed in these global accelerandos are the three signature rhythmic techniques described above: metric mutations of the isoriff, perceptually distinct upbeat, and blurred temporal order of attacks. The fast tempos, stationary harmonies, and fluid triplet vamps further personalise John Lee Hooker's now classic groove. These kinds of rhythmic features – which are so significant in many blues-influenced styles – have been conspicuously neglected in popular music studies. In this light, Hooker's boogie of the late 1940s presents a rich case study of rhythmic expressivity during a pivotal moment in American popular music.

Endnotes

1. Definitions of what constitutes a 'hook' vary. The nature of rhythmic hooks is examined in Traut (2005).
2. David Evans and Gayle Dean Wardlow (personal communication) confirmed that Will Moore was virtually unknown in the Clarksdale scene. Evans notes, however, that Hooker's style bears some resemblance to the little-known work of Country Jim Bledsoe and Clarence London, guitarists who were recorded in Shreveport, Louisiana in the early 1950s. Since we know that Moore hailed originally from Shreveport, we can speculate that Hooker's approach may reflect a regional style centred in Shreveport that his step-father brought with him to the Clarksdale area. However, our present knowledge of the early Shreveport blues tradition is limited, although this could present an interesting area of research for later scholars.
3. The exceptions are all post-1951. The tempo of 'That's Alright' is 114–118 bpm; it is the result of a duo session led not by Hooker but by his musical sidekick Eddie Kirkland in 1952. 'Too Much Boogie' (1953) drags in reminiscing slow motion at 112 bpm. By 1954, tempos in the 120s would not be uncommon, especially in accompanied numbers such as 'I'm Ready' (126–129 bpm) and 'Hug and Squeeze' (120–123 bpm).
4. Some songs, such as 'Don't Go Baby', have a boogie tempo and a stomping foot, but their character is more contemplative than rambunctious. A couple of others, such as 'Low Down Boogie', are really slow blues despite their title.
5. We agree with 'the apparent four-ness of 12/8' (Agawu 2006, p. 21, note 42). Hence, when discussing ternary subdivisions of the beat, we consciously interchange the concepts of 4/4 triplet-quavers and 12/8 quavers.
6. Clearly, neither the duple nor triple subdivisions receive metronomic treatment.
7. Examples include 'I Believe I'll Dust My Broom', 'Honeymoon Blues', 'Kind Hearted Woman Blues', and 'Ramblin' On My Mind'.
8. Pianists did not face the same challenge as guitarists. For an example of triplet-quaver isoriffs at a boogie tempo, listen to 'Do the Boogie' (1:33–1:41). At 200 bpm, James Watkin manages to articulate the isoriff at a tremolo-like rate of ten attacks per second.
9. Millisecond values do not correspond to exact measurements of the audio signal. Rather, they are calculated arithmetically based on the song's approximate tempo. For example, a quaver is 200 ms long at a tempo of 150 bpm, although the actual durations as performed will be naturally higher and lower.
10. Cohen (1996, p. 465) also describes the 't-1 run', a technique whereby the thumb and index finger alternate attacks on a single string, like a plectrum, to play scalar passages. This technique was more prevalent in the East than in the Delta. Although Cohen is careful to note that players are likely to employ more than one approach to hand posture and finger picking, he maintains that these physical aspects are closely intertwined with regional styles.
11. A milder form of this effect was noted by Titon (1994, p. 146): 'When the syncopation is continuous, the natural result is a conflict of pulse patterns (polyrhythm) between the vocal and the accompaniment'. But such instances last no longer 'than two and a half beats' – a stark contrast to Hooker's perennial syncopation.
12. In some instances, the poor quality of the acetate recordings results in a gradual fall in pitch – and a(n uncharacteristically) steady tempo. For instance, the 'Stomp Boogie' tempo of 164 bpm undergoes a negligible increase of two points, while the pitch drops by about 75 cents. Restoring the ending pitch (by ear) to match that of the beginning reveals that the song originally accelerated to 172 bpm. Similar re-enactments of otherwise tempo-static performances of

- 'Miss Pearl Boogie' and 'Boogie Awhile' reveal comparable tempo changes (170–178 and 190–202 bpm, respectively).
13. This is not a gradual *accelerando*; the tempo changes rather abruptly towards the end of the song.
 14. But on the other side of that hit record, 'I Feel Like Going Home' maintains the tempo constant at 78–79 bpm.
 15. Hooker's *accelerando* resembles two of the four types distinguished by Clayton (2000, pp. 88–9) in Hindustani music: '(a) Gradual and slight, and perhaps unintentional' and '(b) Gradual but significant; resulting in increased tension and excitement'. (The other two are '(c) Stepwise; a conscious acceleration at a particular point in a performance' and '(d) Temporary; for example to serve the needs of a *tabla solo*'.)
 16. More recently, composers as diverse as Conlon Nancarrow (Gann 1995, pp. 146–72) and John Adams (Adams *et al.*, pp. 96–7) have often used gradual *accelerandos* to animate the musical surface.

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