Chapter 6:
Analysis of rhythm in electronic dance music

In this chapter I try to identify and describe some essential rhythmic elements in electronic dance music and consider them in relation to their possible effects on movement. The pountchak pattern that I have chosen as a focal point for this study is not present in all tracks or genres of electronic dance music, but if one pattern had to be chosen as a unifying rhythmic pattern (at least for the large subgenre of house music), it would be this one. Thus my analyses of rhythm here will primarily focus on tracks where the pountchak pattern is present. Aspects of sound are also important to the ways in which body movements are activated by this music, and I will deal with that issue separately.

I start with elements that are part of (or closely related to) the pountchak pattern itself, and then examine elements that are more distant from it before finally considering the totality of a given groove. Most of these elements presented are central to the music culture in question, but I have also chosen certain musical examples for what they might show us rather than their value as an archetype of the style or their recognition within the culture. I will emphasize British and French house music from the second half of the 1990s but will present examples from elsewhere as well.

Introduction

I will begin to describe and explain the methodological tools that I will apply to the musical material. The theoretical framework is presented in the preceding chapters.

THE PRESENTATION OF THE ANALYTICAL WORK

The analyses will primarily follow a given succession:

1. Choice of material. I have chosen excerpts from tracks that illuminate the specific element or elements in question. I will introduce them with year of release and tempo (in beats per minute = bpm) and explain why the chosen excerpt is a suitable example of the element or elements in question. I will also describe the excerpt when needed.
2. **Visual representations.** I have used a computer-based sound analysis program and examined various parameter settings for the analysis both regarding closer investigation of the elements in question and an understandable sonogram presentation.\(^{523}\) I draw upon notational representations and various transcriptions as well.\(^{524}\)

3. **Attention points.** In accordance with the theories discussed in chapter 4 concerning attention and entrainment, I have chosen the term “attention points” to refer to the sounds in the music that are especially significant in terms of capturing our attention and thus contributing to a bodily oscillation (in this case, the vertical pounmtchak movement pattern). The process of attending is considered interconnected with this movement so that certain sounds are expected in relation to movement positions (up, down). My analytical approach has been to combine various listening strategies (especially concerning focus) with an active engagement with movement and reflection on the contributions of various sounds to it.

4. **Suggested movement curves.** Based on the contributions of these attention points, I can place movement curves upon the sonograms to illustrate possible bodily oscillations. These are only two-dimensional vertical renderings of the potential for movement in the excerpt in relation to the element in question; they are not intended to illustrate actual movement. Various lengths of curves will indicate actual lengths of possible movements in directions,\(^{525}\) but these may also be experienced as differences in force or emphasis, as for example in vertical movements made against a surface (such as foot or finger tapping). I use variations in width to indicate longer durations at a certain point,\(^{526}\) but these may also be experienced as a different force or emphasis. Finally, I will indicate tension and friction in the grooves through breaks or interruptions in the movement curves.\(^{527}\)

The aim of these analyses is not to try to identify the “correct” movement for a specific groove but to explore the possibilities for movement in order to illuminate the

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\(^{523}\) See introduction to the use of sonograms on page 9.

\(^{524}\) Most examples will be presented without barlines or a specific time signature, since the rhythmic patterns in the excerpts often imply various meters. Tracks that clearly communicate a 4/4 meter will in some cases be presented with this time signature as well as barlines.

\(^{525}\) See, for example, figure 6.9.

\(^{526}\) See, for example, figure 6.13.

\(^{527}\) See, for example, figure 6.43.
role of various musical elements. A few terms will be central to how the music may be experienced when moving:

**Drive:** The experience of being continuously pushed forward within the movement pattern.

**Emphasis:** The experience of extra weight or energy in relation to certain movements upward or downward.

**Tension:** The experience of a disturbance to the basic movement pattern (in a positive manner).

**Expectation:** The experience of being prepared for or anticipating a specific occurrence.

**EXAMPLE OF THE PROCEDURE IN RELATION TO ONE SPECIFIC TRACK**

1. **Choice of material.** The track *Phœnix* (1996; tempo 127 bpm) by Daft Punk has a section from 0:15 to 0:30 that consists of the poulmtchak pattern only, which makes the essential features of this element perfectly clear.

2. **Visual representations.**

![Figure 6.1: Notational representation of Daft Punk’s *Phœnix*, 0:15–0:19.](image1)

![Figure 6.2: Sonogram of Daft Punk’s *Phœnix*, 0:15–0:19.](image2)
3. **Attention points.** Neither the bass drum sound in the lower part of the sonogram nor the hi-hat sound in the upper part are disturbed by any other sounds. This is the track from the survey presented in chapter 3, and its poumtchak pattern was especially effective in activating a vertical movement in a specific direction. Thus it appears likely that these sounds capture the listener’s attention in a unambiguous way. The bass drum distributes more energy, as is evident from the amplitude presentation beneath the sonogram, and therefore captures our attention first. However, the hi-hat is alone in the high-frequency area and has its own specific role in the formation of the movement pattern, so it provides significant attention points as well.

4. **Suggested movement curves.**

![Sonogram](image1)

Figure 6.3: Notational representation with suggested movement curve of Daft Punk’s *Phoenix*, 0:15–0:19.

![Sonogram](image2)

Figure 6.4: Sonogram with suggested movement curve for Daft Punk’s *Phoenix*, 0:15–0:19.

As discussed in earlier chapters, verticality appears to link the alternation of sounds of high- and low-frequency content with certain body movements. The two sounds may pull in opposite directions and thus cause the movement pattern suggested in the above figures. The poumtchak pattern forms the basic beat of this excerpt, and it is also the basic “drive” of the movement pattern. The movement curve displays no variations because this excerpt consists of an undisturbed poumtchak pattern.

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528 The effect of the poumtchak pattern is addressed in chapter 3 and 4.
In addition to the examples that will be treated in this way, I will introduce others as well to provide a more thorough discussion of the musical elements in question with comparisons also to other relevant genres.

**Elements of the basic beat**

**THE BACKBEAT**

A British deejay who responded to my first survey described the music he listened to as poum-tchak-clack-tchak, with the “clack” being the snare drum on beats two and four.\(^{529}\) Countless house music tracks use a snare drum or similar sound on every second downbeat but usually in tandem with a bass drum sound. The omnipresence of the bass drum sound seems to alter or reduce the typical backbeat emphasis of a rock song, producing a more persistent drive forward. The sound of the snare drum in a house track is usually lower in frequency range (less bright) than a rock snare drum, and sometimes it blends in altogether with the accompanying bass drum sound. Tracks without a bass drum on every second downbeat may still present a poumtchak pattern, if the different sound is not too different (some tracks have sounds that are difficult to categorize either as bass drum or snare drum). How sound qualities can influence a movement curve will be discussed further in chapter 8.\(^{530}\)

**The backbeat in earlier genres**

Disco tracks from the 1970s with the poumtchak pattern consistently have snare drum sounds or handclaps on every second downbeat, and this backbeat accentuation is more prominent than in succeeding electronic dance music tracks. Several tracks combine the upbeat hi-hat pattern with a more standard rock beat – that is, without a “four-to-the-floor” bass drum pattern. In the production of Chicago house tracks, handclap sounds frequently substituted for the snare drum sound, and tracks without any backbeat accentuation at all came and went as well.\(^{531}\)

\(^{529}\) Facebook message received from Frank Cooper on 29.05.2007.
\(^{530}\) See page 217.
\(^{531}\) For example, Phuture, *Acid Tracks*, 1987.
Main examples: Deep Dish featuring Everything but the Girl, *The Future of the Future (Stay Gold)*, and Basement Jaxx, *Fly Life*

a. The track *The Future of the Future (Stay Gold)* (1998; tempo: 122 bpm), produced by the American/Iranian production team Deep Dish (Sharam Tayebi and Ali Shirazinia) and featuring the British group Everything but the Girl, presents a basic beat by itself for the first nine seconds that consists of the poumtchak pattern with a snare drum sound on every second downbeat.

b. The Basement Jaxx track *Fly Life* (1996; tempo: 127 bpm) starts out with almost thirty seconds of a basic beat and a discreet noise/sound modulated by a moving low-pass filter. The basic beat has a handclap sound on every second downbeat.

![Figure 6.5: Notational representation of Deep Dish feat. EBTG, The Future of the Future (Stay Gold), 0:03–0:05.](image)

![Figure 6.6: Notational representation of Basement Jaxx, Fly Life, 0:17–0:19 (noise/sound not included here).](image)

![Figure 6.7: Sonogram of Deep Dish feat. EBTG, The Future of the Future (Stay Gold), 0:03–0:05. Snare drums circled.](image)

![Figure 6.8: Sonogram of Basement Jaxx: Fly Life, 0:17–0:19. Handclaps circled.](image)

While the snare drum sounds in the Deep Dish track (figure 6.7) blend in with the bass drum sounds, the handclaps from the Basement Jaxx track (figure 6.8) are more discrete. As attention points they simply capitalize upon the bass drum sounds rather than act alone in any way.
My interpretation of the effect of these sounds engages the pull downward on every second downbeat. The snare drum sound on the Deep Dish track seems to give extra weight to this downbeat (represented by my deeper curve), whereas the handclaps on the Basement Jaxx track seem more neutral or maybe even pull somewhat in the opposite direction. In accordance with the discussions on verticality in music presented in chapter 4, the bright-sounding handclap might in fact conflict with the bass drum sound and therefore slightly reduce the weight of those downbeats.

Snare drum sounds or various other sounds emphasizing or altering every second downbeat are important elements in how a constant variation of the basic beat (poumtchak pattern) can be produced. However, the balance of these sounds to the ongoing bass drum sound is very important. If the contrast is too great, the drive will be impaired, but if it is too slight the variation of the poumtchak movement pattern can vanish altogether.

ANACRUSES (PICK-UPS) AND THE PRODUCTION OF DRIVE

Matthew W. Butterfield discusses the role of the anacrusis in a groove’s drive. Employing Hasty’s analytical methods, he attempts to illustrate why various events are anacrases, writing the following about the swing rhythms of jazz:

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532 See page 121.
533 Butterfield uses the term “anacrusis,” while Danielsen uses “pick-ups” or “pick-up notes.”
The flow of swing eighth notes generates offbeat anacrusis, directing attention toward the ensuing quarter-note beats. A powerful anacrusis emerges on beats two and four as a result of the drummer’s ride rhythm pattern, and this is often reinforced by the tendency of bass players to accent the backbeats and place chordal dissonance there. Consequently, the resulting projections are charged with energy because one is always expecting new beginnings—attention is always directed toward the next event via anacrusis, not the completion of the present event through continuation.\(^{534}\)

While I agree with Butterfield’s assumptions concerning the effect he describes being especially significant for the “vital drive” of swing, I am not sure he adequately explains how “the resulting projections are charged with energy.” Expectations of new beginnings can be powerfully evoked by the repetition of many divergent patterns and combinations, while similar rhythmic patterns can lead to an ending downbeat (depending on the preceding event and the duration of the sound on the downbeat). The energy produced by the anacruses (pick-ups) may be more apparent if body movements are introduced to the discussion. How does the anacrusis influence a vertical body movement like head-nodding or foot-tapping? Our attention is indeed directed to the coming event, but I view this in concurrence with a movement pattern. The anacrusis might contribute energy to the ongoing movement downward, which at the same time propels the overall movement pattern as well.\(^{535}\) When the movement downward is given extra weight, the following movement upward has to be slightly accelerated to synchronize with the music, which seems to push the pattern forward.

In relation to the pountchak pattern, various sounds can appear immediately before a downbeat and provide extra energy or emphasis to the following event in a manner reminiscent of swing. These frequently recurring events might connect with every second or fourth downbeat using a variety of sounds that are usually in some way similar to the succeeding sound, as in the following example.

**Main example: Shazz, Fallin’ In Love (PT. G Remix)**

The track *Fallin’ In Love* (2001; tempo 127 bpm) by the French producer Shazz (Didier Delesalle), remixed by Paris deejay/producer DJ Gregory (Grégory Darsa), starts out with fifteen seconds of a basic beat. Part of this beat is a short sound that occurs right before the second, sixth, tenth, fourteenth (and so forth) downbeat.

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\(^{534}\) Butterfield 2006:[23] (reference to paragraph in online article).

\(^{535}\) See also Danielsen’s description of the B-section groove of Parliament’s *Up for the Downstroke* for discussions on the effect of similar rhythmic events (Danielsen 2006:119).
The short sounds are in fact snare drum sounds without much brightness or loudness. While this beat cycle evidently differs from the previous, it remains hard to discern the short sound from the following, and it seems to function as an anticipation of the beat rather than an independent attention point. This in turn affects the movement curve.

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536 On the sonogram it is also possible to see that the hi-hat sounds on the third, fourth, seventh, and eighth upbeats are different from others in the excerpt. The snare drum sound used before the second downbeat is mixed with those hi-hat sounds, varying the basic beat still further though not reflected in the analysis here.
Toward the second and sixth downbeat, the curve is realized with a small break where the short sound occurs. This break might be seen as an extra “push” in the movement. The short sound might give rise to a certain expectation about the coming event, so a wider and deeper curve continues into the downbeat area to indicate this extra energy. The steeper curves of the succeeding upbeats, finally, reset the movement on the beat again. This groove therefore has a more varied shape than the previous while still reflecting the definite characteristics of a pountchak pattern.

Supplementary examples: pick-ups before the downbeat

Cyclic periods in tracks can be regulated by similar additional sound events, for example, right before every first, fifth, or ninth downbeat. In a quantized sequencer track, they may occur on the eighth, sixteenth, or even triplet-sixteenth note before the new downbeat. The most common sound for this purpose is probably a bass drum that is somewhat less accentuated but otherwise the same as the one on the downbeat. The 1993 track *Dark & Long* by the British group/production team Underworld (Karl Hyde and Rick Smith) (tempo 135 bpm) anticipates the first downbeat in every series of sixteen with a short bass drum sound on the sixteenth note just before the downbeat. This event excites expectation and therefore supplies the movement pattern with extra emphasis on the following (downbeat) movement. Because it is the first in a cycle of sixteen downbeats, this event further indicates the relevance of this cycle to the track.

A bass drum pattern found on the 1998 track *Resurrection* (tempo 135 bpm) by the American producer Medway (Jesse Skeens) has a few more bass drum sounds contributing in a similar way throughout the same cycle of sixteen downbeats.
Because they are placed on eighth notes, these sound events are probably experienced more as independent attention points than as simple gestures of anticipation. Still, the variations in the movement pattern caused by them might similarly raise expectations. The extra energy or attention around the first and ninth downbeats suggests maybe a cycle of eight beats as most relevant to this track, though the double occurrence of pick-ups at the end seems to create an even stronger emphasis on the first downbeat, indicating a cycle of sixteen beats.

**Supplementary examples: pick-ups before the upbeat**

Occasionally extra sounds emphasize the upbeat. In *Hypnofunk* (2002; tempo 125 bpm) by the Italian production team Boogie Drama (Diego Montinaro and Lele Sacchi) there is an additional hi-hat sound before the upbeat.

![Figure 6.17: Notational representation of Boogie Drama’s *Hypnofunk*, 0:30–0:32 (only drum sounds), event in question circled.](image)

![Figure 6.18: Excerpt from sonogram of Boogie Drama’s *Hypnofunk*, 0:30–0:32, events in question circled.](image)

Unlike the earlier example, we can discern this event as a separate sound, but it still acts to direct our attention to the succeeding sound on the upbeat. The extra emphasis on this specific upbeat pushes the movement pattern as discussed previously, though this outcome seems more obvious when it is related to a downbeat. This anacrusis (pick-up) is actually part of a more elaborate pattern – a less accented hi-hat also following the succeeding upbeat (to the far right in the sonogram, not circled). Many
tracks with a pountchak pattern have hi-hat patterns with staggered events but those exactly on the upbeats are usually more accentuated.

Daft Punk’s 1996 track Revolution 909 (tempo 126 bpm) has a hi-hat track with a shuffle feel at the beginning and end of a period of four beat-cycles (one 4/4 measure). The events before the first and fourth open hi-hat sound recall the anacruses discussed by Butterfield in their effect on the following upbeat.

![Figure 6.19: Notational representation of hi-hat pattern from Daft Punk’s Revolution 909, 0:57–0:59, circled notes indicate open hi-hat sounds while arrows indicate the events in question.](image)

In the above excerpt, most of the frequencies below 5 kHz are filtered out (except for sounds aimed to represent a police raid on an illegal rave party) and the hi-hat sounds are boosted, making the pick-ups here much more prominent than elsewhere in the track. The first and third arrows point to events placed a triplet sixteenth before the upbeat, while the second and forth arrows point to events on the straight sixteenth before the downbeat. These events are probably effective in bringing variation to the movement pattern, but like the Medway example the most marked effect seems to be on the downbeat following the two events at the end of the excerpt (the first downbeat in the next cycle). The first of these two events may give more energy to the movement upward, while the second gives its energy directly to the succeeding downbeat.

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537 The title probably couples the Beatles track Revolution 9 (1968) with the Roland drum machine TR-909.
538 See page 161.
539 The sounds on the downbeats in the excerpt resemble short dry hi-hat sounds but may also be the remainders of the bass drum sounds where all the low frequencies have been attenuated by the filter.

166
Examples from earlier genres
In disco tracks from the 1970s, such pick-up effects were produced by events played on bass guitars, electric guitars, keyboards, or congas as part of a melodic line or larger rhythmic pattern. In Chicago house tracks, on the other hand, pick-ups by drum sounds began to occur more frequently. Tears by Frankie Knuckles (featuring Satoshi Tomic) from 1989 uses an extra bass drum sound on the sixteenth before every eighth downbeat, like the Underworld example presented earlier. The programming of drum machines probably introduced possibilities for experimenting with patterns in ways that diverged from the playing of acoustic drums. Short sounds without reverb also permitted more sound events in the patterns without making a hodgepodge of the overall mix. Those strategies deemed most successful on the dancefloor thus carried over into the productions of the 1990s.

Anacruses (pick-ups) seem to both excite expectation and provide emphasis to the succeeding sound event, thus encouraging the corresponding movement to be more powerful or energetic. In relation to different beats in a cycle, they might create variations to movement patterns while reinforcing established periods or cycles of certain lengths.

Other elements in the production of drive

FASTER PULSE LAYERS
In addition to anacruses, various other elements of the groove work in different ways to generate energy and inspire movement. Prominent to the build-up sections of tracks is an isochronous pulse on a faster subdivision of the pounchak pattern (events on the sixteenths). The accentuations are mostly on the downbeats but usually not very distinct. Various instruments can be used, but percussive sounds are the most common— for example, a tambourine or variant hi-hat or shaker sound, always less apparent than the upbeat sound itself.

540 An exception is the 1976 Motown track Down to Love Town by the Originals, where the drummer occasionally makes extra snare drum entries on the sixteenth preceding the third downbeat, but this is fairly subtle.
541 See page 164.
Main example: Rinôćérôse, Dead Flower

The 2002 track Dead Flower (tempo 125 bpm) by the French production team Rinôćérôse (Jean-Philippe Freu and Patrice “Patou” Carrié) has a tambourine pattern with accentuations on the downbeats and entries on every sixteenth. It is introduced after sixteen beat-cycles with an electric guitar riff and joined by a poumtchak pattern at 0:17 (again after sixteen beat-cycles). The tambourine pattern then continues throughout the track as part of the groove.

![Tambourine and Hi-Hat Pattern](image)

Figure 6.21: Notational representation of tambourine and hi-hat pattern from Rinôćérôse’s Dead Flower, 0:12–0:20.

![Sonogram](image)

Figure 6.22: Excerpt from sonogram of Rinôćérôse’s Dead Flower, 0:12–0:20.

Considered alongside the poumtchak pattern, the tambourine sounds seem recessive. The accentuated first sound of the series of four falls on the downbeat, emphasizing an already stressed entry. While they are not attention points as such, then, they still seem to increase the intensity of the track, for two reasons: (1) The sixteenths between the sound events inherent to the poumtchak pattern act like the events discussed in the previous section. Both the bass drum and hi-hat sounds of the poumtchak pattern are given more energy via the preceding tambourine sounds. Since every poumtchak event is preceded by an almost identical tambourine sound, this pattern is not a source of variation for the movement pattern. Instead, its contribution of energy is experienced as a more intense push, both upward and downward. (2) The tambourine pattern may also generate an oscillation of its own. Even though the sounds are relatively recessive, they can still be heard as a continuous realization of the sublevel of the poumtchak pattern and thus offer alternatives in relation to movement. The oscillation effect might further be realized through various alternative body movements that join or alternate with a movement that follows the poumtchak pattern.
The choice of instrument and placement of pattern in the overall mix probably determine which of the effects discussed above are most dominant.

**Supplementary examples: synthesizer sounds**

In many tracks, producers place synthesizer patterns with similar sublevel effects in the very front of the mix. These patterns produce alternative oscillations like the tambourine mentioned previously, but with more vigour. In trance music this is very typical, but it also appears in many house tracks. The Chemical Brothers track *Out of Control* (1999; tempo 132 bpm) has a short rhythmic/melodic theme with a constantly modified synthesizer sound that starts at 0:13 and lasts almost the whole track (to 7:19, save for a section from 4:21 to 5:11).

![SynthNotation](image1.png)

Figure 6.23: Notational representation of rhythmic/melodic theme from the Chemical Brothers, *Out of Control*, 0:13–0:15.

The vertical musical movement of the theme recalls the structure of the poumtchak pattern. Since it does not correspond with the directions of the poumtchak pattern, the verticality probably strengthens the effect of the oscillating movement at the level of sixteenth notes.

Melodic structures may also emphasize the level of the poumtchak pattern in various ways. Madonna’s *Give It 2 Me* (2008; tempo 127 bpm) has a rhythmic/melodic theme that is quite apparent in the overall mix in the chorus and gradually builds its intensity.

![SynthNotation](image2.png)

Figure 6.24: Notational representation of rhythmic/melodic theme from Madonna’s *Give It 2 Me*, 1:01–1:16.

Since the melodic vertical movements correspond to the “low” and “high” of the poumtchak pattern, they presumably add momentum to the already established
movement pattern. The change from eighth notes to sixteenth notes increases the intensity while maintaining the same correspondences.

Arpeggiated synthesizer patterns produce similar effects but are often even more neutral as to their influence on movement patterns.\textsuperscript{542} \textit{Waiting for Verdeaux} (2000; tempo 133 bpm) by the American producer Mocean Worker (Adam Dorn) uses an arpeggiated synthesizer pattern throughout the track with mostly identical events on every sixteenth note (four events for each bass drum sound, as can be seen in the upper part of the sonogram).

![Sonogram of Mocean Worker's Waiting for Verdeaux, 0:15–0:21 (sixteen beat-cycles).](image)

The bass drum sounds (seen in the lower part of the sonogram) are placed on every downbeat, forming sixteen beat-cycles (four 4/4 measures) with two extra sounds anticipating a new period.\textsuperscript{543} The arpeggiated pattern has some vague, somewhat random pitch variations (seen as double lines in the upper part of the sonogram) as well as an accentuated entry on the fifth and fourteenth upbeats and the first and ninth downbeats. When the upbeat hi-hat pattern is introduced (at 0:58), the pountchak pattern dominates in relation to body movement, but the arpeggiated pattern seems to supply liveliness through its irregular manner of accentuations and pitch variations.

**Supplementary examples: vocal sounds**

One intriguing way of producing a faster pulse in a track is to use rhythmic vocal phrases, usually without any specific melody. The listener/dancer is offered

\textsuperscript{542} An arpeggiator is a function found on synthesizers (and similar equipment) that generates series of tones through the use of one or several keys on the keyboard. These series may be structured according to various patterns of pitches, rhythms, and accents, and they can be made to fit a certain tempo.

\textsuperscript{543} Similar to the Medway example discussed on page 164.
possibilities of vocalization (or “subvocalization”) \(^544\) as an enhancement of the poumtchak’s movement relations. The phrases are often spoken rather than sung, and they are typically introduced on their own and then gradually blended into the complete groove. Thus the listeners/dancers can follow the vocal phrases before they become more hidden in the mix. The 1999 track by Lord of the Drums featuring Michelle Luna, *Slept 2 Gether* (tempo 130 bpm), has a spoken vocal phrase performed by a heavily filtered female voice throughout most of the track. \(^545\)

![Figure 6.26: Notational representation of rhythmic vocal phrase from Lord of the Drums feat. Michelle Luna, *Slept 2 Gether.*](Image)

The accentuations on the words “might,” “better,” and “slept” correspond with the three first downbeats of the 4/4 period. If the listener/dancer moves down on the downbeats, these words would be spoken at the same time, potentially strengthening the vertical body movement. The energy used to utter the accentuated words may be transmitted to the movement, and vice versa. Similarly, Mocean Worker’s track *Air Suspension* (2000; tempo 130 bpm) has a two-sentence vocal phrase performed by a filtered male voice throughout the track.

![Figure 6.27: Notational representation of rhythmic vocal phrase from Mocean Worker’s *Air Suspension.*](Image)

The phrase in the fourth measure deviates from the others by accenting the last two words and thereby emphasizing the downbeats as in the Lord of the Drums example. The other words or syllables do not really accentuate any beats in the poumtchak pattern, but the phrases still seem to fit well with a vertical body movement. The

\(^{544}\) Subvocalization is a term introduced by Arnie Cox to describe a silent singing or a singing without actually making sounds that he believes can be an important activity in music listening. See discussion page 128.

\(^{545}\) The phrase “I might like you better if we slept together” is taken from the American new wave/post-punk group Romeo Void’s song *Never Say Never* from 1981.
deviating ending also forms a periodic cycle of four measures even though the sentences are identical pairs in terms of words.\textsuperscript{546}

THE DIMINISHED (TIME) INTERVAL

The next element involves sounds that are easily identified in the overall mix and therefore used to produce build-up effects. These are created through gradually contracting the time intervals between recurrences of a specific sound. It may start on a downbeat and be repeated again after sixteen beat-cycles, then after eight, then after four, and so on.

Main example: Romanthony’s\textit{ Floorpiece}

The 2000 track \textit{Floorpiece} (tempo 127 bpm) by the American producer Romanthony (Anthony Moore) starts with a pounmtchak pattern with a quite dominant snare drum on every second downbeat. A sound effect also starts on the first downbeat, followed by a short synthesizer theme.

![Figure 6.28: Notational representation of repeated events from Romanthony’s Floorpiece.](image)

These events are repeated after eight downbeats. After six iterations, the time interval is reduced to four downbeats, and again after four iterations the time interval is reduced to two downbeats. When the time interval of two has lasted thirty-two downbeats, the events are gradually filtered out of the mix. The complete section in question lasts from 0:01 to 0:58.

\textsuperscript{546} In electronic dance music, sampled voices or sounds that are easily identified are often altered like this. Events initially placed on the downbeat, for example, might occur on the preceding upbeat in the next measure, or be moved an eighth or a sixteenth backward or forward. Such variations can influence how movement patterns are shaped in a way similar to Nketa’s “spacing” in African music, where patterns or parts are staggered within musical pieces (Nketa 1974:134). Danielsen calls this effect “displacement” and presents examples from James Brown’s funk music; see, for example, Danielsen 2006:80.
Figure 6.29: Sonogram of Romanthony’s *Floorpiece*, 0:01–0:35, with circle and arrows indicating repeated events.

The initial sound effect (“S.Eff” in the notation) resembles a soft burst of reverb but nevertheless differentiates the first downbeat from the others. The synthesizer theme, on the other hand, is very distinct and almost by itself in the frequency area of 1,000 to 4,000 Hz. When the events repeat after a certain time interval, they in turn excite expectation about yet another return. This expectation is violated when the time interval is diminished, especially since this happens after six (and not four or eight) downbeats, and the events’ function as attention points increases. We might then begin to expect new variations as well. Because the next change happens after a more expected interval of four iterations, the listener/dancer is likely to be better prepared and accept the new time interval almost immediately.

Figure 6.30: Sonogram with suggested movement curve for Romanthony’s *Floorpiece*, 0:16–0:35, with arrows indicating repeated events.
The events do not seem to alter movement patterns in the first period, but when the time intervals are diminished and the events reappear more often, an experience of increased intensity may give rise to more energetic movements. This is why the movement curve in the sonogram is given a gradually increasing length, both at the downbeat and the upbeat, at the end of the section presented in the sonogram. The downbeats in the last section, where the events in question appear most frequently, may be experienced more energetically than the others. When the events have continued for a certain period with the same interval, the effect related to dancers’ attention and expectations will probably lessen.

**Basslines**

**INFLUENCES FROM EARLIER GENRES**

One of the most important links from the disco era to the electronic dance music of the 1990s is undoubtedly the basslines. Chicago house producers often recycled basslines exactly from various disco tracks. For example, the bassline of the first Chicago house track to reach number one on the British charts, Steve “Silk” Hurley’s *Jack Your Body* (1985), is identical to the Warehouse classic *Let No Man Put Asunder* by First Choice (orig. 1977, remixes by Shep Pettibone and Frankie Knuckles from 1983):

![Figure 6.31: Notational representation of bassline from last section of First Choice’s Let No Man Put Asunder (Shep Pettibone remix).](image1)

The bassline can be divided into two parts: the first two events on the tonic accentuate the first two downbeats in a stable manner, while the remainder is unstable (syncopated) with an ending that clearly returns to the opening notes, generating a continuous drive forward that can be repeated endlessly. The small deviation of every second ending makes the two periods of four beat-cycles into a unit. The use of the
unison, perfect fifth, minor seventh, and octave is also typical. In addition to the perfect fourth, these intervals or scale steps fill many basslines in electronic dance music tracks. Although it became less common later in the 1980s to copy basslines in such a manner, 1990s producers continued to exploit many of the qualities that were dominant in the dance music of the 1970s and early 1980s.

**The pick-ups of basslines in funk**

The basslines of funk tracks are another significant inspiration to electronic dance music producers, both directly and via their influence on disco. This inspiration is not due to funk’s extra emphasis on the first downbeat of a 4/4 measure (the “One”) but rather its characteristic early anticipations of its significant downbeats, or the “small notes” surrounding them. Danielsen points out how such events may be understood as stretching the downbeat: “In cases such as the pick-ups to the strong beats and also the rolling basslines of sixteenths typical of Bootsy Collins’s playing, one might rather think of what happens as an offbeat-based pulse of sixteenths being triggered around the beat, working as a magnet both before and after it and thereby absorbing some of the energy of the strong beat.”

**Example of bassline from funk in electronic dance music**

Similar pick-ups (or anacruses) appear in the basslines of electronic dance music tracks and likewise contribute to how the downbeats are experienced. The bassline of the Basement Jaxx track *Red Alert* (1999; tempo 127 bpm)\(^548\) is a sample from the track *Far Beyond* by Locksmith (from the 1980 album *Unlock the Funk*).\(^549\)

![Notational representation of bassline (and bass drum) from Basement Jaxx’s *Red Alert.*](image)

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\(^547\) Danielsen 2006:85.
\(^548\) The music video for the track has several references to the 1970s funk group Parliament (costumes, science fiction).
\(^549\) The Locksmith track has a tempo of 114 bpm and the bassline is placed two semitones lower. When the Locksmith sample is placed in a conventional sampler and played a major second higher, its tempo becomes exactly 127 bpm.
The two events that end on the higher F (A and B) are both preceded by pick-ups (anacruses), but only the second time (B) is the F exactly on a sounding downbeat. The first time (A) may be experienced as (two) pick-ups to the following downbeat, but the fact that they are identical to the succeeding event may cause them to be heard as an early or extended second downbeat. Thus the first and second incidents (A and B) shape the downbeat in slightly different ways. Another feature that links to funk is the slap-hand playing technique that creates the very specific sound of these two incidents. In the two last (downbeat) events of the bassline, the original sound from the sample is blended with a synthesizer sound, emphasizing their relative stability.

Example of “call and response”

The call-and-response technique is also a feature that has its roots in various genres of African and African American music. It is found in electronic dance music tracks in realizations of basslines by various other sounds but also solely among completely different instruments. The track *Jump 'n' Shout* (1999; tempo 127 bpm) by Basement Jaxx has a bassline that is succeeded by two events of a strange, “bubbly” sound effect that resemble call and response:

![Bassline and sound effect](image)

Figure 6.34: Notational representation of bassline and sound effect from Basement Jaxx: *Jump 'n' Shout*, 0:37–0:53.

Since the sounds here are quite different, the call-and-response effect is probably due mostly to the counterrhythmic realization of both instruments. Their presence in the groove is somewhat tangential to the fundamental movement pattern created by other sounds and thus a connection may be formed. In the last notated measure the call and response is muted by the extended bassline figure.

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550 The technique is primarily associated with Larry Graham, who first was bass player with Sly and the Family Stone.

551 In his article “Black Music as an Art Form,” Olly Wilson lists call-and-response (or antiphonal) structures as one of six tendencies or approaches characteristic of the music of peoples of African descent; see Wilson 1983:3.

552 Counterrhythmic patterns will be discussed later, see page 183.
Example of bassline from disco music

The bassline with alternating octaves characteristic of late 1970s disco music corresponds well to the poumtchak pattern. *You Make Me Feel (Mighty Real)* (1978; tempo 131 bpm) has a bassline that is typical of Patrick Cowley’s disco productions with Sylvester (Sylvester James).

![Bassline notation](image)

Figure 6.35: Notational representation of bassline from Sylvester’s *You Make Me Feel (Mighty Real)*.

This bassline, present in the intro and chorus, plays in unison with a synthesizer sound on a higher octave but with an additional entry on the sixteths. Also present is an upbeat hi-hat pattern and an alternating bass drum and snare drum/handclap on the downbeats. A corresponding musical verticality is thus asserted by several events simultaneously, which may have contributed to the success of the track on the dance-floor. Shapiro describes the basslines of these Sylvester tracks as “galloping,” neatly capturing their up-and-down movements in a single word.

VERTICAL MOVEMENT IN BASSLINES

In addition to their rhythmic qualities, basslines obviously have a melodic aspect that can also be relevant in relation to movement and the poumtchak pattern. In the previous example the bassline directly reinforces the poumtchak pattern. This may also be the case in electronic dance music, but predominantly the correspondence is more subtle.

Main example: Fritz Valley Project’s *Blindness (Harmonic Excursion)*

The 1998 track *Blindness (Harmonic Excursion)* (tempo 127 bpm) by the German production team Fritz Valley Project (Frank Impink and Andreas Köhler) has the same bassline for most of the track. The groove of the major part also consists of a shaker-pattern, a handclap-sound on every second downbeat and a congas-type pattern.\(^{554}\)

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554 These patterns will not be discussed and are thus not notated in relation to this example.
Figure 6.36: Notational representation of bassline and bass drum/hi-hat pattern from Fritz Valley Project’s Blindness (Harmonic Excursion).

The bassline remains prominent even among the many percussive sounds involved in the track; its E-A intervals in particular seem to comprise significant attention points. It is probably not a coincidence that the ascending movement from E to A corresponds quite systematically with the pountchak pattern’s movement from bass drum to hi-hat:

Figure 6.37: Notational representation of bassline and bass drum/hi-hat pattern from Fritz Valley Project’s Blindness (Harmonic Excursion) with movement relations circled.

The low E is placed on the sixteenth just before the downbeat bass drum sound, a location typical of many funk tracks. It seems to extend and therefore emphasize every second downbeat. The succeeding ascending movement to the upbeat might further propel the movement upward, so that every second beat-cycle may be experienced as more energetic. The open hi-hat on the third and seventh upbeat (circled noteheads) also adds emphasis there:

Figure 6.38: Notational representation of bassline and bass drum/hi-hat pattern from Fritz Valley Project’s Blindness (Harmonic Excursion) with suggested movement curve.

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555 See, for example, Danielsen’s discussion of the bassline of James Brown’s Get Up (I Feel Like Being a) Sex Machine (1970); Danielsen 2006:76ff.
The last part of the bassline is also characteristic in the way it leads back to a new beginning. It also has several events (on sixteenths) before and after the downbeats and upbeats instead of exactly on the beats, perhaps signifying its influence from funk music.

The fabric of rhythm

An electronic dance music track often starts out with a build-up section that leads to a more complete groove where the basic beat interacts with several other patterns. While some of these patterns or rhythmic elements may be closely connected to and in various ways supportive of the basic beat, other patterns are more independent. The “fabric of rhythm” is this combination of several rhythmic elements or patterns that interact in various ways with the basic beat and with each other.

COMPLEMENTARY PATTERNS

I will begin here with events placed before or after the downbeats and upbeats and mostly within their duple subdivisions. Contrary to the patterns presented earlier, these events do not emphasize certain beats but instead compete with them to some degree and thereby bring tension into the experience.

As described in chapter 2, drum machines introduced ever greater possibilities for forming patterns that would be difficult or impossible for a live drummer. Producers began to experiment with patterns that were quite independent of the basic beat – while bass drum and hi-hat sounds were used to form a pounmtchak pattern, shakers, tambourines, congas, and other such sounds could form patterns quite independent of it. Such experimenting became even easier with the introduction of computer-based sequencer programs.

Main example: Basement Jaxx’s Jump ’n’ Shout

The 1999 track Jump ’n’ Shout (1999; tempo: 127 bpm) starts out with a pounmtchak pattern and a third rhythmic layer consisting of a cymbal.

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556 See page 58.
The cymbal pattern is quite evident here: as attention points, its sounds are probably just as significant as the hi-hat sounds but not as dominant as the bass drum sounds.

The bass drum and hi-hat sounds form a poumtchak pattern here that most likely controls movement. The third (and seventh) event of the cymbal pattern has the same entry point as the bass drum sound and will probably stress those downbeats:

But what do the other events of the cymbal pattern contribute to the groove? Placed right before both downbeats and upbeats, they could be seen to extend them by acting as pick-ups (anacrases). But this does not seem to correspond to their actual effect on movement, probably because the sounds are not directly related to those they anticipate. The vertical movement pattern does not seem to change, but our experience of it might. These cymbal sounds introduce a sort of tension or friction into the groove, making small dents in the movement pattern established by the poumtchak.
Soon a snare drum joins in through three similar but not identical sounds that interact in yet other ways with the dominant movement pattern:
The excerpt represented above is eight beat-cycles (two 4/4 measures) further into the track (measures 7 and 8). Here the hi-hat is clearly boosted compared with the preceding part (measures 1 to 6) as can be seen on the sonogram below of measures 6 and 7.

![Sonogram](image)

Figure 6.46: Excerpt from sonogram of Basement Jaxx’s *Jump n’ Shout*, 0:16–0:19.

The introduction of the snare drum pattern makes the hi-hat appear to recede in the mix – to reinstate the poumtchak pattern, then, the hi-hat needs to be boosted. The cymbal pattern is also somewhat simplified at this point, probably to avoid colliding with the snare drum pattern.

The first two snare drum events seem to have an effect similar to the cymbal pattern in creating tension or friction in the groove, while the three events ending both periods of four beat-cycles seem to have a pick-up role in relation to the following downbeats. The extra snare drum sounds that fall exactly on the upbeats do not seem to have a role beyond somewhat emphasizing this specific beat.

![Notational representation](image)

Figure 6.47: Notational representation of Basement Jaxx: *Jump n’ Shout*, 0:18–0:21, with possible tension points, emphasized beats and entries producing expectation encircled

Circled in the notated example above are the various sounds that stand out from the poumtchak pattern and contribute in other ways – tension, emphasis, or expectation –

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557 See further discussion on page 214.
to the groove. With the illustrations in the sonogram below I try to visualize these processes in relation to a movement curve.

Figure 6.48: Sonogram of Basement Jaxx’s *Jump n’ Shout*, 0:18–0:21, with suggested movement curve and possible tension points, emphasized beats and entries producing expectation circled.

Given a tempo of 127 bpm, it may seem like a reach to identify so many influential events. But it is important to distinguish among the various roles that sounds can have in forming a groove that in turn moves a body. There are no right answers or straightforward recipes for good dance music here: these roles will influence each other in quite intricate ways, and each dancer will respond differently as well. But in aiming to distinguish what makes a good groove, I believe it is important to identify as many influential events as possible.

COUNTERRHYTHMIC PATTERNS

One common rhythmic event in electronic dance music involves four sound events dividing three beat-cycles into four equal durations (3+3+3+3 sixteenths, or a “4:3 pattern”) or a similar pattern where the last event is excluded (3+3+2 sixteenths, or a “standard pattern”). Such patterns are counterrhythmic because the triplets imply a pulse relation that conflicts with the basic beat of the track. A pountchak pattern of three beat-cycles has six possible entry points on downbeats (three) and upbeats (three), while the 4:3 pattern has four events at equal intervals during the same period.

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558 The term “standard pattern” is taken from Danielsen, who uses it because “it may be viewed as a simplified duple time version of the so-called standard pattern of African music” (Danielsen 2006:63).
The basic beat, then, relates to a duple meter, while these counterrhythmic patterns relate to a triple meter. With regard to the funk grooves of James Brown, Anne Danielsen describes this phenomenon as a “play between a main rhythm and a counterrhythm with competing basic pulses: they carry a tendency toward cross-rhythm.”

Such counterrhythmic patterns are common to many genres of popular music, especially various African American genres of groove-based music. The guitar riff of the James Brown track *The Payback* (1973) has the following events:

![Notational representation of guitar riff from James Brown’s *The Payback*](image)

The two last events of this pattern restore its congruence with a duple meter. This is vital, according to Danielsen, because counterrhythmic occurrences should destabilize but never threaten the main pulse. In electronic dance music tracks with a pountchak pattern, the basic beat is clearer and the counterrhythmic tendency weaker compared to the occurrences described by Danielsen. Additionally, the standard pattern is more common than the 4:3 in electronic dance music. Nevertheless, their presence shares in the counterrhythm’s destabilizing tendency, and in the following I will discuss how it might influence a movement pattern.

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559 Danielsen 2006:63; emphasis in the original. Danielsen discusses the difference between “counterrhythmic” and “cross-rhythmic”: contrary to cross-rhythmic occurrences, where patterns of duple and triple meter continue to interact, a counterrhythmic pattern will soon return to its duple meter.


561 The illustration is taken from Danielsen 2006:64; she identifies several characteristic counterrhythmic patterns in the funk grooves of James Brown.

562 Butler examines a counterrhythmic pattern from the electronic dance music track Azzido Da Bass’s *Dooms Night (Timo Maas Mix)* that does not return to the duple meter. It has eight entries with the exact same interval during twelve beat-cycles of the basic beat, and the baseline recommences together with the beginning of this pattern only every twenty-fourth beat-cycle. Butler calls this an “embedded grouping dissonance” with reference to Harold Krebs’s study of the music of Schumann. “Rhythmic dissonance” for Krebs concerns instances where there is disagreement between accentuations or central rhythmic points in the music. Butler uses “embedded” to identify examples where “one grouping dissonance is nested within another whose common durational unit is larger” (Butler 2006:158). He further describes the effect of the dissonance as “a fundamental conflict between the pure-duple values of 4/4 meter and a pure-triple dissonance” (ibid.), but he does not explore how any of this effects the listener/dancer.
Main example: Lee-Cabrera’s *Shake It*

The 2003 track *Shake It* (tempo: 128 bpm) by the American production team Lee-Cabrera (Albert Cabrera and Steven Lee) starts with a pounmtchak pattern with a short drum pattern repeated every fourth downbeat. Barely audible is a piano pattern that answers the drum pattern in a call-and-response manner. The piano pattern is (probably) attenuated by a low pass filter that gradually opens during the first minute of the track.

![Diagram of drum patterns and notational representation of Lee-Cabrera’s Shake It, 0:00–0:04.](image)

The drum sound of the counterrhythmic pattern is probably the most apparent event at this point in the track. Its first event gets the track going, together with the bass drum sound. The hi-hat sound is not very apparent but helps to establish an unambiguous pounmtchak pattern.

The three events of the counterrhythmic pattern fall on a downbeat, between an upbeat and a downbeat, and on an upbeat. In light of my earlier discussions, we can therefore point to possible emphasized beats and tension points, respectively:
The second event on the sixteenth before the second (and sixth) downbeat may produce tension in the same way as the complementary patterns I discussed earlier. But does the pattern influence the poulmtchak in that way as well, or is it experienced as a discrete entity? Again, there is no right answer, but the standard pattern will certainly be familiar to many listeners. Common to a variety of genres (for example, funk, soul, and Latin), it is a much used (and heard) rhythmic structure in popular music. The face-off with the poulmtchak may well intensify the moment for many dancers, yanking them out of a vertical movement pattern or creating a (potentially pleasurable) feeling of conflict and tension in those movements. Danielsen asserts that “there is a tension between the basic pulse and its alternative, between rhythm and counterrhythm. Even if the latter is subordinate to the main basic pulse of 4/4 and does not appear as a continuous rhythmic layer, it has to be present as a destabilizer of the main rhythm, as a possible but unarticulated alternative.”

**Supplementary examples of counterrhythmic patterns**

As a build-up later in the track by Lee-Cabrera, the standard pattern starts to be repeated every second downbeat (1:00–1:09). In a similar manner Rinoçerôse’s 2002 track It’s Time To Go Now! (tempo: 120 bpm) starts with a guitar riff containing three sound events that is repeated two times with various pitch and filter settings. As can be seen on the sonogram below, this riff is in a standard pattern.

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563 Danielsen 2006:70.
Repetitions probably enhance the effects of the counterrhythmic relations, but since each new beginning matches every second downbeat, the destabilizing effect here is not very pronounced.

The 4:3 pattern has one more event placed between a downbeat and an upbeat, and its divergent metrical pulse is therefore more evident. The 808 State track *CübiK (Kings County Perspective)* (1990; tempo: 123 bpm) starts only with a synth-bass sound in this counterrhythmic pattern.  

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564 See page 96 for a notational representation.
Despite the emphasis on this pattern, a culturally trained listener will probably still expect a (divergent) basic beat to start with a bass drum or hi-hat sound on the downbeats or upbeats (the bass drum in fact starts at 0:16) and can easily derive a pount-tchak even before this happens.\textsuperscript{565} In sum, the duple-meter matrix is so basic to many subgenres of electronic dance music that it is difficult to establish a seriously competing pulse by introducing counterrhythmic figures, even right from the start.

MICORHYTHM IN ELECTRONIC DANCE MUSIC

Though the examples I have presented (and how I have presented them) perhaps imply the prevalence of quantized note values in electronic dance music, there are of course rhythmic events that do not follow this generalization. Especially live vocal phrases or instrumental contributions have temporal deviations from the basic beat of the track in similar ways as in other popular music genres.

Example of microrhythmic deviations: Daft Punk’s \textit{Daftendirekt}

The heavily modulated vocal phrase in the track \textit{Daftendirekt} (1996; tempo: 111 bpm) by Daft Punk has the following temporal deviations in relation to the basic beat.

![Notational representation of vocal phrase from Daft Punk’s Daftendirekt with arrows of different sizes to indicate temporal deviations.](image)

The first accentuated word (“funk”) could have been notated a sixteenth note earlier, but the word is stretched out so that the end corresponds fairly well with the bass drum on the downbeat.\textsuperscript{566} Thus it appears to be the starting event of a 4/4 measure, preceded by a pick-up (“da”). These two events may recall topics treated earlier in this chapter, such as how the downbeat may be experienced as extended via an early realization. But more important here is how a vocal phrase can provide attention

\textsuperscript{565} Butler’s uses Hasty’s theory of “projection” on this specific counter-rhythmic theme. This seems rather out of place, as he admits himself. In Hasty’s musical landscape any time signature is possible while the familiarity of the pattern Butler discusses in a dance music context and the resulting expectations of a certain metric cycle (or pulse) must be taken into account; Butler 2006:102–106.

\textsuperscript{566} The basic beat of this track, formed by bass drum, snare drum, and hi-hat (starting at 0:35) is a regular backbeat rather than a pounttchak pattern. The deviations are measured in the sequencer program Digital Performer, in which the track can be aligned to a grid according to the basic beat. The largest arrow (on the word “funk”) is a deviation of approximately a sixteenth note, while the second largest is less than a thirty-second note (on the words “back” and “come”).
points in the process of activating movement patterns. Compared to the snappy drum sounds, the vocal delivery here is stretched and imprecise, yet it plays its part. And temporal deviations between a vocal phrase and the basic beat of a track might well influence movement patterns, but probably in a somewhat different manner than percussive sounds. A vocal phrase, even when it is heavily modulated and percussive, affords primarily vocal participation (overt or covert). Its effect on a pountchak movement pattern, for example, is therefore probably more indirect. It could shape how certain downbeats or upbeats are experienced through the listener’s vocal participation, which might then explain the looser rhythmic structure that is considered acceptable for vocal phrases in this genre.

**Discussion of microrhythm in electronic dance music**

In general, however, temporal deviations from a grid may not be as important in the study of electronic dance music as it is in various other popular music genres. As point of departure for this discussion, I will return to the Basement Jaxx track *Jump n’ Shout* (see figure 6.47 and 6.48).567

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567 See page 182.
At 0:21 a counterrhythmic pattern (the standard pattern) is added to an already quite complex groove that has many significant features in relation to movement. In the last measure, a 4:3 pattern similar to the guitar-riff of James Brown’s *The Payback* occurs both in the bass and the vocals.\(^{568}\) The sonogram below, representing the last eight beat-cycles (the two concluding 4/4 measures) of the notated period, attempts to chart the many incidents that produce drive, tension, and excitement in the groove.

![Sonogram of Basement Jaxx’s Jump n’ Shout](image)

Figure 6.57: Sonogram of Basement Jaxx’s *Jump n’ Shout*, 0:33–0:37, with a suggested movement curve and circled possible tension points, emphasized beats, events producing expectation and counterrhythmic patterns.

In such tracks it is important to keep events strictly placed to avoid chaos, and temporal deviations from the basic beat can in fact be quite damaging. Furthermore, the basic beat has to be a solid foundation: this is how producers make tracks work and how electronic dance music as a whole identifies itself. The genre emerged from dancing to drum machines, which permit no deviations in timing. From the possibilities inherent in combining rhythmic patterns, new forms of dance music and movement later evolved. Compared to, for example, jazz, funk, or hip-hop, house music or trance needs its basic beat to be punchy, persistent, and predictable, and these qualities are appreciated by its listeners/dancers.

Nevertheless, producers of dance music have to be aware of how various sounds work together. To move certain sounds slightly backward or forward to find

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\(^{568}\) See figure 6.49.
the best spot in the groove may or may not be necessary. Sometimes everything works perfectly with a fully quantized track; other times adjustments are necessary. These issues emerge because the sounds interact, not because a groove needs more complexity. A bass drum sound with a fast attack and a descending pitch movement provides a different downbeat from a bass drum sound with a slower attack. Thus, grids of note values and deviations seldom tell the whole story.

Many electronic dance music tracks are actually quite straightforward in their rhythmic structures and have patterns that interact in simple ways. Analyses of rhythm, in turn, tend to fall short when it comes to explaining how such simple structures may be experienced as filled with drive and tension. When there are no microrhythmic deviations, no counterrhythmic elements or ambiguity in metric relations, what is there to study?

For me it is the rhythmic structure’s relationship to the physicality of music. How rhythm directly impacts movement answers some questions and raises many more. In the next two chapters I will focus upon the actual sound of the patterns I have presented in this chapter.

**Summary**

My first analyses and discussions in this chapter concerned the various elements of the basic beat. An extra sound (snare drum or handclap) on the backbeat, together with the ongoing bass drum sound, may give extra emphasis to a movement on the downbeat and thus introduce a subtle variation to the poumtchak movement pattern. Anacruses (pick-ups) can also produce an extra “push” before either a downbeat or an upbeat.

Another contributor to the “drive” in an electronic dance music track is the host of rhythmic patterns that are present on faster pulse layers, produced by percussive sounds, synthesizer sounds, or even vocal phrases. These may act as anacruses (pick-ups) or initiate oscillations that complement the poumtchak pattern and activate various alternative body movements. Another element related to the production of “drive” is the gradual contraction of time intervals between recurrences of specific sounds. As sound events reappear more quickly, an experience of increased intensity may occasion more energetic movements.
Basslines in electronic dance music are influenced heavily by earlier genres such as funk and disco, and their anacruses, call-and-response techniques, and relationship to the downbeat expose important antecedents in African and African American musics. The melodic component of basslines also impacts musical verticality. If ascending or descending melodic movements match the “up” or “down” in the pountchak pattern, the corresponding movement may receive extra emphasis.

While many patterns in electronic dance music tracks are closely connected to, and in many ways supportive of, the basic beat of the music, other patterns are more independent. These “complementary patterns” typically involve sound events placed before or after the downbeats and upbeats relating to the basic beat cycles and its duple subdivisions. They do not emphasize certain beats but instead compete with them to some degree, thereby introducing a certain productive tension to the experience of the groove. Counter-rhythmic patterns with events between the beats that imply a competing basic pulse may work in similar ways to produce tension, but they may also be experienced as discrete. This destabilizing function is, however, less prominent here than in genres where the rhythmic structure (and the expectations it evokes) is looser.

Generally, temporal deviations between patterns and the basic beat are not as important in electronic dance music as in other popular music genres. In a track with several things occurring all at once, it is important to keep events strictly placed to avoid chaos. Qualities related to a punchy, persistent, and predictable basic beat are appreciated and expected by listeners/dancers, and the rhythmic structure’s relationship to the physicality of music is therefore crucial.