According to Lussy, the addition of an anacrusis as in 3.19 destroys the coincidence between metric and group accents. Rhythmic units are now astride (à-cheval) over two measures, creating counter-metric groups (rythmes à contre-temps). Moreover, the harmonic balance is upset: "each rhythmic unit, instead of a single chord, receives two, which brings about a kind of swaying instead of the original stability."⁴² In discussing the possibility of anacrustic groups at the beginning of Mozart's A major Sonata in Emotion and Meaning in Music (1956), Leonard Meyer suggests precisely Weckerlin's version and argues that "the grouping can be changed if an upbeat, an eighth note E, is placed before the C-sharp in the first measure of the theme."⁴³

According to Lussy, the decision to regard maximum parallelism as the overriding criterion in grouping should always take the expressive character of the passage into consideration. For instance, the beginning of Beethoven's Piano Sonata op. 26, given in figure 3.20a, would lose its serene quality if grouped as in 3.20b, which corresponds to Westphal's analysis.⁴⁴

Lussy argues, the addition of an anacrusis in the third measure, i.e. at the second measure, would retain the basic rhythmic pattern, and it would produce a more lyrical sound.

Accordingly, the most natural grouping is identified by the strong accent on the first beat of the second measure as the boundary in both structure and meaning. It is certainly possible, however, for a counter-metric grouping to retain the general character of the phrase; "[if] we ask a composer to be more lyrical, there is no doubt his part will not be any less a counter-rhythm, calmer and smoother, which is what Lussy recommends..."⁴⁵

Lussy's arguments are significant in terms of grouping hierarchies and the musical expression of the unit. Occasionally, the grouping hierarchy may be influenced by the fact that Beethoven's Piano Sonata op. 26 has been a source of inspiration for Baroque composers. "Il faut donc se mettre à l'aise..."⁴⁶

Evidently, Lussy's arguments go beyond the logical framework of structural makeup.

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⁴² "De plus, les rythmes sont à cheval sur deux mesures et l'harmonie est détraquée: chaque rythme, au lieu d'un seul accord, en reçoit deux, ce qui entraîne une espèce de balancement au lieu de la stabilité primitive." Traité, p.75.
⁴⁵ "Si Beethoven..."⁴⁶ "Mais nous..."⁴⁷ "Compareriez-vous..."
Lussy argues that “if Beethoven had placed only two notes in the first measure, i.e. a quarter note E-flat and an eighth note A-flat, as he did in the third measure, the integrity of the [musical] idea would be retained, and it would not occur to anyone to make an anacrusis of this A-flat.” Accordingly, the unity of the move from the E-flat to the A-flat, secured by the strong attraction between them, would resist the introduction of a boundary in between. Lussy states that the grouping given by Westphal is certainly possible; it indicates how the criterion of maximum parallelism would retain the anacrusic groups implied by the beginning. However, “[if] we ask any unbiased musician which [interpretation] he prefers, no doubt his preference will lead him to the one that renders the phrase calmer and simpler.”

Lussy’s analyses almost entirely concern the smallest levels of the grouping hierarchy, i.e. the level of the incise and that of the rhythmic unit. Occasionally, the level of the phrase is discussed in terms of its internal structure formed by the interconnection of rhythmic units. Indeed, the fact that Lussy has not extended his theory to the larger levels has been a source of criticism. Combarieu, in his *Théorie du rythme dans la composition moderne* of 1897, wrote that

> in spite of its significant merits, Lussy’s work cannot be judged as satisfying, for in the first place it is incomplete. Of the different parts that constitute the rhythm of a classical composition, Lussy has limited himself to the analysis of the simplest ones: measures, i.e. phrase members. He has not seen, or has forgotten to demonstrate that phrases group to form distinct units [called] strophes.

Evidently, Lussy recognizes the fact that hierarchy of grouping extends beyond the level of the phrase: though he does not discuss their structural makeup, he does speak of periods and strophes. The question, then,

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45 “Si Beethoven avait mis à la première mesure seulement deux notes, un mi bémol noire et un la bémol croche, comme il le fait à la troisième mesure, l’intégralité de la pensée serait conservée, et il ne serait venu à l’idée de personne de considérer ce la bémol comme l’anacrose.” *Le rythme*, p. 11.

46 “Mais nous demandons à tout artiste non prévenu laquelle il préfère? Sans aucun doute sa préférence se portera sur celle qui donne à la phrase plus de calme et de simplicité.” *Le rythme*, p. 11.

is why throughout his career he never showed any interest in the structural levels larger than the phrase. One plausible response would be that Lussy conceived of the internal structure of the phrase as a model for the larger-scale structures in tonal pieces; and that consequently, he regarded the criteria for the comprehensible and expressive delivery of the individual phrase as providing the essentials of expressive performance in general. To be able to assess whether Lussy’s theory of the individual phrase can indeed provide a model for larger-scale structures in music, one first needs to explain his conception of rhythmic units, which are the elements that form the internal structure of musical phrases.

Rhythmic Accent: The Ictus

One of the persistent analogies used by Lussy in explaining the nature of rhythmic units is that of architectural arches. Unlike the analogy of the verse, which was used in pointing out the similarities between the ways poetry and music organize durational units, the arch analogy concerns the hierarchy of tonal elements in terms of stability. The structure of architectural arches is such that the weight of the arch is distributed between points of support, often pillars of a certain kind, placed at its two extremities. These pillars, while absorbing the weight, also exert a certain counterforce on the arch, and thereby hold it in equilibrium; they are the most static and stable points of the arch. According to Lussy, musical rhythmic units mirror the structure of architectural arches in the temporal dimension: they are "the true musical arches, each of which forms an entity, an archetronic unit characterized by a beginning and an end." Like their spatial counterparts, rhythmic units extend between two stable points, which exert an "attractive force" on the tonal elements in between and thereby hold them together. As Lussy argues, "the materials of rhythmic arches are imponderable, immaterial. Yet, a magnetic, attractive fluid relates and keeps together their constitutive parts. The points of support exert on them an attracting (force), giving them an astonishing solidity and cohesion." The concept of

48 "Les rythmes (sont des) véritables arcs aux musiciens, donc chacun forme une entité, une pièce architecturale caractérisée par un commencement et une fin." Le rythme, p.5.


50 Monmyry, Mouchet, chantant, triomphe, âme du ciel, que nul ne peut plus poissant une nouvelle merveilleuse, Le Tonique, p.52.

51 "La tonique, planétaire. Tous les cultures du ciel." Pâris sur l'oeil.

52 "Plus l’intervalle que nous avons en musique, plus l’harmonie se fait sentir. Le rythme, p.33.
“imponderable fluids” alluded to by Lussy was commonly used in early nineteenth-century physics in reference to the phenomena of electricity and electromagnetism.

The first formulation of the idea of tonal attractions in music theory is found in Momigny, who argued that the need to “resolve” certain chords can only be explained by the existence of an attraction or affinity between the tones of the chord that is resolved and those of the resolving one. In his Cours complet of 1806, Momigny wrote:

Like the attraction recognized in physics in relation to the inertia of bodies, this attraction acts in inverse relation to distance: such that a tone that is only half step away from the one that needs to follow it is much more powerfully attracted by it than it would be if separated by a whole step. Here is a new analogy that I have discovered in nature, one that proves the marvelous harmony that reigns among things least resembling one another in appearance.50

Even though Lussy speaks of the degree of attractions between the tones of a scale, he does not explain how and in what order the scale-degrees are hierarchized in terms of attractions. In this respect, he appeals to the intuitions of the listener in perceiving the subordination of the tones to the tonic, which “plays the same role the sun does in the planetary system. All the notes turn around and converge towards it.”51 Lussy also states that the smaller the interval between two pitches, the greater the attraction between them.52

According to Lussy, the attractive forces between the tones are a local phenomenon: the effects of these forces remain within the boundaries of rhythmic units, provided they are well-formed, i.e. have two points of support, one at either end. The formation of larger-scale structures through the interconnection of rhythmic units and phrases is ruled not by the attractions, but by the organizational principles of similarity, unity

51 “La tonique joue dans la musique le même rôle que le soleil dans le système planétaire. Toutes les notes tournent autour d’elle et y convergent.” In “De la culture du sentiment musical,” p.11.
52 “Plus l’intervalle qui sépare deux notes est petit, plus l’attraction qu’elles exercent l’une sur l’autre est grande.” In “De la culture du sentiment musical,” p.18.
in variety, etc. Hence, Lussy writes: "the attractive power that exists between the [support points] of a rhythmic unit cease with them. The succession of different rhythmic units is governed only by a relation of logic, of analogy and of symmetry." 53

According to Lussy's theory, the internal structure of a well-formed rhythmic unit can be represented as "repose – action – repose." Tonal attractions function to sustain the internal dynamics of such units, which initiate at a stable point, move towards another stable point and terminate there. Prior to Lussy, a similar model was offered by A.B. Marx in his Kompositionsllehre of 1837. Marx argued that at the basis of all musical forms lies the model of rest – motion – rest (Ruhe – Bewegung – Ruhe) as represented by the diatonic scale. He wrote:

The tonic at the beginning and end (marka) the moment of rest; the successive sounds following and returning back to the tonic (form) the moments of motion ... We find, (in) this motion of sounds, no arrival place, no satisfactory ending until we have returned to (the tonic). 54

The model of repose – action – repose needs to be carefully distinguished from another several theorists have proposed in explaining rhythmic structures: Riemann, in his Musikalische Dynamik und Agogik of 1884 presents the structure of a prototypical rhythmic group as "upbeat – accent – upbeat – upbeat." A similar model is recently offered by Cédelin Delégé, who argues that the minimal well-formed rhythmic group consists of "anacrusis – accent – ending." 55 The most significant difference between these models and the one Lussy proposes is that the former do not have hierarchical applicability, other than only metaphorically; for while "accent" at the smaller levels refers to a dynamic stress as a feature of a time-point, when the size of the groups expand, the same concept would be used in reference to whole time-spans, in which case it no longer means "dynamic stress." 56 Moreover, the three components of the model

53 "Cette puissance attractice qui existe entre les Jc che d'un même rythme, cesse avec eux. La succession des différents rythmes n'est plus régie que par un lien de logique, d'analogie et de symétrie." (Le rythme, p.33.


56 This point also constitutes the main conceptual inconsistency in Cooper and Meyer's (1960) theory of rhythm.
"upbeat – accent – afterbeat" – and those of "anacrusis – accent – ending" do not identify different features of analogous structures, but features of different structures. "Upbeat/anacrusis" and "afterbeat/ending" refer to time-spans, the former preceding an accent, the latter following it. "Accent," on the other hand, is a quality of a time-point. In this sense, the continuity of the motion between the span of upbeat and the span of afterbeat is conceptually "suspended" by the accented time-point: according to the model, the internal dynamics of a rhythmic group corresponds to a two-phase motion.

The distinguishing feature of the model of repose – action – repose is that it is hierarchically applicable from the smallest to the largest level of rhythmic groups, since it is based on stability conditions determined by tonal criteria. More importantly, it represents a single movement that unfolds within the time-span of a rhythmic group of any size.

In Lussy's theory, the stable points at the beginning and end of a rhythmic unit are called ictus: the term comes from the Latin "icere" meaning "to hit, to strike." The plural form of ictus will be presented here with a bar placed over the "u", i.e. as ictus. The initial ictus of a rhythmic unit marks a melodic and/or harmonic initiation; the final ictus corresponds to a melodic and/or harmonic arrival. Every well-formed rhythmic unit has two ictus: the rhythmic motion unfolds from one towards the other. Even though the idea that the tonal system orders its elements hierarchically in terms of the degree of their stability and attraction to the tonic does not necessarily imply a reductive analytical technique by itself, reduction appears to be the most obvious tool for representing the relatively more stable pitches of rhythmic units. Lussy does not have a fully – or even partially – developed pitch-reduction method. However, he does make use of the idea of reduction in explaining the nature of ictus. He refers to the ictus as "the vital elements" that conserve the identity, the essence of a rhythmic unit.

For example, the rhythmic unit in figure 3.21a, from Gounod's Faust, has its initial ictus on the downbeat of the third measure, and the final ictus on the downbeat of measure 5. The rhythmic units are indicated by the brackets; initial and final ictus by "I" and "F" respectively, placed directly above the corresponding pitches. Lussy argues that if this unit is reduced as in 3.21b, the essential musical idea behind it is revealed. The basic melodic motion, unfolding from the G in measure 3 to the E in measure 5, becomes apparent. According to Lussy's reduction, measure 4, with its dominant harmony is thus presented as prolonging the tonic harmony as well as the melodic G of measure 3.
Another example of reduction concerns the opening phrase of Mozart's A major Piano Sonata K.331 (figure 3.22a). The most stable pitches of this theme, according to Lussy, are those given in figure 3.22b.

Not all rhythmic units have both the initial and the final ictus. In figure 3.23, showing Mendelssohn's Liedermelodie Worte op.102 no.5, mm.1–4, each unit has both ictus and hence is well-formed:

One of the most important factors in determining the number of ictus is the accent, or stress, which depends on the number of base beats or less stable units.

57 None, in this context, means the ictus.
The first two rhythmic units of the Mozart A Major Piano Sonata (figure 3.22a), on the other hand, have only the initial ictus. Certain units, like those at the beginning of the last movement of Beethoven's Piano Sonata op.10/1, given in figure 3.24, will have only the final ictus.

![Figure 3.24](image)

In Lussy's theory, the ictus are accents of weight that mark the points of melodic and/or harmonic stability: they are the rhythmic accents. Lussy is careful to distinguish the rhythmic accent of the ictus from the thesis, i.e., the metric accent indicating the downbeat of the measure: the two refer to conceptually distinct phenomena and the existence of the ictus does not require or imply the thesis. Non-metric music, such as Gregorian chant, has no theses but does have ictus. According to Lussy, a rhythmic unit will have as many theses as the number of measures it has, while it cannot have more than two ictus: the theses coincide with the downbeat of each measure within the rhythmic unit, the ictus with the first and last downbeats. In figure 3.25, from Verdi’s La Traviata, the first rhythmic unit has three theses, each indicated by a “T” below the staff, but two ictus.

![Figure 3.25](image)

One of the most significant differences between the thesis and the ictus is that the experience of the thesis is primarily dependent on dynamic accent, or stress. Rhythmic accent of the ictus, on the other hand, depends on the perception of pitch stability: the status of a pitch as more or less stable within a tonal context remains unchanged whether it is

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57 Note, in this connection, that Lussy's reductions do not necessarily retain only the ictus.
dynamically accented or not. In fact, according to Lussy, to stress an already tonally prominent event beyond the dynamic level of the context is unaesthetic. He writes that

nothing is more disagreeable, in bad taste, and less aesthetic than hearing a person read or declaim verses regularly leaning on the rhyme, or the last syllable of each verse. It is even more painful to hear the first and last notes in the final measure of each rhythmic unit struck, accented.58

Lussy also distinguishes the rhythmic accent of the ictus from what he calls “accent of delimitation,” or accent of grouping, which is the dynamic intensity that sets off the boundaries of groups in performance. If the first pitch of a rhythmic unit precedes the initial ictus, the accent of delimitation would not coincide with the rhythmic accent.

Though conceptually independent of dynamic accent, the ictus in certain cases requires its cooperation for perceptual prominence. The rhythmic unit at the beginning of Chopin’s Nocturne op.9/1, given in figure 3.26, involves a perceptual effacement of the initial ictus. Lussy argues that the subdivision of the initial ictus into four F’s in the first measure weakens the prominence it would have had as a single whole note F – a long stimulus calling for stress. Repetition, which by itself is a source of length and thereby of prominence – it prolongs the experience of the same event – does not appear to match the prominence dynamic accent would provide in this case. To function as a source of dynamic accent, length must be experienced as prolonging not a kind of event, but a particular one.

Figure 3.26

In several of his analyses, Lussy speaks of the “principal ictus” (l’ictus principal) of rhythmic units, implying a hierarchy of perceptual prominence – but not necessarily one of pitch stability – between the initial

and the final ictus, and the listener’s expectation of a rhythmic unit moves away from its principal ictus towards it. Venetian music, a principal ictus can move away from its only ictus, as in op.2/1, giving it a non-ictus.

Figure 3.27

Lussy argues that the second ictus of measure 2, in op.2/1, is the first to move away from its principal ictus. The second ictus in measure 7 then is the principal ictus within their measure.

Lussy does not form his rhythmic units: They are always rhythmic. For example, he may have only the first two of these points. But then the last group and its principal ictus of the last measure 2/8. He writes, in fact be regards measures 5 through 8, not 6 through 8.

Lussy argues that the passage on the downward half step, the notes 1 and 3, are not events but arrivals that have none of the characteristics of a ictus, and so do not contradict this.
and the final ictus. The concept of the "principal ictus" distinguishes the listener's experience of "motion-towards" and "motion-away-from" as a rhythmic unit unfolds. If the principal ictus is the initial one, the group moves away from it; if the final ictus is the principal one, the group moves towards it. When the group has a single ictus, the context for identifying a principal ictus does not arise: the group as such moves towards or away from its only ictus. Lussy uses the beginning of Beethoven's Piano Sonata op.2/1, given in figure 3.27, to demonstrate the idea of the "principal ictus."

![Figure 3.27](image)

Lussy argues that the final ictus of the first rhythmic unit, the A-flat in measure 2, is the principal ictus: the group is experienced as moving towards it. Similarly, the B-flat in measure 4 is the principal ictus of the second rhythmic unit. In the last unit, however, the principal ictus coincides with the initial one, the C in measure 7. In all three cases, the principal ictus have the longest note values and are the highest pitches within their respective groups.

Lussy does not extend the ictus-hierarchy to groups larger than rhythmic units: The idea, however, can be applied to larger-scale motions. For example, the third and fourth units in the Beethoven example above have only the initial ictus, and they define motions leading away from these points. Both groups are experienced as initiations directed towards the last group starting with the C in measure 7. Therefore, the principal ictus of the last rhythmic unit, which corresponds to its initial ictus, can in fact be regarded as a final ictus within the larger group from measure 5 through 8, marking a larger scale arrival.

Lussy argues that the ictus of a rhythmic unit always needs to fall on the downbeat of the measure. If ictus are always stable, however, arrivals that happen on a weak beat, i.e. feminine cadences, appear to contradict this requirement. Lussy certainly admits of the distinction
between feminine and masculine cadences. How, then, would feminine arrivals be explained consistently with both the argument that the ictus always mark a point of stability and repose, and that "the real ictus is always implied by [inferred from] the first beat of the last measure?" 

Lussy's theory provides both the theoretical tool and the psychological mechanism to explain the experience of the ictus as always coinciding with the downbeat, whether the arrival is masculine or feminine. The theoretical tool is the method of reduction. Whenever Lussy discusses the reduction of a rhythmic unit, the pitches that are retained, among them the ictus, are placed at metrically strong positions. In other words, tonal and metric emphasis are aligned as one moves to reductive levels from the surface. Consider Chopin's Mazurka op.7/2, shown in figure 3.28a, starting with two feminine rhythmic units. If the first unit is reduced to its stable pitches, as in 3.28b, the final stable pitch, the E in the second measure, would be placed at the downbeat. Such a displacement of the ictus is more than an analytical convention, however. It in fact can be regarded as making the more important claim that the E is mentally experienced when the F is heard.

Figure 3.28a (above), 3.28b

Lussy's theory of tonal attractions can be employed to explain the psychology of this phenomenon. The rhythmic arrival at the end of the first unit of Chopin's Mazurka op.7/2 given above is experienced with the onset of F, not because it is the most stable pitch within its context, but because it is the pitch with the highest tendency for repose, due to its melodic proximity and strong attraction to the stable E. The attraction of the F to E is delaying the arrival of the F, and at the same time, for repose, it delays it. A tension with a relative tension within the form of a tension is a structural, functional, however, and the potential evaluation profile established.

Within this theoretical framework, it is not necessary to posit a psychological or physiological explanation for these phenomena. Conviction of a feeling, for instance, is not necessary. It is enough to be aware of the tension and the tensional factor. In this sense, and in this nature and form, all phenomena are more than the changed way in which we experience the music, and how long it lasts.

63 Though the ictus's role in reductivism, the ictus is not simply a "tension point," though it is a result of a "tension" and is useful: it is the tension's space. Chopin's Mazurkas, one special case, are aware of the tension and are similar to the kind of a given feeling, and to another, and to still another, and so to speak of a given piece.
64 This is a theory of the ictus.

59 Feminine cadences, in Lussy's theory, include both harmonic and melodic arrivals on weak beats.
60 "L'ictus réel est toujours sous-entendu sur le premier temps de la dernière mesure." Lénacrouse, p.7.
61 This kind of reductive practice is already seen in eighteenth-century theorists, for example in Roch. See Chapter I, p.15.
of the F to the E is further augmented by the long duration of the former delaying the desired arrival of the latter. Because of its high tendency for repose, the F in measure 2 also marks the moment of highest melodic tension within the group. Since listeners are able to make judgements of relative tension as a piece unfolds, they can abstract from the surface a tension-profile that informs them about their location in the formal structure. The main source of this information concerning formal location, however, is not the degree of tension of a given moment, but rather the potential of the moment for further tensing, for further action; the evaluation of this potential requires an awareness of the formal tension-profile established up to that moment.

Within this tension-profile, relaxation is recognized at its onset, and not necessarily at the moment of full repose. In other words, the psychological experience of arriving starts before the actual arrival: this is because, unlike the process of tensing, the process of relaxation, once it starts, cannot be reversed before a certain local equilibrium or repose is reached. While the process of tensing requires the action of a force either to sustain or to increase the level of tension, relaxation, like gravitational pull, is independent of outside forces in unfolding as a process. In this sense, the onset of relaxation is more information-laden as to the nature and content of the immediately following time-span(s); more so than the onset of tensing, which provides much less information as to how long the process would continue and how tense it would get. This

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63 Though frequently employed in recent music theoretical and psychological writings, the precise conceptual designation of the term "tension," to my knowledge, has not been specified. It is assumed that listeners experience varying degrees of "tension" as the music unfolds. But, what exactly is such experienced "tension" the result of? An analogy to the concept of "heat" as employed in thermodynamics is useful: accordingly, "heat" is the energy generated as a body moves in physical space. Conceptually, it is a property of "the move" and not of the moving object. If one speaks of the experience of "heat" in this sense, one would be referring to an awareness of a change in the level of energy. "Tension" in music is conceptually similar to "heat" as the property of a motion. In other words, it is not the property of a given moment, but rather of the "move" in tonal space from one location to another. It is the essential byproduct of any tonal move. Tension-profile is, so to speak, the dynamic "trace" created as each tonal move structures a given piece.

64 This is also in accordance with the physiology of the phenomenon of respiration.
inner dynamics shared by all natural motions explains why it is possible to conventionalize formal endings, as various kinds of cadences, and not formal initiations. It also accounts for Lussy's claim that the final ictus of feminine arrivals are experienced at the downbeat of the final measure of a given rhythmic unit. In reference to example 3.28, when the F in measure 2 is heard, the listener experiences it not only as the moment of highest melodic tension so far, but also as the initiation of the relaxation process; for, the tension-profile established in the first measure informs him that a local relaxation and repose is needed before further tensing activity can take place.

Lussy argues that in some rhythmic groups the perceptual prominence of the note immediately following the final ictus may create the impression of a secondary "fictitious ictus" (actus fictus). The beginning of the third movement of Beethoven's Piano Sonata op. 79 in figure 3.29 exemplifies such a case.

![Figure 3.29](image)

According to Lussy's theory, the B on the second beat of the second measure is prominent because of its length; but the real ictus corresponds with the G on the downbeat of that measure. The implication of the idea of a "fictitious ictus" is that the listener's decision concerning the pitch to be retained in the elementary reduction he mentally performs inclines towards both the real and the fictitious ictus. The intuition Lussy attempts to explain in reference to example 3.29, however, is not related so much to surface prominence as to the operation of tonal attractions, both melodic and harmonic. In the second measure of this example, the B on the second beat could be heard as the real ictus, the stable arrival pitch, relaxing the melody locally from the fifth to the third step of the G major chord; yet, while the melody relaxes, the harmony tenses from the first to the second beat in measure 2. The listener, then, would be prompted to retain the B melodically, and reduce it out harmonically. In the second rhythmic unit of the same example, the B in measure four does not get as both a real ictus of a fictitious ictus.

Rhythmic groups

In Lussy's theory, and the first bound end of the phrase is the beginning; should it be the first important of a phrase, over at the phrase, as is generally the case in the more complex whole the phrase.

Later, Reicha's ictus as boundary of a small rhythm group, not the phrasing proviso.

However, it is the phrase's beginning. During later smaller than the structure being.

Rather than

65 Koch, H.G.
66 Reicha, F.
Adam Prager
Nancy K
von Coignet
C'est à-dire
C'est à-dire
does not generate the experience of a “fictitious ictus,” because it is heard as both a melodic and a harmonic relaxation; in this sense, it is the real ictus of a feminine arrival in Lussy’s terms.

Rhythmic Categories

In Lussy’s theory, identifying rhythmic units requires locating the initial and the final ictus of a group and determining whether they establish the boundaries: rhythmic units can start before the initial ictus, and end after the final one. In this connection, Lussy is the first theorist to analyze rhythmic groups in terms of the features that define both their beginnings and their endings. During the eighteenth century, theorists had been primarily concerned with the various ways of ending groups at the phrase level, and had cited harmonic criteria, i.e. the different cadences employed for this purpose. In identifying groups smaller than the phrase, they had appealed to the musical experience of their readers. Koch, for instance, had argued that

generally speaking, only feeling can determine both the places where resting points occur in the melody and also the nature of these resting points, if they are more or less noticeable, that is, if they indicate whether the sections of the whole thus ended may be considered complete or not.65

Later, Reicha for the first time mentioned the criteria of length and rest as boundary markers of sub-phrase segments. Her wrote:

a small rhythmic group (dessin), in order to be distinguished from the following group, must have at least a quarter-cadence, that is a small reprise point, which [is provided by] a pause or a longer note.66

However, neither Koch nor Reicha discussed the ways melodic segments begin. During the second half of the nineteenth century, rhythmic groups smaller than the phrase were extensively treated in terms of their internal structure by Westphal, who used Greek poetic meters in analyzing them. Rather than drawing the group boundaries from the properties of the


musical surface, Westphal would apply preconceived metric patterns to it — not only implying segmentations contrary to musical intuitions, but also reinterpreting the internal construction of the poetic feet in the process. For instance, Westphal often has recourse to poetic “resolutions” and “contractions,” which are considered anomalies and not the norm in scansion: “Resolution” refers, in Greek and Latin prosody, to the replacement of a long by two shorts, making for instance a tribrach (ο ο ο) of an lamb (ο —). “Contraction,” on the other hand, is the uniting of two shorts into one long. In his attempt to fit prosodic meters to the musical surface, Westphal is forced, for example, to read — — — — — ο ο — as an anapestic tetrameter, which should in fact take the following form: ο — — — ο — — — —.

The former pattern shows Westphal’s analysis of the first two measures of Beethoven’s Piano Sonata op.2/1, given in figure 3.30. The quarter notes are represented as “longs”, only some of which are accented, and the triplet in the second measure is assigned two poetic “shorts.” The whole group is identified as an anapestic tetrameter.67

![Figure 3.30](image)

Lussy identifies rhythmic units in terms of the manner in which they begin and end. Accordingly, there are five rhythmic categories: anacrusic, decapitated, thesic, masculine and feminine. A rhythmic unit belonging to any of the first three categories, which define beginnings, also belongs to either of the last two. In addition, rhythmic units are identified by their length, determined by the number of measures they involve. Lussy uses the terms monopody, dipody, etc. to refer to units with one, two, etc. measures. Hence, a full label for a rhythmic unit would, for example, be “anacrusic feminine dipody.”68

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68 Lussy writes that such a label is evidently too long, and that music theory needs a “semiology,” with signs similar to those used for chemical formulas, such that upon hearing the label, one would form a clear and complete image of the outer form of the rhythmic unit.

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A rhythmic unit is anacrusic, and therefore the third move in figure 3.31, starts:

![Figure 3.31](image)

When the initial downbeat are of the part of the word and call them according to Lussy’s measure, where one starts counts since “metrical,” the rhythmic units.

![Figure 3.32](image)

When the rhythm beat, it is called given in figures rhythmic units.

A rhythmic unit is *thetic* when its first note corresponds with the initial ictus, and thereby with the downbeat of its first measure. For example, the third movement of Beethoven’s Piano Sonata op.79, reproduced as figure 3.31, starts with a thetic dipody.

![Figure 3.31](image)

When the initial ictus is preceded by one or several notes, the rhythmic unit is *anacrustic*. Lussy states that since rhythmic units starting on the downbeat are called *thetic*, it may seem appropriate to use the counterpart of the word “thetic” to refer to those starting before the downbeat, and call them *arsic*. However, this would not be an accurate description, according to Lussy: for the arsis refers to the upbeat, or the last beat of the measure, whereas an *anacrusis* can start on any part of any beat within a measure except on the thesis. The third movement of Beethoven’s Piano Sonata op.31/2, given in figure 3.32, starts with *anacrustic dipodies*: one starts counting the measures of a rhythmic unit with the first thesis since “metrically, the notes forming the anacrusis do not count within the rhythmic unit they belong to.”

![Figure 3.32](image)

When a rhythmic unit lacks its initial ictus, and has a rest on the downbeat, it is called *decapitated*. Chopin’s Nocturne op.48/1 and op.48/2, given in figures 3.33 and 3.34 respectively, both start with decapitated rhythmic units.

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69 “Comme nombre métrique, les notes formant anacrouse ne comptent pas dans le rythme auquel elles appartiennent.” In “De la culture du sentiment musical,” p.21.
In essence, these are thesic units deprived of their initial ictus. In notation, they appear anacrustic: however, they lack the quality of “moving towards” the following downbeat, which is an essential feature of anacrustic beginnings. Because of the absence of a determinate initiation, decapitated groups are experienced neither as “moving away” nor as “moving towards,” giving them a unique expressive quality. Lussy argues that such rhythmic units “proceed in a heavy, hesitant, anxious manner” since they lack the “assurance” the initial ictus provides. Accordingly, the absence of an initiating impulse temporarily “paralyzes” the attractions between the tones.

Lussy argues that one of the means of determining whether a rhythmic unit is anacrustic or decapitated is singing it: if one instinctively renders the beginning by an inhalation, the rhythm is anacrustic. If delivered by an exhalation, it is decapitated. However, since the process of exhalation is represented in Lussy’s theory by the time-span that starts a measure, well-formed thesic rhythmic units, i.e. those with an initial ictus, would also be rendered by an exhalation. How, then, does one know that the unit is decapitated and not thesic? The difference between these two kinds of rhythmic units in terms of their delivery in singing is that the onset of a thesic rhythmic unit coincides with the onset of the exhalation process, the highest point on the dynamic curve of respiration. Since the onset of a decapitated rhythmic unit does not correspond with the onset of the exhalation process, it provides imprecise information about the location of its initiation within the dynamic curve in question; it is this ambiguity of location that accounts for the expressive qualities of decapitated rhythmic units as described by Lussy.

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70 "Le commencement des rythmes décapités ont une marche hésitante, lourde, inquiète. Cette inquiétude résulte de l'absence du temps fort, de l'ictus initial qui sort de point d'appui à l'arceau rythmique." L'anacrouse, p.35. “Si la privation du point d'appui se prolonge, s'il ne retrouve pied, il devient haletant; il suffoque, il oppose. Le point d'appui seul donne le calme et l'assurance." Le rythme, p.15.
The three rhythmic categories introduced so far, namely, *thetic*, *anacrustic*, and *decapitated*, represent rhythmic initiations. Endings of rhythmic units, on the other hand, present only two categories: *masculine* or *feminine*. If the last pitch of a rhythmic unit coincides with the final ictus, it is called *masculine*. Chopin’s Nocturne op.48/2, reproduced as figure 3.35, starts with a masculine rhythmic unit.

![Figure 3.35](image)

If the final ictus of a rhythmic unit is followed by one or several notes, the ending is *feminine*. Chopin’s Mazurka op.7/2 – figure 3.36 – starts with two feminine units.

![Figure 3.36](image)

If a rhythmic unit is a *thetic monopody*, i.e. made up of a single measure and starting on the downbeat, as in the first unit of Mozart's A major Piano Sonata – figure 3.37 – it is necessarily *feminine*.

![Figure 3.37](image)

*Anacrustic monopodies*, on the other hand, can be feminine or masculine. The last movement of Beethoven’s Piano Sonata op.10/1 starts with *anacrustic masculine monopodies* (figure 3.38); the last movement of his op.49/1, on the other hand, begins with *anacrustic feminine monopodies* (figure 3.39).
4. Notation of Rhythmic Units: The Theory Of “Bonne Mesure”

One of the characteristic features of theories of rhythm proposed during the second half of the nineteenth century is the importance attached to “correct” notation of rhythmic groups. Theorists of the period, among them Riemann and Lussy, argued that unless metric notation – the time signature as well as the placement of the barlines – is clearly correlated with rhythm, the notated score would not fulfill its basic function of guiding the performer in an intelligible delivery of the music. In the absence of notational coordination between rhythm and meter, the tendency of performers to respond to the barline as a cue for the dynamic accentuation of the immediately following event would result in a misrepresentation of grouping; rhythmic units, instead of being led to their arrival points as in one continuous impulse, would succumb to the mechanical segmentation brought about by the metric accentuation.

The tendency of performers to regard the barline as a sign with structural significance is confirmed by recent research. Experiments carried out by researchers such as Sloboda, Clarke, Bengtsson and Gabrielson demonstrate that the position of the barline in a melody significantly influences its accentuation and timing in performance because of perceived changes in the location of group boundaries.71

An important outcome of the theoretical discussions concerning the relation between the notated meter and rhythmic grouping during the late nineteenth century was the growth of performance editions

in which the presumed wrong-barring by the composer would be corrected by the editor. The best-known examples in this connection are Riemann’s editions (Phrasierungsausgaben) of Mozart (1883), Beethoven (1885) and Haydn (1895) Piano Sonatas. Lussy’s single performance edition involving such metric alteration of a score, an edition of Beethoven’s “Pathétique” Piano Sonata op.13, would appear posthumously in 1912.

According to Lussy, one of the most important functions of musical notation is to reveal the rhythmic category of each unit: for instance, a th
c
thic masculine rhythmic unit is to be notated with its first and last pitches on the downbeat. Lussy argues that when rhythmic units are thus coordinated with the musical measure in notation, the resulting structure represents a bonne mesure. Lussy states that “the inconveniences resulting from faulty metric [notation] exist only for the performer and not for the listener.” Accordingly, the listener always perceives rhythmic units in bonne mesure. In this sense, the musical structure referred to as bonne mesure is the perceived measure. Hence, there are two dimensions to Lussy’s theory: the structural features of the perceived measure, and its notational representation. The greater part of Lussy’s discussion concerns the latter.

According to Lussy, a bonne mesure is neither a metric nor a rhythmic structure, but a “fusion” of the two. He writes that the origin of bonne mesure lies “in the fusion, in the agreement or correspondence of the elements of force presented by the theses and the ictus.” Even though the two components that constitute the measure, i.e. rhythm and meter, are conceptually separate, the measure itself is a perceptual unity that is qualitatively distinct from either of its components. In this sense, it is much like a Gestalt that is more than the sum of its parts.

Accordingly, the most important defining property of a bonne mesure is the coincidence of the ictus with theses. Lussy argues that this coincidence represents the correspondence of the moments of psychological repose with physiological repose. In a bonne mesure, the psychological repose brought by the ictus corresponds with the physiological repose

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72 “Les inconvénients résultant de formules métriques déf ectueuses, n'existent que pour l'exécutant et non pour l'auditeur.” Le rythme, p.99.
73 “Où trouver l'origine de la bonne mesure? Précisément dans la fusion, dans la concordance ou coin
cidence des éléments de force qu'offrent les thèses et les ictus.” In “De la culture du sentiment musical,” p.56.
provided by the thesis, which represents the exhalation phase of respiration. Hence, Lussy argues that to reflect the *bonne mesure*, i.e. the perceived measure, all ictus have to be notated as downbeats.

This requirement, according to Lussy, implies that anacrustic rhythmic units cannot be notated as starting on the downbeat, which is reserved for either the theses or the ictus. For example, the first two units of the melody in Mendelssohn’s *Lieder ohne Worte* op.67 no.6, given in figure 3.40a, are written as thetic units; it visually appears as though the downbeat of measure 4 is the initial ictus of the first rhythmic unit. Lussy argues that a reduction of the melody, as shown in figure 3.40b, reveals that the fourth measure is in fact an anacrusis to the first rhythmic group, the initial ictus of which coincides with the G-sharp on the downbeat of measure 5. Hence, the *bonne mesure* in which the initial and final ictus would coincide with the theses and the anacrustic nature of the rhythmic units would become clearly visible requires 6/8 as time signature (figure 3.40c).

![Figure 3.40a](image1)

![Figure 3.40b](image2)

According to the figure, placing the starting beat as the G-sharp showing the anacrusis, as in figure 3.40c, would be an aesthetic error, as the c-minor progression, by the interpretation of the author.

![Figure 3.40c](image3)

A faulty interpretation of a rhythmic group aurally
According to Lussy, the notation in certain cases can be adjusted to reflect anacrusic rhythmic units and thereby the bonne mesure by simply displacing the barlines without altering the time signature. Figure 3.41a, showing the beginning of Beethoven's Piano Sonata op.27 no.1, is such a case. Lussy states that if the barlines are moved half a measure to the left as in figure 3.41b, the correct category of the rhythmic units disguised by the incorrect notation would be revealed.

A faulty notation, according to Lussy, can at times disguise the category of a rhythmic unit in terms of its ending. For instance, a rhythmic unit aurally experienced as masculine may look feminine in notation. This
happens when the final ictus of a unit is not preceded by a barline. Lussy uses the beginning of the Adagio from Beethoven's Piano Sonata op. 2 no. 3, given in figure 3.42a, to exemplify such a case.

![Figure 3.42a](image)

Lussy argues that in 2/4 the final ictus of the rhythmic units in example 3.42a do not correspond with the theses. Because of the absence of the visual cue, i.e. a barline, that identifies the final ictus by immediately preceding it, a performer guided more by the visual notation than by his aural experience of the music, would fail to drive each rhythmic unit towards its repose point, the final ictus. Hence, the correct notation of this passage, according to Lussy, would be in 2/8 as shown in figure 3.42b.

![Figure 3.42b](image)

This argument involves an inconsistency. Since the barline, according to Lussy, is a sign that identifies both the thesis and the ictus – the former referring to a metric, and the latter to a rhythmic phenomenon – how would a performer know, only relying on his visual reading of the score, that a given barline cues not the ictus but the thesis? This inconsistency is especially apparent in the case of rhythmic units that involve several measures, and thus several theses but only two ictus, as in the example from Verdi's La Traviata reproduced here as figure 3.43. In reference to the downbeat of the second measure, one has no visual means of deciding whether it is only a thesis or also an ictus, unless aural judgement to discern the degree of tonal stability is called upon.

![Figure 3.43](image)
Lussy's discussions of the theory of *bonne mes"re* in his later publications, particularly in *L'ancr"ose dans la musique moderne* of 1903, display an increasing concern with the determination of the number of beats the notated *bonne mes"re* of a given piece should have. The requirement that the ictus coincide with the theses is no longer regarded as sufficient for the correct representation of the *bonne mes"re*; in addition, the number of beats in the notated measure should indicate the number of beats in the perceived measure. This new requirement in fact appears as an attempt to amend the above-mentioned inconsistency concerning the inefficiency of the barline to distinguish the thesis and the ictus visually. Lussy argues that Brahms' *Hungarian Dance* no.6, the beginning of which is shown in figure 3.44a, is not notated in *bonne mes"re* even though the ictus of the units do correspond with theses: for the perceived measure includes 4 and not 2 beats. Accordingly, the correct notation of the *bonne mes"re* for this example is as in figure 3.44b. Here, only the ictus are notated as downbeats, i.e. as theses, with the implication that the perceived measure is in fact determined by the length of the rhythmic units.

![Figure 3.44a](image1)

![Figure 3.44b](image2)

In explaining the preference for a 4-beat measure in reference to Brahms' *Hungarian Dance* shown above, Lussy mentions the gestures one would employ in conducting it. Accordingly, when the conducting movements are "effortless," and least mechanical, one knows that he is conducting the *bonne mes"re*. When the passage in 3.44a is conducted in 4/4, i.e. as in 3.44b, the movements are experienced as lighter – possibly because they are shorter – and according to Lussy this lightness better fits the expressive character of the piece. The implication of this argument, i.e.
that the perceived musical structures can be represented by a body-specific encoding, which gets its input from the muscular sensations of tension and relaxation, is indeed one aspect of Lussy’s theory that received much attention during the first decades of the twentieth century, particularly in the teachings of his student Emile Jaques-Dalcroze.

The most extensive application of Lussy’s theory of bonne mesure is found in his edition of Beethoven’s Piano Sonata op.13. Figure 3.45a shows the beginning of the first movement as notated by Beethoven. 3.45b is Lussy’s notation of the same passage.

![Figure 3.45a (above), 3.45b]

The insertion of additional barlines in Lussy’s notation serves the same purpose as in the previously discussed examples: it visually aligns the ictus with thences. But why are the note values changed? Though not explicitly stated by Lussy, the explanation concerns a purely notational convention going back to the sixteenth and seventeenth centuries. One of the characteristic features of the mensural notation employed during that period was that note values were conventionally coupled with tempo indications. Slow music was notated with large note values, and faster music with shorter ones. Since modern metric notation developed gradually from the earlier mensural notation, the convention associating note values with tempi continued to be employed throughout the eighteenth century. In this connection, some theorists discussed the effects of notating a melody with smaller or larger values on performance. For instance, in The Art of Strict Musical Composition, Kirnberger wrote that

a few older composers who were very sensitive about the manner in which their pieces were performed often designated pieces consisting only of sixteenth notes by, [for example] 24/16 instead of 12/8 to indicate that the sixteenth notes should be performed lightly, quickly, and without the slightest pressure on the first note of each beat. Composers and performers today seem to know so little about these subtleties that they believe, on the contrary, that such meter designations were only an eccentricity of the older composers.\(^{74}\)

\(^{74}\) Kirnberger by Davis, p.391.
\(^{75}\) Ibid., p.
In reference to the theme of the F major fugue, notated in 6/16, from the second book of The Well-Tempered Clavier by J.S.Bach, Kirnberger argued that if it were rewritten in 6/8, not only the tempo but also the accentuation in performance would be altered. He wrote:

6/16 meter differs greatly from 6/8 meter in the hurried nature of its tempo and the lightness of its execution. If the theme at A is rewritten as at B, the tempo is no longer the same, the gait is much more ponderous, and the notes, particularly the passing notes, are emphasized too much; in short the expression of the piece as a whole suffers.  

As a foundation for a theory of performance, the most important feature of Lussy's theory of rhythm and meter is the emphasis placed on the motional aspects of the musical structure. Accordingly, the source of tonal motion lies in the successive phases of action and relaxation and the directionality generated by the tonal attractions. This view leads Lussy to conceive of the elements of expression in performance as the externalization of the motion experienced that the tones generate. The features that give rise to tonal structures are thus the very ones that account for the expressive qualities of musical performance.

75 Ibid., p.388.