

2. Text Setting and Prosodic Form

2.0 Introduction

The discussion in chapter 1 focused on a specific aspect of what has been described by Bruce Hayes as the text setting problem (Hayes, forthcoming). For the moment, it will be useful to take a step back and describe this problem somewhat abstractly as follows:

2.0.1 The text setting problem

Given a sequence of syllables S and a tune T , what are the properties of those assignments of S to T which are heard as constituting acceptable text settings.

It has occasionally been noted (e.g. Jackendoff, 1989) that the text setting problem shares certain similarities with the central problem addressed by those concerned with a formal account of poetic meter. I will refer this as the prosodic form problem defined as follows:

2.0.2 The prosodic form problem

Given a poetic meter M , what conditions are imposed on sequences of syllables S such that S can be construed as members of the class M .

Stated in these terms, the two problems appear to be distantly related, if at all. However, as each problem is formulated in greater detail, the solutions approach if not a point of convergence, at least map out certain areas of common ground.

In the following, I will explore certain facts which suggest that the prosodic form problem and the text setting problem may be, if not reducible to each other, two

complementary aspects of the same problem in certain domains and discuss some of the barriers which prevent a unified account of the phenomena in question.

2.1 Prosodic Form within the Similarity Metric

The main aspect of the text setting problem discussed in the previous chapter was the observation that the independent musical structure of strophic songs is subjected to considerable variation based on the requirements of the text assigned to it. The primary constraint on the form of these variants is a characteristic of weak metrical positions within the grid corresponding to the original tune some of which may be occupied by events or left vacant. This optional status gives rise to a family of tunes which are acceptable so long as they are heard as sufficiently close to, i.e. variants of, the original.

Any reasonable approach to the prosodic form problem must take into account what is at least a superficially similar characteristic of verse form, namely that poetic meters designate as acceptable not a single line type but a family of lines. In most verse traditions a significant source of variation is induced by discrepancies in the syllable count of acceptable lines. In their influential formulation of the prosodic form problem, Halle and Keyser (1971, hereafter HK) accommodate these alternate forms of iambic pentameter lines by proposing an underlying template consisting of alternating strong and weak elements some of which are, as indicated by parentheses, optional.

2.1.1 (W)SWSWSWS(X)(X)

The parenthesized initial position is generally included in most iambic lines but omitted in headless feet for which HK cite Chaucer's line "Twenty bookes clad in blak and red."

The final positions indicated by X in 2.1.1 are occupied in lines such as "To be or not to

be that is the question” and "Whatever ails me, now a-late especially." These feminine forms are taken by HK to be exceptional: the normative iambic line is assumed to be masculine or "end stopped" as in "The cufew tolls the knell of parting day." Restating these observations in the terms of the similarity metric the unparenthesized line medial positions in 2.1.1 are mandatory: they are present in all metrical lines of iambic pentameter and their omission would result in an unmetrical line. The initial and final metrical units, in contrast, are optional, with the former being optionally omitted and the latter optionally occupied.

Assigning each metrical element from HK's template the appropriate status defined in the similarity metric (hereafter SM) yields the following mapping between the two strings defined in each approach:

2.1.2

SM	+	1	1	1	1	1	1	1	1	1	-	-
HK	(w)	s	w	s	w	s	w	s	w	s	(x)	(x)

The next step in reconciling the two representations involves assigning a grid corresponding to the string of events. A subset of the theoretically infinite class of grids which can be applied to the string of syllables indicated in 2.1.2 are those which manifest a one-to-one correspondence of metrical elements to a base gridline L(0). For simplicity, we will limit ourselves to this class of grids for the moment bearing in mind that most melodies make use of more rhythmic variety than the string of isochronous events indicated in 2.1.3:

2.1.3

	x	x	x	x	x	x	x	x	x	x	x	x	L(0)
SM	+	1	1	1	1	1	1	1	1	1	-	-	
HK	(w)	s	w	s	w	s	w	s	w	s	(x)	(x)	

The next step is to assign the tactus line L(1) of the grid designating the location of strong and weak positions among the subtactus positions designated by L(0). The placement of this level is subject to the equal spacing requirement dictating that strong positions alternate with either one or two weak positions on the immediately lower level. Corresponding L(1) with the left edge of L(0) allows for two of what we will refer to, following GTTM, as **in phase** arrangements.

2.1.4

a) * binary, in phase

	x		x		x		x		x		x		L(1)	
	x	x	x	x	x	x	x	x	x	x	x	x	L(0)	
SM	+	1	1	-	-									
HK	(w)	s	w	s	w	s	w	s	w	s	(x)	(x)		

b) * ternary, in phase

	x			x			x			x			L(1)
	x	x	x	x	x	x	x	x	x	x	x	x	L(0)
SM	+	1	1	1	1	1	1	1	1	1	-	-	
HK	(w)	s	w	s	w	s	w	s	w	s	(x)	(x)	

As indicated by the asterisks, neither of these grids aligns properly with the HK iambic paradigm: what we take to be violations, indicated here in bold faced type, are mismatches which, for the moment we will construe as strong syllables assigned to weak positions on the metrical grid occurring adjacent to weak syllables assigned to strong positions.

A non-violative arrangement can be achieved making use of an **out of phase** binary grid, constructed by aligning L(1) above the second L(0) position. The musical term anacrusis refers to those events which occur on the leftmost edge of out of phase grids, in this case, the initial syllable of the iambic line:

2.1.5 binary, out of phase, (single anacrusis)

		x		x		x		x		x		x	L(1)
		x	x	x	x	x	x	x	x	x	x	x	L(0)
SM	+	1	1	1	1	1	1	1	1	1	-	-	
HK	(w)	s	w	s	w	s	w	s	w	s	(x)	(x)	

Two additional out of phase relationships are also available. These are created by constructing ternary grids, marking as strong each third element of L(0). These allow for a single or double anacrusis to precede the initial strong event. Several mismatches (shown in bold face 2.1.6) will result when these out of phase ternary grids are assigned to the iambic pentameter paradigm.

2.1.6

a) * ternary, out of phase, single anacrusis

			x			x					x		L(1)
		x	x	x	x	x	x	x	x	x	x	x	L(0)
SM	+	1	1	1	1	1	1	1	1	1	-	-	
HK	(w)	s	w	s	w	s	w	s	w	s	(x)	(x)	

b) * ternary, out of phase, double anacrusis

			x			x					x		L(1)
		x	x	x	x	x	x	x	x	x	x	x	L(0)
SM	+	1	1	1	1	1	1	1	1	1	-	-	
HK	(w)	s	w	s	w	s	w	s	w	s	(x)	(x)	

Taken as a whole the five grids in 2.1.4-2.1.6 define the performance pattern associated with five basic meters familiar from traditional prosody. The in phase binary and ternary grids in 2.1.4 define trochaic and dactylic meters respectively. The two out of

phase ternary grids in 2.1.6 denote sequences of amphibrachic and anapestic feet. The iambic grid in 2.1.5, as mentioned, can be defined in musicalist terms as an out of phase binary grid.

2.1.1 Digression: Stress Mismatches in Textsetting and Prosodic Form

On the one hand, this is, of course, telling us what we already know albeit in unfamiliar terms: when the representations are superimposed, a verse paradigm should "match" its associated musical paradigm. In particular, the iambic rhythm represented by the similarity metric should match HK's prosodic representation of iambic pentameter. However, this seemingly innocuous statement obscures a more controversial issue addressed at the outset. Are the two formalisms ultimately directed towards the same underlying phenomena or do the examples in 2.1.4 and 2.1.5 merely indicate a coincidental area of overlap between the text setting and metrical form problems?

We will return again to this question, but before we do so it is relevant to note that in addition to representing two salient aspects of the underlying form dictating iambic pentameter –the potential for optional metrical elements and the periodic alternation of weak and strong positions- the similarity metric is also capable of making the essential determination which H+K and other generative metrical approaches take as fundamental to a theory of metrical form: to provide a means to distinguish between "metrical" and "unmetrical" texts. It will be recalled that this is accomplished within the HK system by the stress maximum principle (hereafter SMP). The SMP limits the appearance of stress maxima defined as "fully stressed syllable occur(ring) between two unstressed syllables in the same syntactic constituent" to S positions in metrical lines. 2.1.1.1 demonstrates how the SMP functions in practice: In 2.1.1.1 a) all stress maxima in bold face type are

correctly matched hence the line is correctly predicted to be acceptable. In b) the stress maximum assigned to a W position results in the line “Ode to the West Wind by Percy Byssche Shelly” being categorized as unmetrical.

2.1.1.1

	(W)	S	W	S	W	S	W	S	W		S (X)	(X)
a)	The	cur	few	tolls	the	knell	of	parting	day			
b)	Ode	to	the	West	Wind	by	Per	cy	Byssche	Shelly.		

Excluding violative lines by the SMP within the grid based representations in 2.1.4-2.1.6 requires nothing more than a substitution of terminology. That is, we can simply posit that stress maxima are required to be assigned to tactus level metrical positions on the grid. Text-tune composites such as 2.1.1.2 do not meet the requirements of this form of the stress maximum condition:

2.1.1.2

												L(1)
x	x	x	x	x	x	x	x	x	x	x	x	L(0)
+	1	1	1	1	1	1	1	1	1	-	-	
	Ode	to	the	West	Wind	by	Percy	Byssche	Shelly.	∅		

Such lines are, as noted in HK, quite rare in the corpus of iambic pentameter verse. Furthermore, more significantly for our discussion here, mismatches of the sort indicated in 2.1.1.2 are also quite uncommon in the English vocal literature (Kelly and Palmer 1992), a topic we will return to subsequently.

Finally, another indication of the interaction of formal prosody and text setting can be seen by revisiting the definition for mismatch proposed in 1.1. It will be recalled that we identified the mismatch as a “stressed syllable assigned to a weak position adjacent to an unstressed syllable assigned to a strong metrical position.” On these grounds, the second and third syllables of the texts 2.1.1.3 a) and b) assigned to a simple tune such as “Frère Jacques” manifest stress mismatches.

2.1.1.3

- | | | | | | | | |
|--|---|---|---|---|---|---|-----|
| | x | | x | | x | | x |
| | x | x | x | x | x | x | x x |
| | C | D | E | C | C | D | E C |
- a) The **boy is** at home on Friday*
- b) Joe 's boy is at home on Friday

Given that “boy is” meets the criterion for mismatch appealed to previously, a) and b) are predicted to be deviant. This prediction is incorrect: examples like b) are relatively frequently encountered in English language songs and are experienced as more or less natural text settings whereas a) is both quite rare and experienced as problematic. What appears to account for the asymmetry in 2.1.1.3 is the SMP: “boy” functions as a stress maximum in a) and is therefore predicted to be an unacceptable mismatch. In b) the stressed syllable “boy” is neutralized by adjacency to the stressed syllable “Joe” and the setting is, apparently on this basis, not heard as mismatched.

Insofar as the SMP is the correct explanation for listeners’ judgments, the stress maximum, a category devised to account for prosodic form appears relevant to intuitions which govern well formed textsettings. If the two practices implicate non-overlapping empirical domains, one would not expect the same principle to have any explanatory power in both domains as seems to be the case here.

2.2 Musicalist Scansion

The most radical interpretation of facts such as those just mentioned is that they indicate that the prosodic form and text setting problems outlined in 2.0.1 do not just share an area of overlap but are the same problem. It should be recognized that insofar as variants of this position have been proposed in the literature, they have not been

influential. Part of this skepticism is based on the history of “musicalist” approaches to prosody whereby an actual or idealized performance of a metrical text is represented in standard or modified musical notation, (the grid being one such non-standard musicalist representation). The discussion in Groves (1998) suggests why these are generally regarded as having provided relatively little insight into the nature of prosodic form. We will not review Groves’s arguments here except to agree with him (and others) that a nadir of sorts is reached in the musicalist scansions of Lanier (1899), most notably of, Hamlet’s soliloquy:

2.2.1



Among those criticizing Lanier’s scansion is Gross (1964) who refers to 2.2.1 as “scattering sand in the eye and pouring wax in the ear”. While this characterization is reasonable it is also somewhat misleading in that, as a musical representation, 2.2.1 is simply inaccurate: few musicians would find it natural to recite the text according to the notational specifications therein or would transcribe any imaginable recitation in this way. Rather than constituting a decisive verdict on musicalist representation, Gross’s recognition that 2.2.1 does violence to the form which a reader projects on this line leaves open the possibility that an accurate musicalist representation could come closer to representing an essential aspect of this structure, by extension, the underlying abstract form of metrical lines within the meter in question.

Furthermore, even if no satisfactory representation of the text in 2.2.1 could be advanced in any form of musical notation, this may be a fact about the particular line in question, a general characteristic of Shakespearean iambic pentameter, or certain varieties of iambic pentameter. Any or all of these categories may be ill suited for representation by musicalist scansion. It does not, however, follow that musicalist transcriptions necessarily fail to represent salient aspects of all types of metrical texts.

2.3 Musicalist Metrical Form

In particular, one variety of texts would appear to require a musicalist scansion, namely those which were fashioned specifically for use in musical contexts. Consider, for example, the lyrics to the Irving Berlin song “White Christmas”:

2.3.1 Text of White Christmas

I'm dreaming of a white Christmas
Just like the ones I used to know
Where the treetops glisten, and children listen
To hear sleigh bells in the snow

Those who know the song will assign the text to the sequence of events which Berlin composed, resulting in the following musicalist scansion (in Lanier's conventional musical notation),

“Christmas” on a W position:

2.3.5

W S W S W S W S
I'm dreaming of a white **Christ**mas

More resistant is the third line which contains eleven syllables:

2.3.6

Where the treetops glisten, and children listen

One could conceivably account for such a line along the lines of HK by revising the paradigm to include parenthesized optional positions resulting in the following scansion:

2.3.7

W (W) S W S (W) W S W S (W)
Where the treetops glisten, and children listen

Another possibility would be to fracture what is represented in 2.3.6 as a single constituent into two typographic lines:

2.3.8

Where the treetops glisten
And children listen

Whereas the abundant line in 2.3.6 requires the representation of optional metrical positions in the underlying paradigm, the lines in 2.3.8 are each deficient in not containing the requisite number of syllables specified in the tetrameter paradigm. These lines thereby require the converse of optional occupancies described within the similarity metric namely that certain positions must be allowed to be unoccupied, or occupied by the null syllable represented by \emptyset :

2.3.9

W	S	W	S	W	S	W	S
∅	Where	the	tree	∅	tops	∅	glis
ten	∅	And	chil	∅	dren	∅	lis
ten	.	.					

In addition to appearing somewhat oddly enjambed due to necessity of splitting the words “glisten” and “listen” between what is presented as two lines, 2.3.9 would not qualify as a potential scansion within most theories of prosodic metrical form. The reason for this, as discussed in Tarlinskaya (2002) and in Halle-Fabb (2008) is that most prosodic theories reject on principle the representation of empty positions such as those indicated by ∅ in 2.3.9. The principled exclusion of empty position (or, stated conversely, the requirement that every metrical position be occupied) requires that prosodic scansions interpreted as musicalist structures are limited to representing monodurational temporal sequences of events. Among these is the musical sequence which Berlin assigns to the second line “just like the one I used to know” shown in 2.3.4. Most notably, prosodic grids are not able to capture the structure of any rhythmic pattern which makes use of mixed durational units. Among these is the relatively simple rhythmic form of “White Christmas” which requires six, four, two and one L(-1) grid positions assigned to syllables, as can be seen in 2.3.3. Since these temporal relationships are clearly a fundamental component of how the metrical structure of these texts is understood, prosodic scansion fails to capture an essential aspect of the metrical structure relevant to this idiom.

2.3.1 Lyrics and Metrical Form

The failure of prosodic analyses to accurately characterize the temporal form of “White Christmas” should not be understood as a liability of prosodic approaches but rather as indicative of two fundamentally distinct empirical domains each of which requires its own formal description and theoretical explanation. Specifically, the attempt to construe Berlin’s texts as making use of a more or less sophisticated variant of poetic practice misses the point for a more or less obvious reason which is that Berlin was not writing verse, but rather lyrics. This is to say that Berlin was surely not concerned with producing texts which could be construed as self-contained, independent poetic forms. Rather his texts were dictated by the requirement that their form needed to allow for appropriate interaction with a tune, composed, in many cases, prior to the text. This practice is consistent with what we know of Berlin’s working method and that of other songwriters. As noted in, for example, Wilder (1972), popular composers frequently have at their disposal a substantial catalogue of pre-existing tunes to which lyrics can be assigned according to what the occasion or context required.

Assuming, for the moment, that Berlin employed what we shall refer to as a **tune initial** text setting process in this instance, we can characterize the genesis of White Christmas as follows: the pre-existing tune composed by Berlin which would become the song has the following structure:

2.3.1.1 Tune: White Christmas

x		x		x		x		x		x		x		x		L(0)	
x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	L(-1)
E				F	E	D#	E	F				F#	G				
	A	B	C	D	C	B	A	G						C	D		
E		E		E	A		G	C		C		C	G		F		
E				F	E	D	C	D									

The song “White Christmas” emerged as the text-tune composite resulting from Berlin’s assigning syllables of the text in 2.3.1 in a one-to-one correspondence with the notes of the tune in 2.3.1.1 as represented in the following grid:

2.3.1.2 Composite Object/Song: White Christmas

x		x		x		x		x		x		x		x		L(0)	
x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	L(-1)
E				F	E	D#	E	F				F#	G				
I’m				dream	ing	of	a	white				christmas.					
	A	B	C	D	C	B	A	G						C	D		
	Just	like	the	one	I	used	to	know.						Where	the		
E		E		E	A		G	C		C		C	G		F		
tree		tops		glis	ten,		and	chil		dren		lis	ten		to		
E				F	E	D	C	D									
hear				sleigh	bells	in	the	snow									

Finally, what we have been referring to as the musicalist scansion is the song with the pitch indications removed as in 2.3.3. This deletion of pitch can be effected without distorting the essential structure of the text-tune association since the intuitions which govern English text setting appear to be largely rhythmic and do not implicate pitch (see Halle-Lerdahl 1998 for discussion). One benefit of eliminating pitch is that the intuitions governing text setting in vocal music are now seen as merging with other seeming distinct metrical practices, most notably chant and rhythmic declamation of so called metrically rigid textual idioms referred to earlier. Since no information salient to text setting appears to be lost by the elimination of pitch and since our doing so allows us to unify a class of

metrical idioms we will employ pitchless representations of lyrics well known songs.

Among these is White Christmas shown in 2.3.3 and repeated here:

2.3.1.3 Pitchless representation of composite object in 2.3.1.2 (equivalent to grid-musicalist scansion 2.3.3)

x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	L(0)	
x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	L(-1)
I'm				dream	ing	of	a	white				christmas.				
	Just	like	the	one	I	used	to	know.					Where	the		
tree	tops	glis	ten,		and	chil		dren		lis	ten		to			
hear				sleigh	bells	in	the	snow								

2.3.1.3 provides insight on the previously stated observation that attempts to consign lyrics into traditional prosodic categories are likely to fail. As noted, of the four lines of text, only the second, “just like the one I used to know” can be unproblematically construed as an acceptable line of a standard poetic meter, namely iambic tetrameter. 2.3.1.3 indicates why this is the case: in this one location of the song, syllables are required to be assigned to eight adjacent L(-1) positions which will (reflecting the geometry of the grid) be alternately weak and strong:

2.3.1.4

x	x	x	x	x	x	x	x	L(0)
x	x	x	x	x	x	x	x	L(-1)
W	S	W	S	W	S	W	S	
Just	like	the	one	I	used	to	know.	

However, as will be seen by the structure assigned to the remaining three lines, the presence of alternating weak-strong pairs is a coincidental characteristic of this one segment of the tune. No other line segment is composed of notes assigned to contiguous grid locations. For example, the initial pair and penultimate pair of syllables from the first line of the text are assigned to strong positions on the metrical grid:

2.3.1.5

x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
S			S	W	S	W	S				S	W			
I'm			dream	ing	of	a	white				christmas.				

All other eight syllable sequences in 2.3.1 will be seen to contain at least one instance of adjacent syllables assigned to adjacent strong positions. For this reason, the second line, and only the second line, is unproblematically identified as conforming to a textual meter, namely, iambic tetrameter

2.3.2 Concluding Observations: Musicalist vs. Prosodic Metrical Form

We conclude this section by making two observations. The first of these addresses a terminological point: it should be recognized that both lyrics-texts intended for assignment to a tune-and verse texts-texts constructed as independent poetic forms—can be referred to as metrical or unmetrical. However, the term metrical when applied to lyrics such as 2.3.1 is to be understood in a specific sense. Namely, metrical lyrics are those sequences of syllables which, when, inserted into a given tune, will manifest an acceptable text-tune interaction. Conversely, what can be reasonably, albeit somewhat more awkwardly referred to as “unmetrical” lyrics are the result of violative arrangements of text and tune specified by the interactive text setting principles discussed in 1.1-1.3.

Such violations can be easily created, for example, by assigning the sequence “Tyger, tyger burning bright in the forest” to the first eight notes of White Christmas. The resulting arrangement contains two stress maximum mismatches (indicated in bold face). It also contains two constituency mismatches (c.f. 1.3) resulting from prosodic units (indicated by |) misaligned with musical groups (indicated by /).

2.3.2.1 *

x		x		x		x		x		x		x		x		x
x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
E				F	E	D#	E	F				F#	G /			
Ty				ger	Ty	ger	bur	ning				bright	in			

The effect of these violations (and possibly others) is a setting which is clearly unnatural and the line is thereby judged unmetrical as a text-tune composite. The text is, however, clearly metrical as a line of trochaic tetrameter. Thus, the line is simultaneously both metrical and unmetrical. This is a paradox if one assumes a unitary definition of meter relevant to both text setting and prosody but is easily reconciled if one assumes that a stricter definition of the term, or more precisely two separate definitions are required to make sense of the facts.

The second observation has to do with the consequences arising from the specific point just mentioned. Given that two distinct cognitive categories are denoted by the term metrical, it follows that a theory of meter must specify which empirical domain it is a theoretical account of. As we just observed, a text such as “Tyger, tyger burning bright” can be construed as metrical as a text but may be unmetrical as a lyric. Conversely, a text such as “I’m dreaming of white Christmas” is eminently acceptable as a lyric for a tune but is not apparently metrical as a text within a definable standard meter. A theory of metrical form for text setting or verse form may successfully account for one or the other, but it would appear impossible that it can accurately explain what is taken to be metrical form in both. This state of affairs has resulted in some confusion in the literature, a topic we return to in the following section.

2.4 Abstract vs. Concrete Meter

Ours is by no means the first study to recognize a distinction between verse form functioning in a musical capacity in comparison to its functioning as self-contained prosodic form. Indeed the roots of this distinction appear to go back at least to the late antiquity, as discussed in Galyon (1980)

the *artes* . . . concerning poetry were . . . divided into treatments of rhythmical composition and metrical composition, a division seen in Thomas of Capua's *Ars dictandi* where he noted three types of writing: prose as in Cassiodorus, metrical verse as in Virgil, and rhythmical verse as in Primas. There were *ars metrica* and *ars rithmica*. Rhythmical verse was accentual or qualitative verse, that is, based upon stress patterns; it was at first the verse of popular songs and only later "won recognition as valid poetry in the hymns." The verse of classical poetry was quantitative verse, that is, based upon the quantity or length of the syllable; such verse came to be known as metrical verse in contrast to the newer rhythmical verse. Metrical verse was that of the schools.

In addition to the bifurcation in metrical practice noted by Galyon also significant is the distinction drawn by Thomas of Capua with respect to how these two verse types tended to be transmitted and were received by audiences. Namely, the appreciation and recognition of the underlying form of quantitative verse required formal instruction whereas the qualitative verse originally associated with the lyrics of popular song was intuitively accessible, then as now, to those who had been exposed to the surface form of the verse as it was presented in performance.

The distinction between these two verse types and the mechanisms of formal analysis appropriate to each would become influential on modern prosody. Gouvard's (1999) distinction between "versification" and "prononciation" constitutes one variant of how the two forms of metrical practice are construed in contemporary metrics.

Cette distinction entre la versification et la prononciation des vers, qui relève de la pratique du récitant, du comedien ou de l'orateur, est un

point capital: l'étude de la forme du vers n'est pas l'étude de la déclamation du vers de telle ou telle époque. Les règles qui président à l'écriture versifiée d'une œuvre littéraire ne sont pas de règles de composition.

Gouvard's focus on the underlying structure of the verse in contrast to its surface instantiation is consistent with the consensus position among metricists identified by Groves (op cit). For most of its modern history, according to Groves, formal prosody has "reject(ed) the notion that the utterance of the verse can have any relevance to the meter." "Metrical form" is "a property of texts rather than utterances" and is therefore seen as "static and inert, a pattern existing outside of or apart from any actual reading of the poem." (Groves, p 79-80) A concise formulation of the distinction is contained in Fabb and Halle (2008) who stipulate a "fundamental difference between the meter of a text viewed abstractly and the rhythm of a concrete performance of the text." The nature of the underlying textual organization can be seen in H+K's earlier comparison of the "abstract patterns" of metrical form to "flowers in a flower bed, desks in a classroom, windows on the side of a house."

"Abstract" here is to be understood as relating to the underlying principles governing the construction of the object in question; what we will define as **abstract meter** is the structure inhering in lines which are construed as "metrical" on these grounds. In contrast, what we will refer to here as **concrete meter** implicates those aspects of metrical form which are potentially present not in the inherent structure of a text but in the declamation of a linguistic sequence. Whereas abstract meter is a property of texts, concrete meter is a property of utterances, specifically of the rhythmic/temporal form of utterances which results from the interaction of a text with a tune (pitched or pitchless) having a pre-existing metrical form.

This distinction, while superficially clear, has, as noted above, not been sufficiently well understood. We will attempt to clarify some of the underlying issues in the following by schematically representing each type of meter as independent processes and also how these two metrical forms may, on some occasions, interact.

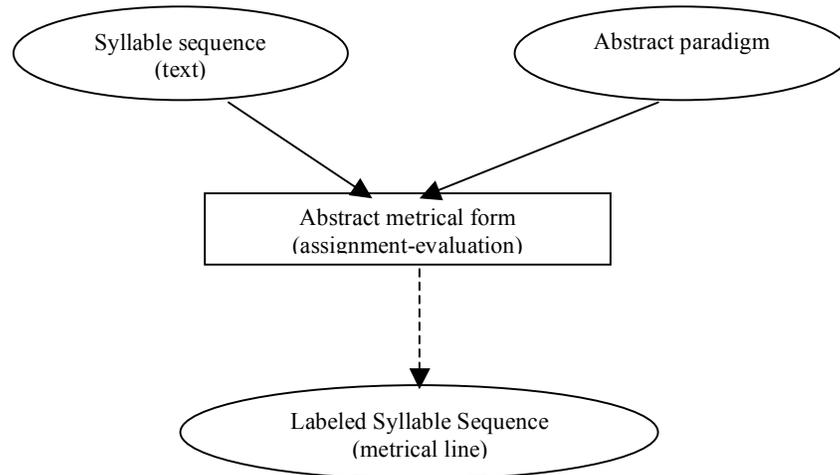
2.5 Schematic Representation of Metrical Form

The distinction just made between abstract and concrete meter allows us to revisit the two problems stated at the outset with a bit more insight. It will be noticed that the attribution of what we have been referring to as abstract meter directly implicates the prosodic form problem 2.0.2, with abstract meter being the object produced by the assignment of metrical form to a text. What was stated in the form of a question, namely “Given a poetic meter M , what conditions are imposed on sequences of syllables S such that S can be construed as members of the class M ?” can now be restated as an abstract process along the lines of traditional approaches to generative metrics. While these approaches differ in significant detail consisting of generating an output, namely a line of text, from an input consisting of a sequence of syllables and an abstract paradigm defining the particular meter.

More specifically, the process of producing a metrical line of text consists of two steps which we will refer to as assignment and evaluation: In the assignment stage, a metrical position from the abstract paradigm (e.g. S and W in HK) is matched with each unit, which we take here to be a syllable, of a prospective line. Second, in the evaluation stage the characteristics of a given syllable are checked against the specifications of the abstract paradigm. If the comparison of the syllable and metrical position meets the conditions specified by a given meter, (for example, if no syllable is a stress maximum

assigned to a W position, as discussed previously) the line is evaluated as metrical and assigned to the output. This process may be schematically represented as follows:

2.5.1 Abstract meter (prosodic form problem)

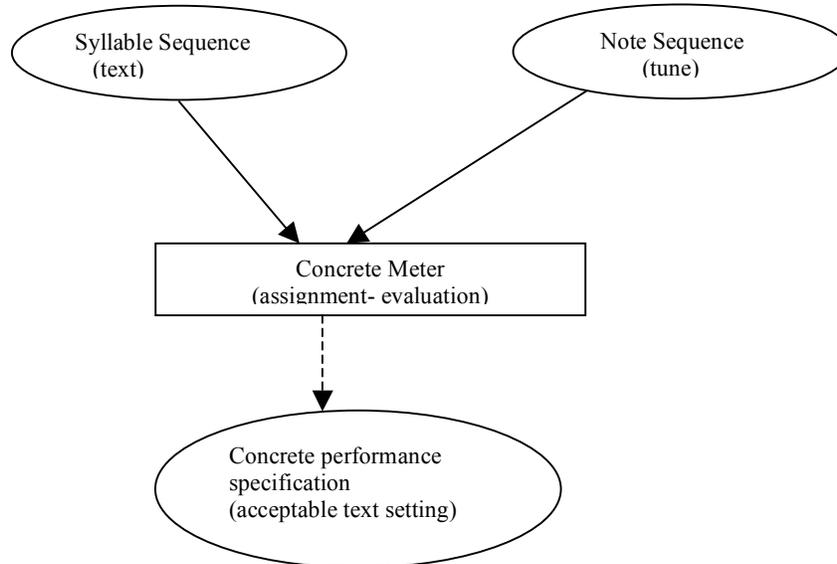


The schematic representation in 2.5.1 identifies two objects as input, one linguistic-the prospective line of text- the other prosodic-the paradigm defining the poetic meter. These are subjected to the assignment-evaluation process from which a third object emerges: a syllabic sequence with each element now attached to a prosodic label as in, for example, 2.1.1.1 a) above. That the presence of this object is provisional-depending on the evaluation being favorable-is indicated by the dashed line extending to the metrical output.

The schematic view of the metrical form problem allows us to visualize an essential difference between it and the text setting problem. Whereas both text setting and poetic meter take as input the same linguistic unit-in most cases, the syllable- in assigning prosodic form each syllable is paired with units defined within an abstract metrical paradigm. In contrast, when texts are set to tunes syllables are matched with a concrete input, namely to notes from the tune in question. If the matching is acceptable according

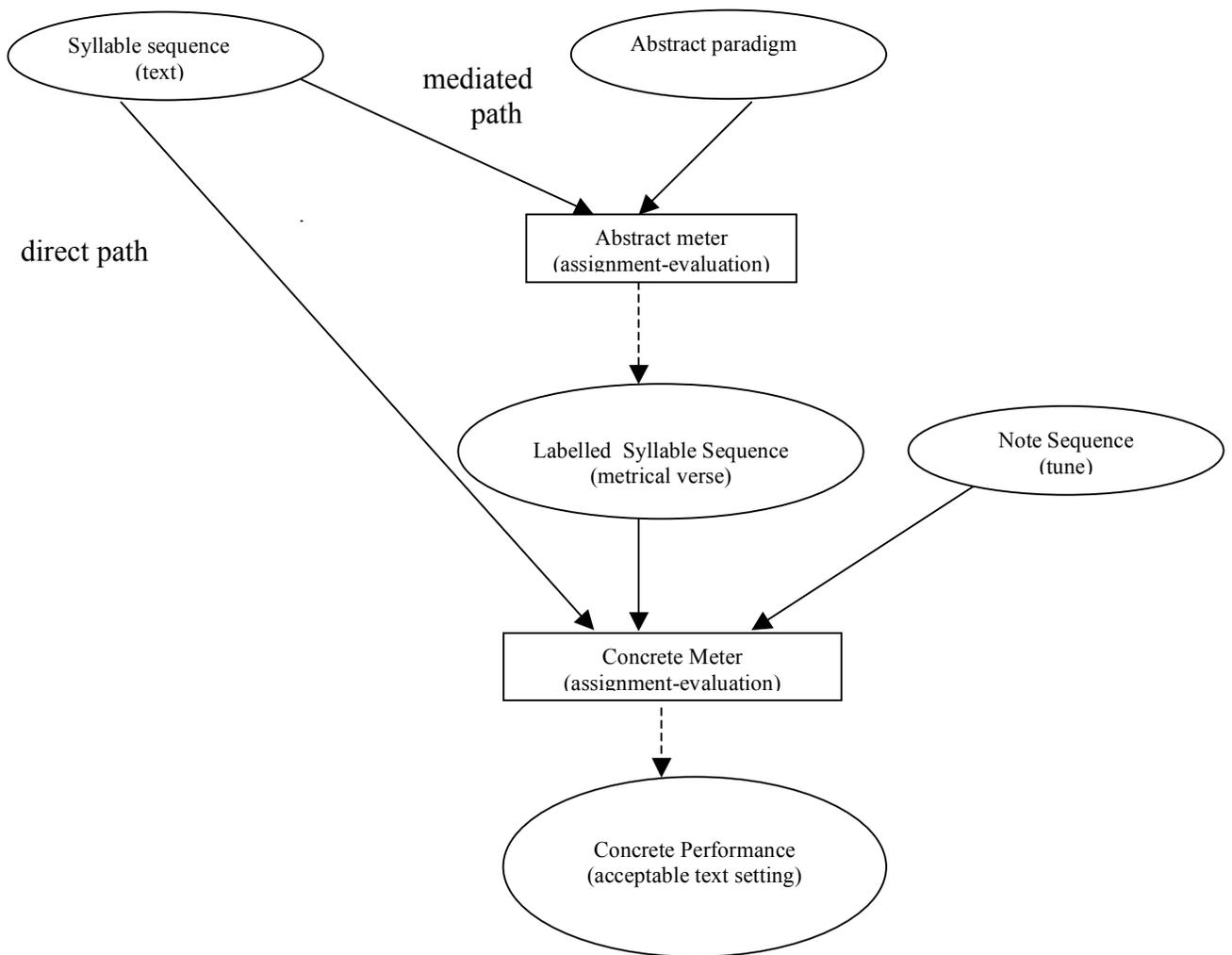
to the principles of text setting in the musical and linguistic idioms in question, an output, namely the specifications for a concrete performance of the text emerges. The following diagram schematically represents the assignment of text setting:

2.5.2 Concrete Meter (text setting problem)



While the two metrical processes represented in 2.5.1 and 2.5.2 are conceptually distinct and need to be strictly distinguished in theories of meter, it is also clear that they interact under certain circumstances. As just noted, while prose texts may be accorded a musical setting, it is likely the case that a majority of musical texts are abstractly metrical, i.e. identifiable as within a definable poetic meter. In this circumstance, it is reasonable to assume that the form of the text setting may at least to some degree mirror that of the textual meter. This entails combining the representations for abstract and concrete meter in 2.5.1 and 2.5.2 so that the syllabic sequence which functions as the output of abstract meter becomes the input into the concrete metrical component. This process is taken to be along the lines of 2.5.3:

2.5.3 Generalized metrical form



It will be noticed that 2.5.3 identifies two possible paths according to which a syllabic sequence may become realized as a text setting. One which we will refer to as the **direct path** mandates that the original syllabic sequence functions as input to the text setting evaluator, and this output subsequently results in a text setting if the matching of text and tune is well formed. The other route we will refer to as the **mediated path**. In this instance, a syllabic sequence is evaluated to determine whether it is an acceptable line within the textual, abstract meter. If it is a metrical line, a syllabic sequence emerges with

each element now attached to a prosodic label (e.g. S or W within the HK framework). A melody is then fashioned so that the abstract metrical positions align appropriately with the metrical structure of the tune.

According to this view, within the mediated path the abstract prosodic structure dictates the melodic setting whereas within the direct path the setting is derived from the normal linguistic structure of the string of words. We can speak of the two paths informally as “setting the meter” in the case of the mediated path just described or “setting the words” when the path from the syllables to the text setting is direct, without the influence of the abstract, textual meter on the setting.

The following sections will present examples of each process.

2.5.1 Mediated Path: Setting (Abstract) Metrical Texts

A specific instance of the mediated path represented in 2.5.3 is alluded to in 1.3 above where it was observed that Robert Frost’s “Stopping by Woods” can replace the original lyrics of the song “Hernando’s Hideaway” with the required matching of constituent units of the text and tune remaining intact. Relevant for our purposes here is the more general recognition that any iambic tetrameter quatrain will function as an acceptable text for the tune. This particular fact has been frequently noted including, among other places, on the website www.tetrameter.com which provides a catalogue of more or less well known verses able to function in this capacity.¹ The alignment of the underlying abstract iambic tetrameter pattern of the text with the concrete meter of the tune can be seen in the following:

¹ Standard Protestant hymnals (e.g. <http://www.cyberhymnal.org/>) are, in a similar fashion, indexed according to textual meters and thereby take for granted the inherent connection between prosodic/poetic and musical/metrical form under discussion here.

2.5.1.1 Hernando's Hideaway

The image shows a musical score for 'Hernando's Hideaway' in 3/4 time, featuring three staves of music. Above the first staff, there are two boxes labeled (1) and (0). Red dots are placed above each note on all three staves. Below the notes, syllables are assigned as 'W' (weak) or 'S' (strong). The first staff has syllables: W, S, W, S, W, S, W, S, W. The second staff has: S, W, S, W, S, W, S, W, S, W, S, W. The third staff has: S, W, S, W, S, W, S, W, S. Small squares are placed below the final syllable of each line.

2.5.1.1 derives from iteratively assigning the four alternating weak (W) and strong (S) syllables of the iambic tetrameter line to each note of the tune subject to the following requirements:

2.5.1.2 Prosodic text setting-English

- 1) (Stress matching-general) Strong syllables (S) will tend to be assigned to stronger positions of the tune than weak syllables (W)
- 2) (Stress matching-specific) S syllables must not appear on weaker metrical positions than those assigned to adjacent W syllables.
- 3) (Constituency matching) The final syllable of each line is assigned to the longest musical events available in the sequence.

Before proceeding to other instances of prosodic text settings, it is worth making two observations with respect to their defining characteristics. First, it will be noticed that the relevant units for matching with the tune's metrical hierarchy are not relatively stressed and unstressed syllables but strong and weak *prosodic elements* assigned by the

poetic scansion. Similarly, the relevant textual constituent unit here is not the sentence, intonational phrase, clitic group or some other unit of the *linguistic* constituent hierarchy (see e.g. Hayes 1984, Nespor and Vogel 1986) but rather a unit within the *verse* hierarchy, namely the line. 2.5.3 takes as text setting input not the “raw” phonological categories inherent in the textual sequence in the upper left corner but rather the output of the prosodic evaluator: specifically, the units derived by from the parsing into prosodic categories resulting from the text having been parsed as poetic form.

Secondly, it should be apparent that the specifications in 2.5.1.2 do not designate a particular text-tune composite, but rather the relatively large family of songs which assign the prosodic categories to the requisite locations within the tune. Another member of this large tune family is Leroy Anderson’s “Syncopated Clock” which also allows for the assignment of an iambic tetrameter syllabic quatrain:

2.5.1.3 “Syncopated Clock” (slightly simplified)



We will return to other instances of English prosodic text setting in chapter 3. For the moment it will suffice to note that while the settings 2.5.1.1 and 2.5.1.3 conform to the specifications in 2.5.1.2, it should be understood that composers may choose to respond to textual metrical form in a variety of ways, including, as we shall see, not at all in some instances.

With these qualifications in mind, we can turn to two additional examples of prosodic text setting. The first to be considered is the Tashlhiyt Berber text setting dialect (hereafter TB) discussed in DE. A comparison of TB text setting with the English prosodic settings just mentioned is consistent with the observation made earlier that text setting traditions can make use of different principles in mapping prosodic categories to concrete performative structure. Thus, whereas S and W positions and the line boundary are constrained in their appearance in musical settings of English meters, TB implicates different prosodic units, namely light and heavy syllables composed of one and two moras respectively. Furthermore, rather than the line, TB textsetting implicates a lower level of the constituent hierarchy of the prosodic form, namely the foot which, according to DE, is assigned to left of each four mora sequence.

According to DE, prior to a tune being assigned to a text, TB text setting requires that these relevant prosodic. Thus, to take an illustrative example, for the thirteen syllable sequence in 2.5.1.4 to be assigned it must first be understood to be composed of heavy (H) and light (L) syllables and parsed in four foot constituents, indicated by parentheses:

2.5.1.4 TB foot assignment

1 2 3 4 5 6 7 8 9 10 11 12 13
 (L H L(L L H(L L L L (L L H

Once these prosodic categories are available, the sequence is then mapped to the musical grid (referred to by DE as the temporal grid) according to the rule BEAT which we present in a simplified form:

2.5.1.5 (DE 32-simplified) BEAT: The second syllable in every foot is on the tactus.

Applying DE 32 to 2.5.1.4 results in the assignment to tactus level positions indicated, following DE's notation, by underscores.

2.5.1.6

1 2 3 4 5 6 7 8 9 10 11 12 13
 (L H L(L L H(L L L L (L L H

As DE show, a variety of metrical grids can accommodate the general specifications of

2.5.1.6. Among them are the following single anacrusis binary, ternary grids and composite (e.g. ternary plus binary) grids.

2.5.1.7

a) binary, single anacrusis

x x x x x x x x x x x x x x x
 x x x x x x x x x x x x x x x
 1 2 3 4 5 6 7 8 9 10 11 12 13
 (L H L(L L H(L L L L(L L H L(0)
 L(-1)
 L(-2)

b) ternary, single anacrusis

x x x x x x x x x x x x
 1 2 3 4 5 6 7 8 9 10 11 12 13
 (L H L(L L H(L L L L(L L H L(0)
 L(-1)

c) composite, single anacrusis (“Ndalb irbbi”)

x
 a-la ha-la ha ya ni na wa-li ya vi xlq ni
 (L H L(L L H(L L L L(L L H([i] L(0)
 L(-1)
 L(-2)

Of the possible instantiations of the structures represented in 2.5.1.7, c) is an attested text setting, namely the song Ndalb irbbi, transcribed by DE as follows:

2.5.1.8



For the final instance of prosodic text setting represented by the direct path in 2.5.3 we turn to the text setting practice of Dufay discussed in Boone (1999). Dufay was somewhat unusual among composers in producing his own texts which strictly adhered to the conventions of French syllabic meter. Dufay's settings of his octa and decasyllabic texts, according to Boone, map positions defined within the prosodic form to musical surface according to the following assignment rule:

2.5.1.9 Boone's rule: In syllabic settings of octasyllabic and decasyllabic texts, starting with the fourth syllable of the line, assign all even numbered syllables to tactus level positions.

Expressed within DE's notation, Boone's rule applies as follows in assigning a class of settings to the two classes of metrical lines employed by Dufay:

2.5.1.10

- a) Decasyllabic line 1 2 3 4 5 6 7 8 9 10
- b) Octasyllabic line 1 2 3 4 5 6 7 8

Unlike 2.5.1.2 and 2.5.1.4 which requires the identification of strong and weak and light and heavy syllables respectively for the prosodic form to be designated, 2.5.1.9 assigns the string of syllables to grid positions based entirely on their sequential order, independent of their inherent phonological structure. Examples of the resulting text settings can be seen in the following octasyllabic and decasyllabic lines from Boone's text. As in the previous example, syllables assigned to tactus level positions are underscored.

2.5.1.11

				<u>Ma</u>	bel-	Le	<u>da-</u>	me	<u>je</u>	vous	<u>Pri</u>	
				1	2	3	4	5	6	7	8	
				<u>De-</u>	ve-	Nus	<u>suy</u>	viel	<u>et</u>	u-	<u>Sé</u>	
				1	2	3	4	5	6	7	8	
		<u>Et</u>		<u>vous</u>		ju-	<u>re</u>	par	<u>mon</u>	ser-	<u>Ment</u>	
		1		2		3	4	5	6	7	8	
	<u>Que</u>		<u>j'en-</u>	<u>du-</u>			<u>re</u>	pour	<u>vos-</u>	trea-	<u>Mour</u>	
	1		2	3			4	5	6	7	8	
	<u>Car</u>		<u>De</u>	mon	<u>cuer</u>		Et	<u>quan-</u>	que	<u>j'ay</u>	vayl-	<u>Lant</u>
	1		2	3	4		5	6	7	8	9	10
		<u>Et</u>	<u>Il</u>	au-	<u>ra</u>		Guer-	<u>[re-]</u>	don	<u>de</u>	par	<u>Le</u>
		1	2	3	4		5	6	7	8	9	10
D-un	<u>tres</u>		<u>no-</u>		<u>ble,</u>		di-	<u>gne</u>	de	<u>tout</u>	hon-	<u>neur.</u>
1	2		3		4		5	6	7	8	9	10

The distribution of underscored syllables in 2.5.11 shows that in accordance with Boone's rule, with the exception of the second syllable appearing in both weak or strong metrical positions, all even numbered syllables are assigned to tactus level beats. This matching occurs regardless of whether the syllable is stressed or unstressed and thereby results in frequent stress-beat mismatches as can be seen in the settings of the words "jure" "guerredon" and "digne" all of which assign the reduced e-muet to the beat while consigning the preceding stressed syllable to the adjacent weak rhythmic position. Boone comments that "some might wish to hear" these mismatches as "stemming from rote, abstract principles of alignment" which are "indifferent to the shape and meaning of the words". For our purposes, this discontinuity is more or less unproblematically explained as resulting from Dufay's practice of setting the abstract string of elements designated by

the abstract meter rather than, and to some degree at the expense of, the concrete requirements imposed by stress to beat matching.

We conclude this section with two additional observations concerning prosodic text setting. First, as mentioned previously, the text setting traditions considered above are somewhat unusual in that, in general, the text setting practice is not so rigorously determined by mapping of prosodic form to the tune. More commonly, as we will see, composers will depart either in part or in some cases entirely from the categorical specifications of the abstract metrical form. In this latter case, while the text is objectively metrical, the composer responds to it, in whole or in part, as if it were effectively prose and the text setting process is thereby required to be represented by the direct path rather than the mediated path specified in 2.5.3. Instances of the practice just described will be discussed in the following section.

Secondly, the mediated path, as mentioned previously, does not generate a specific setting corresponding to a meter, but rather designates a general class of settings which conform to particular metrical specifications. Within this class, however, there is, as we shall see, a very limited class of specific text settings corresponding to particular meters. For example, as we shall discuss in detail, meters such as the limerick are defined by a more or less precise rhythmic declamation pattern which is arguably as definitive of the meter as its abstract prosodic characteristics. The existence of these **normative settings**, as we shall refer to them, indicate a close connection between the abstract paradigm of the prosodic meter and the note sequence of its concrete realization. Insofar as these suggest that a poetic meter itself should be identified with the performative concrete metrical structure, they fundamentally challenge the consensus position discussed in 2.1 which

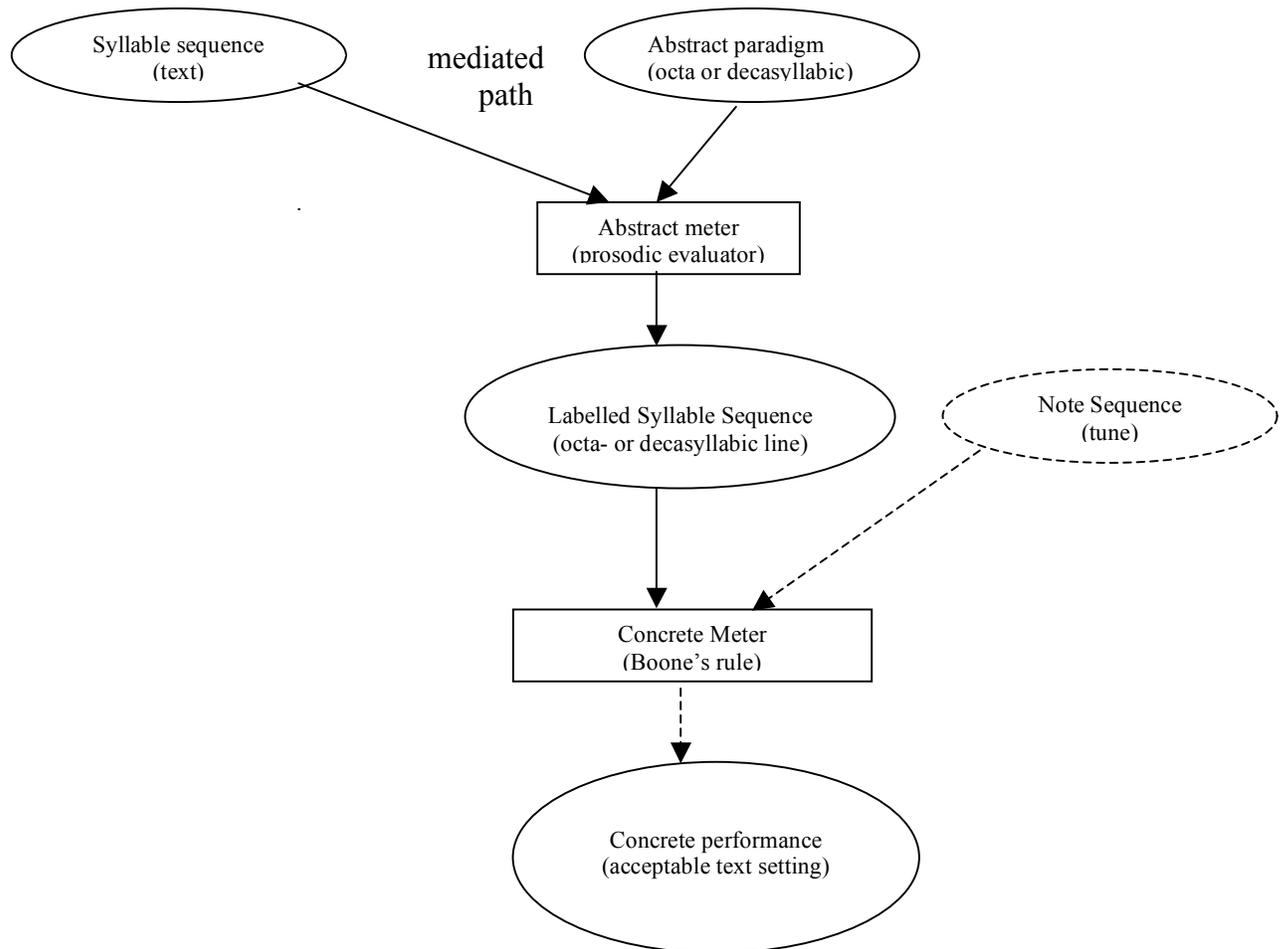
takes abstract poetic versification as definitive at the expense of declamation. For the moment we will assume the consensus position, that, as represented in 2.5.3, poetic meter and musical text setting should be viewed as primarily independent rather than interactive cognitive processes and develop the consequences of this position bearing in mind that that we may be required to revisit this assumption.

2.5.2 Schematic Representation of Prosodic Text Settings

So far in this chapter we have examined four text setting practices all of which can be accounted for as special cases of the general model shown in 2.5.3. There are, however, significant differences in the practice underlying each. Representing these within the schematic model will require us to make some refinements to it.

One such refinement is suggested by the recognition that, as we alluded to previously, text settings emerge according to one of two circumstances, a tune initial process where a text is composed according to the requirements imposed by an existing melody or text initial where the text dictates the structural characteristics of a new tune. We focus first on Dufay's songs which were, according to Boone, composed to pre-existing texts, and are thereby an example of the latter. Furthermore, these texts were metrical indicating that the mediated path from 2.5.3 applies:

2.5.2.1 Dufay text setting: mediated path, text initial

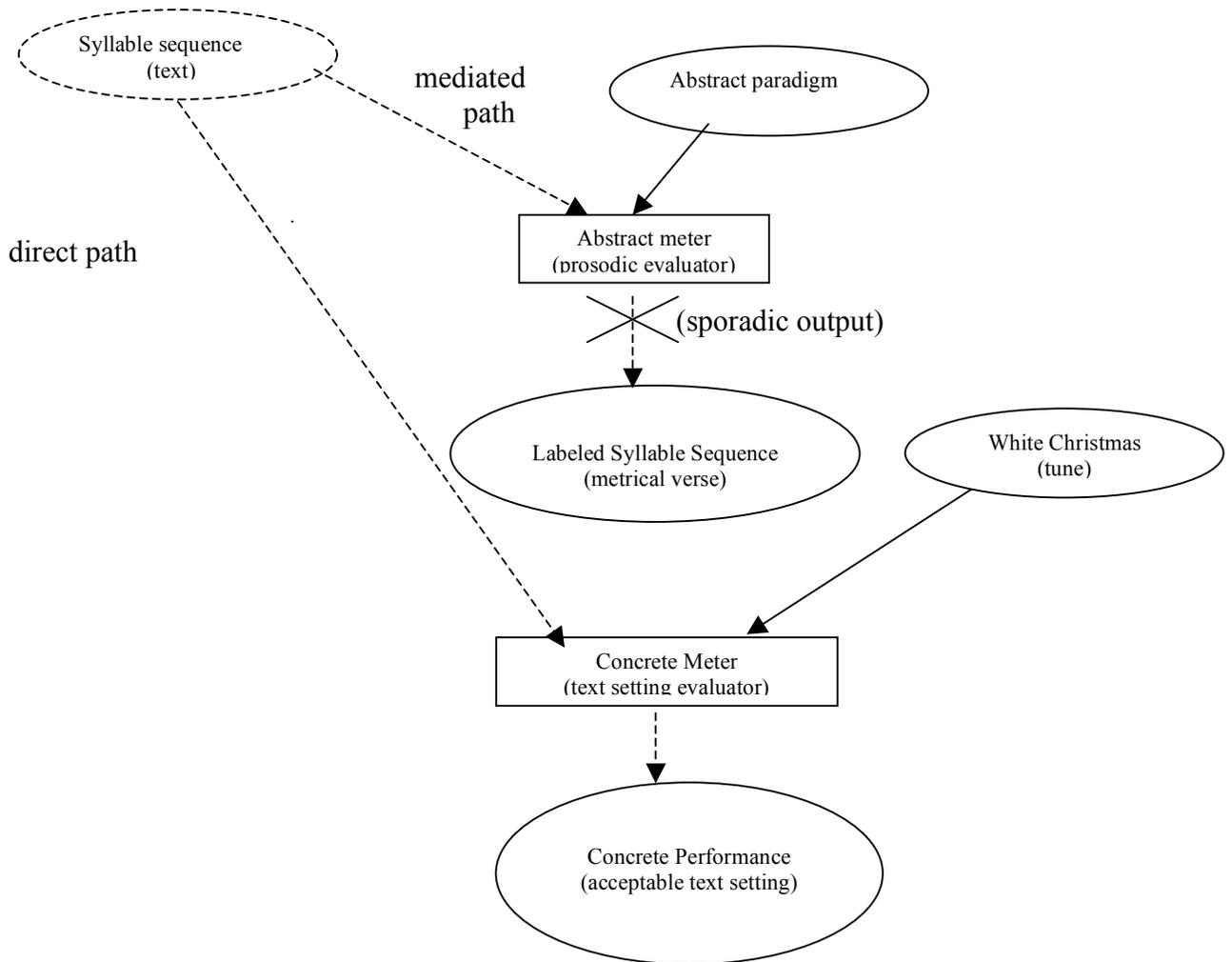


The text initial process is notationally represented in 2.5.2.1 by enclosing the note sequence in dashed lines, indicating that the note sequence is now the free element to be adjusted according to the specifications of the text. It also will be noticed that 2.5.2.1 differs also from 2.5.3 in two additional respects. First, what were previously dashed lines connecting the syllable sequence to the prosodic evaluator are now solid. This represents the assumption that the pre-existing text assigned to a tune by Dufay is metrical according to the abstract principles of French verse and will not be altered during the text setting process. Secondly, the dashed line connecting the syllabic sequence to the text setting evaluator has been eliminated. This represents the assumption that Boone's law operates

not on a raw textual sequence, but rather requires the sequence to have been appropriately parsed into a prosodic sequence so that each syllable is assigned a numerical position within the octa or decasyllabic line.

For a second application of the schematic model applied to an actual text setting practice, we recall that in contrast to Dufay’s text initial settings, Irving Berlin’s working method typically involved fashioning an appropriately corresponding text to a pre-existing tune. White Christmas appears to be one such instance of tune initial text setting, which we represent in the following:

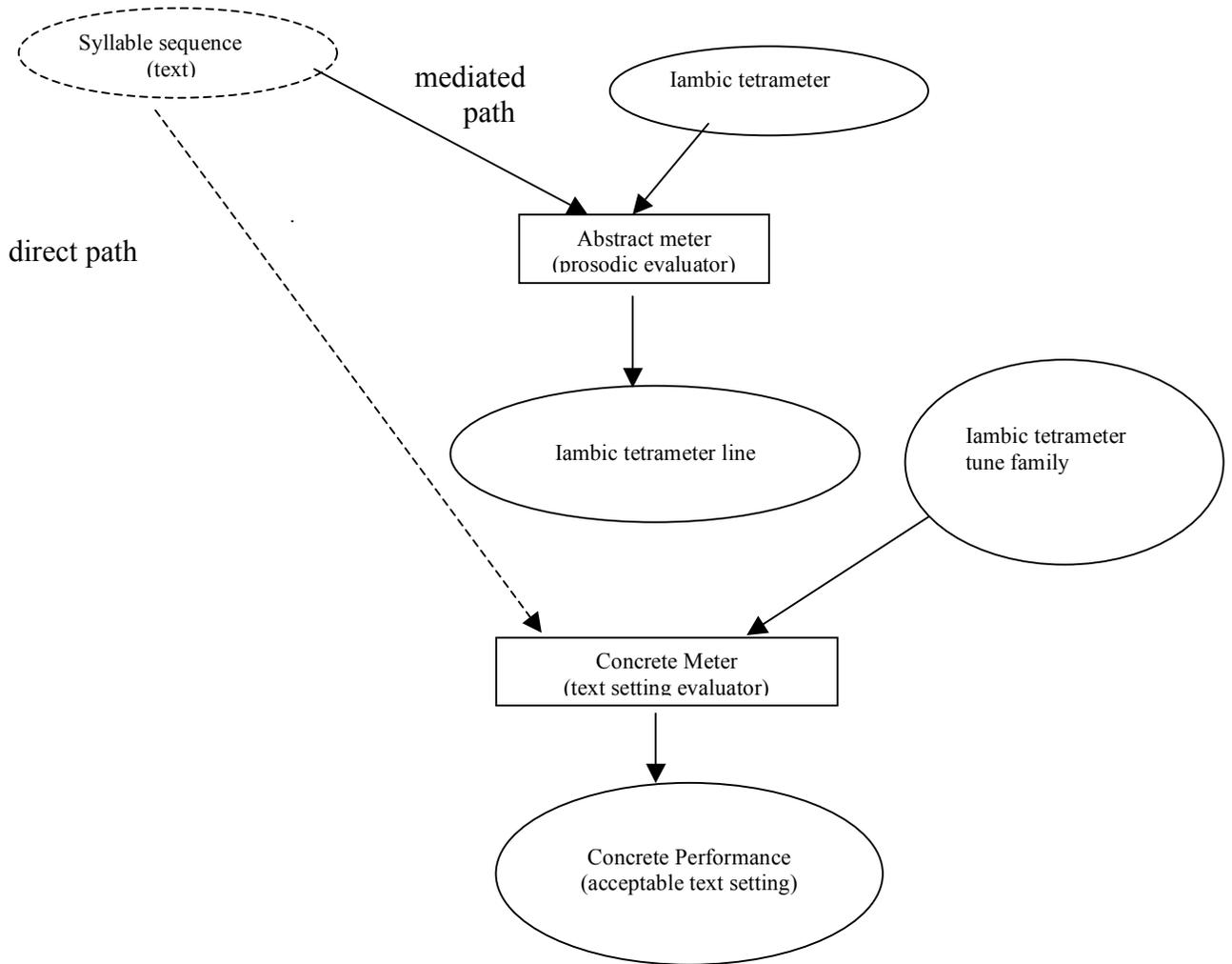
2.5.2.3 White Christmas: direct path, tune initial text setting



Given that the lyrics of the song are not in a textual meter, it would be sufficient to represent only the direct path from 2.5.3, omitting the mediated path. We include the mediated path here to reinforce the observation made previously that a portion of a well formed lyric will present itself as an iambic tetrameter line, namely, at one location of the tune (“just like the one I use to know”). We can now visualize this as an output, which, as indicated, is usually blocked, but which sporadically emerges from the prosodic evaluator as a metrical line.

“White Christmas” as a whole, however, will not consistently produce a textually metrical output. Those songs which do so we referred to earlier as prosodic text settings. These will consistently, not just locally, produce a textually metrical output, generally a complete iambic tetrameter quatrain, as we saw in 2.5.1 above. We can now be somewhat more specific as to their defining characteristics: namely, a text is fashioned to appropriately match a pre-existing tune belonging to the class of what we will refer to as **prosodic tune families**. These are tunes such as “Hernando’s Hideaway” in 2.5.1.1 and “The Syncopated Clock” in 2.5.1.3 whose structural characteristics embody the metrical characteristics of a given textual meter so that a one to one matching of syllable of notes of the tune will give rise to sequences of syllables which will be acceptable within a given meter. The following represents this variant of the general text setting model:

2.5.2.3 Prosodic text setting (tune initial)



In this instance, the observed textual meter does not emerge from the text having been composed in accordance with the dictates of abstract prosodic form but rather as an incidental by product of concrete text setting. Thus, to return to the iambic tetrameter cases referred to previously, an iambic tetrameter line (e.g. “Whose woods these are I think I know”) will be seen as resulting not from the text having been composed as an iambic pentameter line but rather its having been assigned to a melody from the iambic tetrameter tune family. In this class of instances, which we will revisit several times, the text setting and prosodic form problem are shown to be the same problem in that the latter

is reducible to the former. Those looking for independent, textual metrical form would find it, however, the underlying mechanisms responsible for its presence do not involve the matching of syllables to an abstract prosodic paradigm but rather the interactive principles of text to tune alignment.

2.6 Direct Path-Prose Text Setting

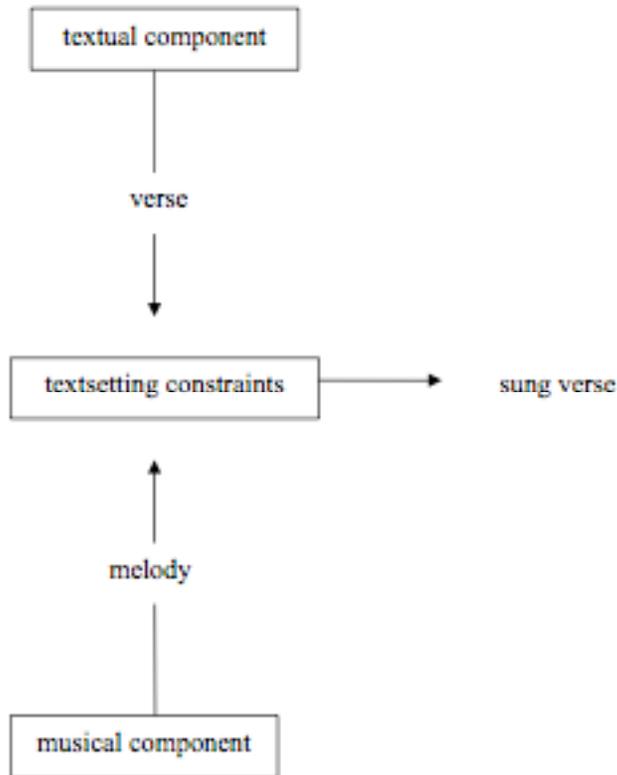
Before continuing with our survey of the possible realizations of the text setting model proposed in 2.5.3, it is worth mentioning how the above account of text setting differs from others which have been offered in the literature. Insofar as these have been explicit with respect to the relationship between textual meter and text setting, it will be noticed that they tend to assume what we referred to above as the mediated path, namely, one in which a metrical text is set to music.

One instance is provided in Kiparsky (2008) which characterizes text setting as a process by which

(c)omposers . . . construct a match between *three* tiers of rhythmic structure: linguistic prominence, poetic meter, and musical rhythm.
(Kiparsky's italics)

A graphical representation of the status of prosodic metrical form within text setting, consistent with Kiparsky is proposed by Dell and Elmadoui (2008), hereafter DE. According to DE independent “verse” form, equivalent to what we have abstract functions as an input into the text setting interaction which generates the song:

2.6.1 Dell and Elmadoui (2008)



It should be apparent from the discussion in 2.5 that a model which assumes that verse form must intercede between the syllabic sequence and text setting cannot account for all varieties of text setting practice. Most conspicuously, it cannot account for texts which lack poetic meter and on the basis are not “verse” but prose. The failure to attempt to account for prose text setting is understandable in that most of the most familiar and celebrated vocal works of the 18th through the 20th centuries made use of pre-existing metrical texts. While prose texts were, of course, the basis of many liturgical works such as the passions of Bach, Handel’s Messiah, and numerous others, these probably represent a minority when one considers the lieder of Schubert, Brahms, Schumann almost all of which were settings of metrical poetry of various types. The statistical over-representation of metrical texts has created the impression that texts which function properly within

musical contexts should be analyzable as having an independent, abstract metrical structure.

While prose texts do not (by definition) have an abstract metrical form, they pose similar problems for composers attempting to set them in that their inherent structure constrains the class of tunes which can be associated with them. How these constraints function can be seen by taking a familiar example, the text from Ecclesiastes which assumes the following concrete metrical form in the well-known setting by Pete Seeger (1964):

2.6.2 Prose text setting (Turn, Turn, Turn-Pete Seeger setting of Ecclesiastes 3: 1-8)

	x		x		x		x
x	x	x	x	x	x	x	x
C	E	F	G				
To	eve	ry	thing/				
C	E	F	G	G			
[there	is	a	seas	on//			
	A	A	G	G	F	E	D
	And	a	time/to	eve	ry	pur	
C		E	D	D	C		
pose/	un	der	hea	ven.	///		

2.6.2 indicates the independent structural characteristics of the text and tune which must, as discussed in 1.1-1.3 interact properly to create a well formed setting. The diagonal slashes represent textual constituents which align, in all but one instance shown in bold face, with the vertical slashes indicating melodic groups. The bold faced syllables indicate stress maxima all of which align with relatively strong positions on abstract metrical grid.

In contrast, the tune to which Seeger assigns to the text in 2.6.3 is clearly unnatural when applied to another prose text, namely the first verse of Ecclesiastes:

2.6.3

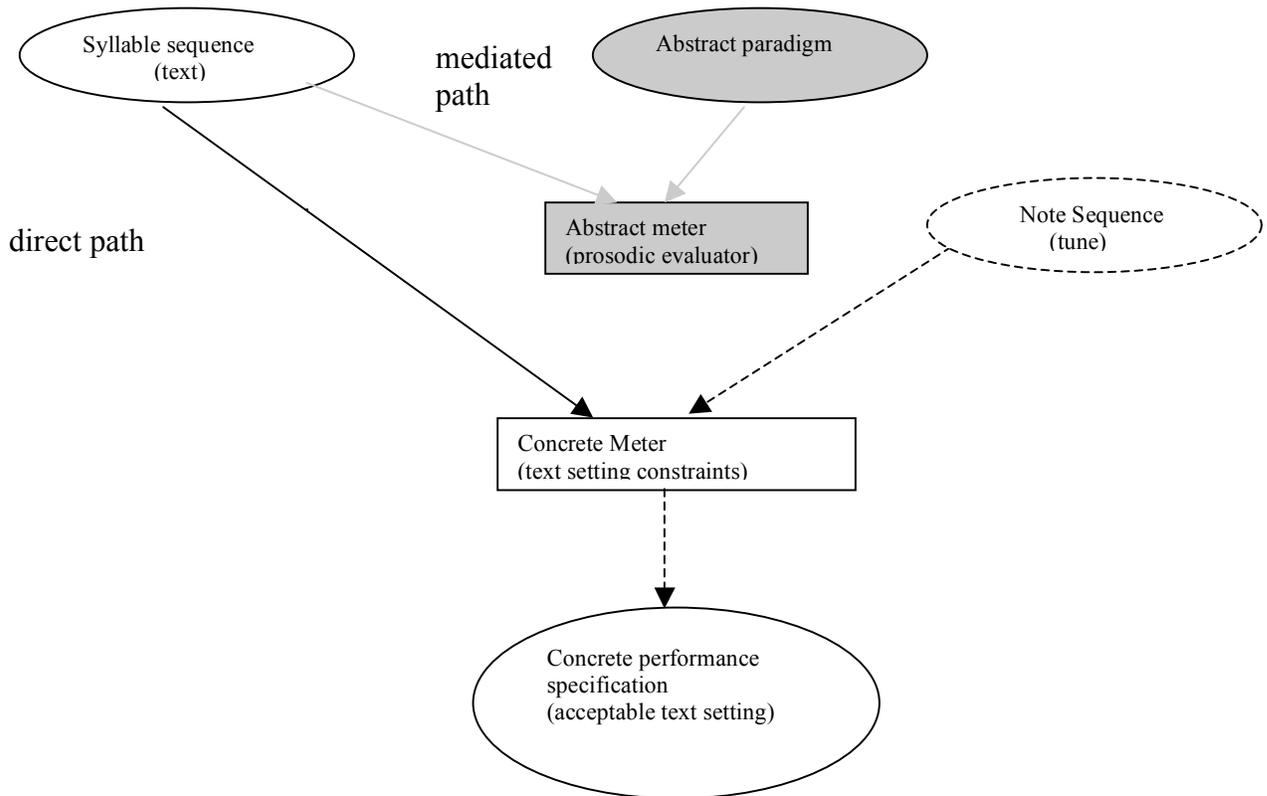
	x		x		x		x
x	x	x	x	x	x	x	x
C	E	F	G				
Van	i	ty	of				
C	E	F	G	G			
van	i	ties/sa	ith				
	A	A	G	G	F	E	D
	the	prea	cher.//	Van	it	y	of
C	E	D	D	C			
van	i	ties/	all	is . . .			

2.6.3 is experienced as unnatural due to several violations of the interactive principles discussed in 1.1 and 1.3. The include mismatches resulting from three stress maxima (shown in bold face) assigned to weak positions as well as six constituency mismatches shown in boldface resulting from unaligned (musical) group boundaries (|) failing to align with linguistic constituents (/).

The conclusion to be drawn from a comparison of the two settings 2.6.2 and 2.6.3 is that prose texts, as do metrical texts, impose constraints on the form of the tunes with which they may be associated, namely the same comparison of independent and musical structure. It will be seen that these are unproblematically accounted for as special cases of the general text setting model 2.5.3. Settings of prose texts require what we referred to as the direct path from text to tune, bypassing the abstract metrical components which operate exclusively when metrical texts are set. These are greyed out in the graphical representation in 2.6.4 below. The graphic also interprets “prose text setting” literally, assuming, as indicated by the dashed oval, that a tune is composed to meet the

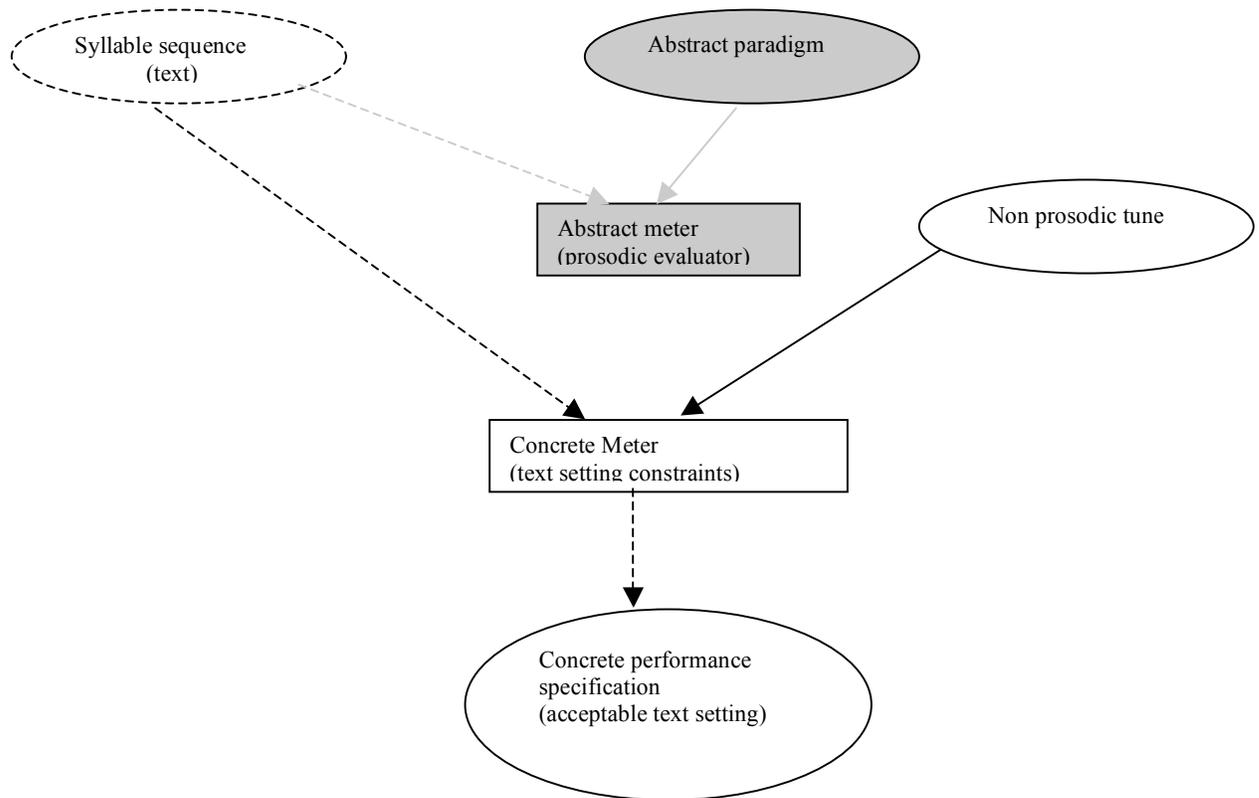
specification of a pre-existing (prose) text, though it will be seen that this is not a necessary interpretation as prose text settings can arise from a tune initial process as well.

2.6.4 Prose text setting-direct path, text initial



The ambiguity of the phrase “prose text setting” should be apparent in recognizing that in addition to being text initial, settings of prose texts can, as just noted, also emerge from a tune initial process. In this instance the pre-existing tune is non-prosodic. This is to say that unlike the prosodic tunes 2.5.1.1 and 2.5.1.3 which ensure that the texts assigned to them will be acceptable lines within some prosodic meter, non-prosodic tunes ensure that any text assigned to them will be, at most, sporadically metrical. This, we recall, was the situation obtaining with White Christmas shown in 2.5.2.3. The representation of prose, tune initial text setting will be the generalized version of 2.5.2.3 shown below:

2.6.5 Prose text setting (direct path, tune initial)



2.6.1 Concrete and Abstract Metrical Assymetry

It is important to recognize that both Kiparsky's and DE's descriptions were intended to apply to the limited repertoire with which their studies are concerned- Isaac Watts hymns and the Tashlhiyt Berber vocal idiom respectively. These traditions tend to make use of texts which are generally unproblematically analyzed as within prosodic meters and thereby require the mediated path described in 2.5.3 which is essentially equivalent to DE's graphical representation in 2.6.1.

However even when a metrical text is present it need not obligate the composer to respond to the meter in which the text is composed for two reasons. First, there is no

requirement that the form defined by the abstract meter is accessible to the reader of a text, including the composer. The structure of metrical verse after all, as pointed out by Galyon (op. cit.) is “that of the schools” which is to say available only to those having been provided access to relevant instruction. In the absence of this, readers of metrical texts may have not known how, or even whether they were metrical. Included among this number were composers for whom the metrical form would be essentially absent and the text would be treated effectively as prose.

Indeed, as Taruskin (2004) notes, this would be increasingly the case during the medieval period. While Latin texts would continue to be frequently set, the quantitative meter according to which they were composed would be gradually ignored. The settings of these texts were by no means unconstrained since the basis of the constraints would not be vowel quantity but rather stress-or what was understood to be stress-resulting in accentual settings of what were objectively quantitative texts. The mediated path discussed above would not apply in these instances, since what is being set is not the prosodic form, but the specific phonological string of syllables without reference to the abstract organization of the quantitative categories which form the basis of Latin poetic meters.

Secondly, even if the composer is aware of the abstract metrical form of the text, it may not exert any influence for any number of reasons: for example, the composer may choose to ignore it either altogether or sporadically or interpret it in an idiosyncratic fashion. We will identify instances where this is likely the case subsequently.

Whatever its ultimate explanation, an instance of a clear discontinuity between abstract and concrete meter can be seen in many songs, including the setting of the socialist Internationale presented as follows in its original form as a metrical text.

2.6.1.1 l'Internationale (Pottiers 1879)

Debout, les damnés de la terr|e
Debout, les forçats de la faim
La raison tonne en son crater|e
C'est l'éruption de la fin

Du passé faisons table ras|e
Foule, esclaves, debout, debout
Le monde va changer de bas|e
Nous ne sommes rien, soyons tout

Pottiers' International text is unproblematically octosyllabic, which for our purposes will be minimalistically construed (along the lines of numerous standard texts such as, e.g. Bonnard 1953) as requiring the counting of all syllables exempting syllabic elisions (underlined in 2.6.1.1) and the line final e-muet, set off by a preceding vertical slash, |.

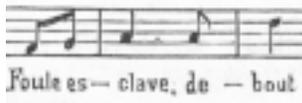
Of interest to us here is the syllabification of the fourth line “C'est l'éruption de la fin.” In Pottiers's text, the suffix “-ion” is construed as bisyllabic, with the result that the line conforms to the eight syllable requirement imposed by the meter. However, as can be seen in the original sheet music, the concrete metrical instantiation indicated in de Geyter's 1897 textsetting construes the suffix as a single syllable, assigning it to a single note with the resulting musical phrase containing not eight units, but seven.

2.6.1.1



A similar asymmetry is observable in setting of the sixth line, “Foule, esclaves, debout, debout.” Here the e-muet of “esclave” is not syllabified by de Geyter

2.6.1.2



with the result that five rather than six units are relevant to the text setting of this portion of the line.²

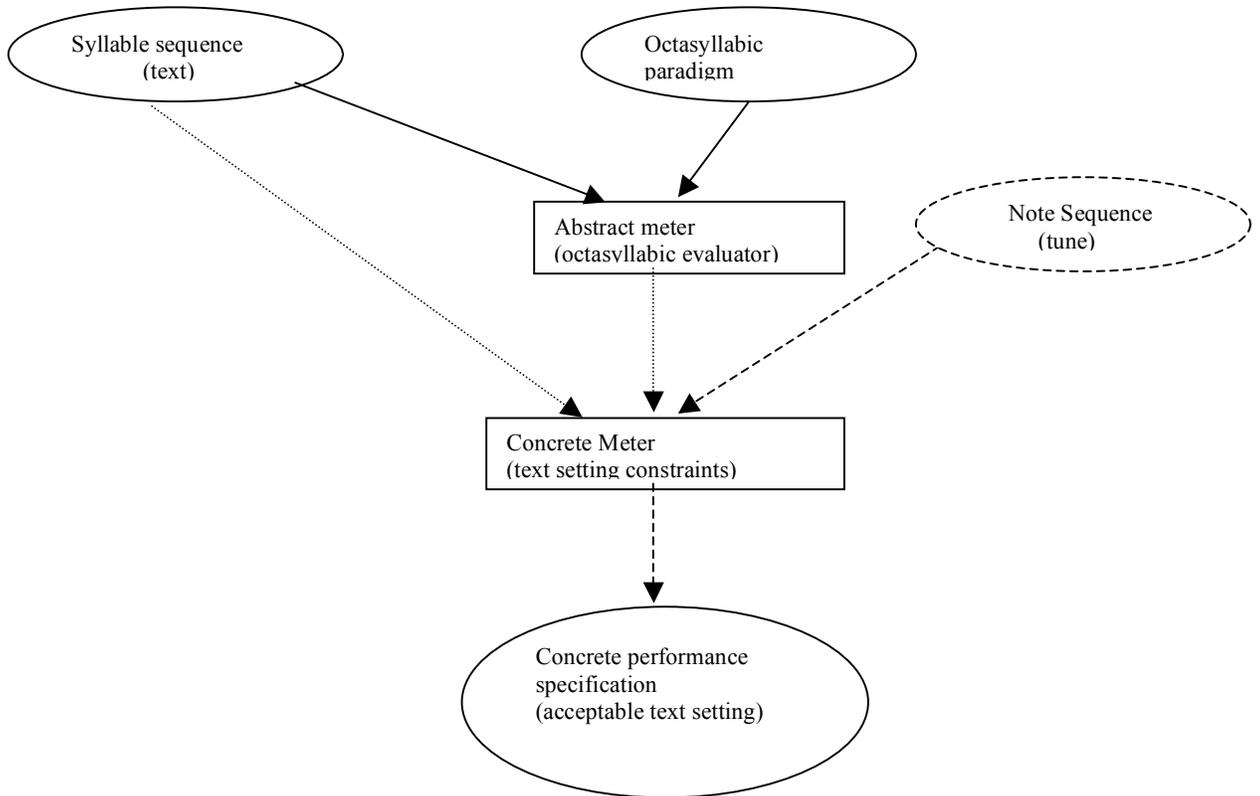
It is apparent from both these cases that de Geyter was either unaware of the correct scansion, or, more likely, chose to ignore it. In either case, the setting of the text is not dictated by intrinsic abstract metrical form but functions independently of it. This constitutes additional evidence that the abstract verse form need not function as a necessary component of text setting even when it is present.

These observations require the general text setting model 2.5.3 be amended to allow for simultaneous access to the mediated path which accepts the syllabification inherent in the octasyllabic meter and the direct path which takes as input the syllabification of the raw syllabic sequence. We accomplish this by representing the connections within both the direct and mediated paths by dotted lines. The syllable sequences and note sequences are, however, enclosed by solid and dotted ovals respectively as is required by the the song the Internationale having been composed to a

² Interestingly, subsequent stanzas of the poem do not allow for a similar reduction of the syllable count in these same locations. This has the practical consequence that singers must determine which departures from the original are acceptable variants of the tune. As pointed out in Dell and Halle (forthcoming), most traditional French songs, in contrast to the English vocal repertoire, do not require exercising of these intuitions.

pre-existing text. The result is what we shall refer to as a text initial **hybrid** setting which assigns a text to a tune based on an input alternating between the direct and mediated path as shown below.

2.6.1.3 Hybrid text setting-text initial



The dotted (as opposed to dashed) lines are meant to indicate the composer being able to choose to view the text as a prose sequence of syllables despite the string of syllables being definable within a textual meter. The setting of the Internationale is, as we shall see, one of many instances in which textual meter is sporadically dispensed with as a determining factor in how a text is realized as a text setting. Given the extent to which certainly textual meters may be highly personal abstract codes created by the poet,

invisible to even informed readers, it is likely that most text setting practices should be described, to varying degrees, as hybrid, a topic we will return to in the following chapters.