

CONTOS NOSSOS DE CADA DIA

Prof. Irmão Elvo Clemente

Margarida Cassales é artista do conto, domina a língua e a trama que o gênero exige. Fúlvia Moretto apresenta a contista com belo texto e conclui com o parágrafo: "É um prazer ler os **Contos nossos de cada dia**. Enredo, imagens, tensão formam um todo inseparável e nos revelam uma contista nata que sabe usar a linguagem e que nos encanta com seu mundo de realidade e de nuances inesperadas. Estilo rápido e forte que o leitor lê e relê sempre com renovada satisfação".

Suely Meloni tece-lhe belas apreciações e encerra com: "Margarida nos serve o néctar de sua inteligência, cultura e verve, em translúcida taça, qual Hebe no Olimpo".

Os **Contos nossos de cada dia** fluem como a água do tranqüilo riacho a murmurar entre seixos e margens sedosas. Os relatos apresentam fatos simples do dia-a-dia e da vida pacata da gente simples que fica na saudade de nossa civilização. Vale a pena ler os títulos: *Vigília, A viagem da costureira, O boi da cara preta, O anel de brilhante, Previdência Social, A enfeitada, Labéu, Como dona Jandira pirou... Cacilda a ontológica, Ronda, Radiografia, O suborno, Adeus amigas, De como chegou ao final uma carreira de cabo eleitoral, O baile da indexação, Leito do sol*. Os dezesseis contos perpassam pelas retinas do leitor deixando-lhe o sabor singelo da vida de nossos povoados, o perfume dos costumes pampeiros ou serranos, a alegria e a tristeza das ações das vilas e dos rincões de nosso Rio Grande. Há em tudo singeleza, intimismo em que a narrativa brota do imo da narradora e se enlaça com as vivências do leitor. Os contos nossos de cada dia estão presentes na vida da gente boa que vê a vida passar entre dias alegres e sobressaltos do azar ou da mala fortuna, sempre com a esperança de vida melhor, com sentido e com amor.

On the Weight Issue in Portuguese, a Typological Investigation

W. Leo Wetzels*

1 Introduction

The relevancy of syllable weight for the attribution of Spanish, Italian, and Portuguese word stress remains controversial. Whereas for Spanish and Italian the opinions are divided, there seems to exist among Lusitanists a tacit consensus that syllable weight is irrelevant as a parameter for stress distribution. Most analyses of Portuguese stress are based upon the observation that, at least in non-verbs, stress falls on the last vowel of the stem, where 'stem' is defined as the lexical word, stripped off of the 'desinence', which in most cases is the thematic vowel. Thus, the thematic noun *cabeça* 'head' has prefinal stress, whereas in the athematic *nariz* 'nose' stress is on the word-final syllable. This stem-based analysis successfully predicts main stress in the great majority of the Portuguese non-verbs. However, both the fact that stress could never fall on the antepenultimate vowel in a word like *aberto* 'open' (with a prefinal heavy syllable), and the fact that athematic non-verbs usually end in a heavy syllable, remain, from this perspective, purely accidental.

It would be at least equally successful to posit a mechanism that takes syllable weight to be a conditioning factor for main-stress placement. If properly worked out, a quantity-based account would provide an explanation for the systematic absence of proparoxitonic stress in words with a prefinal heavy syllable, while also explaining why stress-placement in newly created words is systematically governed by the closed vs. open syllable distinction.

* Free University of Amsterdam, The Netherlands.

In this paper, we will address some of the counterarguments that have been used to dismiss a weight-sensitive stress rule for Portuguese. In particular, we will discuss the arguments that are claimed to be derived from cross-linguistic generalizations. One of these arguments is that closed syllables may only count as heavy in languages that have phonemic vowel length, another that weight-sensitive and morphology-based subsystems cannot co-exist in a single language to account for the distribution of main stress. It will be shown that both of these universal claims are incorrect.

2 Trubetzkoy on the mora

One interesting argument that is frequently mentioned to dismiss the relevance of a moraic approach to Romance stress is the one that makes contrastive vowel length a prerequisite to weight-sensitive stress. The interest of the argument does not only derive from its persistence in the literature (see, e.g., Kuryłowicz, 1948; Newman, 1972; Greenberg and Kaschube, 1976; Hyman, 1977; Ohsiek, 1978; Hyman, 1985; Roca, 1990; Andrade & Laks, 1991), but also from the fact that most of the time Trubetzkoy's *Grundzüge* is referred to as the source of the principle from which it is derived. Indeed, Trubetzkoy expressed himself in his *Grundzüge*, translated in English as *Principles of Phonology*, which is how we will henceforth refer to it, in a way that could be interpreted along the lines suggested by the critics of a moraic approach to Spanish and Portuguese stress. I provide Trubetzkoy's full statement below:¹

- (1) The interpretation of long nuclei as geminated, or in terms of multi-number constituency in general, may be regarded as an 'arithmetic conception of quantity'. Languages in which this conception finds expression are 'mora counting' languages since in these languages the smallest prosodic unit does not always coincide with the syllable (1939/69:177).

I will assume that when contemporary phonologists claim that languages without distinctive vocalic quantity cannot have a weight-sensitive stress rule, what they mean is that in such languages the location of stress cannot be based on a mora count.

¹ I suppose that this is the passage that the linguists I mentioned had in mind when they referred to *Principles*. As a matter of fact, I have only seen references to the book, never to a specific page or to the quoted passage. In any case, as far as have been able to check, this is the only place where Trubetzkoy makes a statement that is interpretable in the way it has been interpreted by these scholars.

Since, according to Trubetzkoy, languages must have phonologically long vowels in order to have moras, and because Spanish and Portuguese lack such vowels, it is concluded that weight sensitive stress cannot exist in these languages. In the remainder of this section I will show that this conclusion is based on an erroneous interpretation of Trubetzkoy's conception of the mora. I will trace the historical source of this 'implicational law,' one early version of which was formulated by Trubetzkoy in a paper entitled *Einiges über die russische Lautentwicklung und die Auflösung der gemeinrussischen Spracheinheit*, which he published in 1925. Trubetzkoy's (1925) paper is the beginning of a long and interesting search into solving the problem of how languages implement a phonological length contrast on vowels. Indeed, as we will see, the fundamental and only question that Trubetzkoy was concerned with was how to represent contrastive vowel length. Nowhere was his attention directed towards the factors that cause stress to select syllables with specific properties in some languages, and, consequently, nowhere was he explicitly interested in the relation between weight-sensitive stress and phonological length.

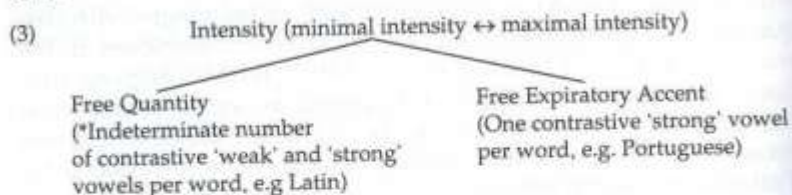
In his (1925) study of the disintegration of the common Russian linguistic unity, Trubetzkoy explains the disappearance of the Oldslavic (Urslavisch) pitch accent as a consequence of the loss of quantitative vowel oppositions. According to Trubetzkoy, this causal relation follows from a universal implicational law which establishes that "...languages with a pitch accent² but without quantitative oppositions, as well as languages with free quantity and free dynamic stress ... do not occur anywhere in the world." (1925:303/4 [my translation; LW]).³ In the foregoing citation, "free quantity" must be interpreted as 'vowel length contrast' and "free dynamic stress" as '(surface) contrastive stress accent'. Let us restate the universal implications formulated by Trubetzkoy as in (2) below:

² I interpret Trubetzkoy's expression of 'musical accent' (see next footnote) as a 'non-stress accent' in terms of Beckman's (1986) classification of word-prosodic systems, which is called '(lexical) pitch accent' by some phonologists, including myself.

³ "Sprachen mit musikalischem Akzent aber ohne Quantitätsunterschiede, ebenso Sprachen mit freier Quantität und freiem expiratorischem Akzent, soviel ich weiss, nirgends in der Welt vorkommen." (1925:303/4). In a footnote Trubetzkoy adds that he has tested his law in non Indo-European languages, especially from East-Asia and Africa, and that he has not encountered a single exception.

- (2) Universal implicational relations between vowel quantity and stress (Trubetzkoy 1925)
- If L has pitch accent, then L has vocalic length contrast
 - If L has vocalic length contrast, then L cannot have a contrastive dynamic (stress) accent, which implies:
 - If L has a contrastive dynamic (stress) accent, then L cannot have contrastive vowel length

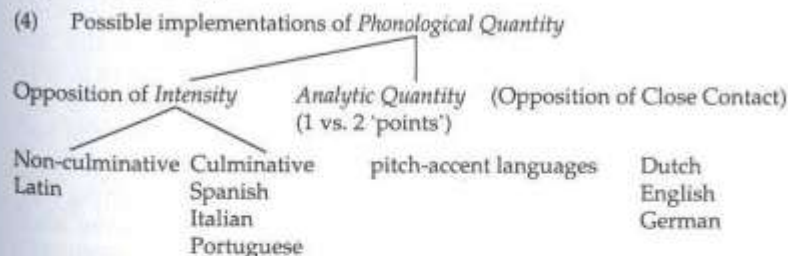
In a paper entitled *Zur allgemeinen Theorie der phonologischen Vokalsysteme* (1929) Trubetzkoy returns to these implicational laws in some more detail. He points out that the implications given above as 2bc were first formulated by Jakobson in his book *O češskom stiche*, 'On the Czech verse'. The formulation of Jakobson's law as in 2bc amounts to saying that vowel duration and dynamic accent cannot both be contrastive in one and the same language. This fact serves Trubetzkoy as an illustration for a lesson on phonological reasoning aimed at showing the fundamental difference between linguistic (phonological) and non-linguistic facts. In order to explain why the implications in 2bc hold, he proposes that the basic (universal) phonological opposition involved in both contrastive vowel quantity and contrastive dynamic accent is *Intensity*. More precisely, contrastive vowel quantity and contrastive dynamic accent are the language-specific implementation of a more fundamental opposition between minimal and maximal intensity, as schematised in (3) below:



In Trubetzkoy's view, Latin is a language where the feature *Intensity* is implemented as an across-the-board vowel length opposition. Consequently, the Latin word-accent, because it is dynamic, cannot be contrastive. It must be non-phonological, i.e. 'automatic' or predictable, which it is. On the other hand, in Portuguese, where *Intensity* is implemented as a free expiratory accent, only one syllable per word may be contrastively strong, as in *sábia* 'wise-fem', *sabía* 'know-impf si', *sabiá* 'bird'. As is known, Portuguese has no contrastive vowel length, in conformity with

Trubetzkoy's predictions. Notice that there is nothing in the formulation of Trubetzkoy's implicational laws (2) that excludes the possibility of a weight-sensitive stress rule in a language that has no phonological vowel length. To be sure, the generalizations in 2bc only state that in languages like Portuguese, Spanish or Italian, a phonological quantity opposition cannot exist on vowels, because vowel length is already used to distinguish stressed vowels from unstressed vowels in a (surface) contrastive, i.e. linguistically significant, manner. Consequently, Trubetzkoy's laws are no impediment for arguing for a stress rule (or a set of subrules), that is sensitive to the open vs. closed syllable distinction.⁴ Below, we will see that this is exactly what Trubetzkoy proposes for Latin, which has a weight-sensitive stress rule, but which Trubetzkoy does not (yet) consider to be a mora-counting language.

In a subsequent paper called *Die phonologischen Grundlagen der sogenannten "Quantität" in den verschiedenen Sprachen*, which he wrote in 1934, but published in 1938, Trubetzkoy returns to the question of how to deal with durational vowel contrasts. Elaborating upon his 1925 study, he now claims that the question of quantity is even more complex than he had thought some ten years earlier. He proposes that the languages that make phonological use of vocalic quantity fall out in two types, in the way represented in (4):



The oppositions of Intensity and Analytic Quantity appear to be mutually exclusive, and this is why they are represented in (4) as two alternative ways of implementing the more basic opposition of Phonological Quantity. Next to the quantity opposition

⁴ Of course, such an argumentation would have to be completed with the further demonstration that the claimed contrastiveness of word-stress can be eliminated at a more abstract level, or that some of the words that are part of the contrastive sets may be considered exceptions to an otherwise productive rule of stress placement.

there is the opposition of Close Contact, which is independently available and can combine with either Intensity or Analytic Quantity. Dutch, English and German are languages that realize the former combination, i.e., Close Contact and (culminative) Intensity, whereas Siamese and Hopi, which Trubetzkoy discusses in his *Principles* (1969:179), are claimed to combine the correlation of Close Contact with Analytic Quantity. The expression 'Close Contact' is used in the English translation of *Grundzüge* as the equivalent of what Trubetzkoy termed the 'Silbenschnittkorrelation', literally the 'syllable cut correlation'. The opposition refers to the way in which the articulation of consonants relates to the preceding vowel. In languages using this opposition, long vowels are not impeded in their articulation by the following consonant, whereas a short vowel sounds short because of the fact that the articulation of the following consonant 'cuts off its normal flow', as in German: *satt* ~ *Saat*, but when no consonant follows, only the long vowel appears: *sah* [za:] "saw 1p" ~ **sa* [za]; or in Dutch *lat* ~ *laat* ("slat" ~ "late"), but without a following consonant only *la* "drawer" is a possible word, with long [a:], not *[a]. So, given the existence of the [close contact] opposition, Dutch, English and German are no longer exceptions to the claim that distinctive quantity is incompatible with distinctive durational word-stress.

As seen above, in languages such as Latin, where Intensity is used for the expression of phonemic length, the locus of expiratory accent is always non-distinctive, because mechanically assigned, either through reference to the word-boundary (e.g. initial stress in Finnish, final stress in Persian, Yakut, etc.) or to the quantity of the boundary syllables, counting either from the beginning or the end of the word, as in Latin. In these languages, the position of stress serves not the differentiation of meaning but the delimitation of words. On the other hand, as we have also seen, languages that use intensity for the purpose of differentiating meaning by emphasizing a single syllable in the word (primary word stress) cannot also use it for other distinctive purposes. In these languages stressed syllables are predictably long, and unstressed syllables are short, as in the Romance languages.

⁵ The notion 'culminative' refers to the use of intensity to mark a single syllable per word, whereas 'non culminative' refers to the use of intensity as an across-the board distinction on vowels.

Another conception of quantity distinguished by Trubetzkoy is one in which the long vowel is considered to be divisible into two parts, a beginning and an end. Usually, this 'analytic' quantity is exploited to express an opposition between contour tones, which are realized on long nuclei but not on short ones. However, Trubetzkoy (1938b) adds that it does not really matter what exactly causes the segment-internal movement, whether it be tonal or dynamic. The important phonological fact is a language's potential to foreground only one part of a long nucleus, which presupposes its composite nature.

Trubetzkoy uses the term 'mora' for the first time in his 1938b study. In his view, moras are subsyllabic elements to which the two points of a long vowel individually belong (cf. 1938b:164).⁶ In deciding which languages belong to the mora type, i.e., the analytic quantity type, Trubetzkoy clearly proceeds on a "what-you-see-is-what-you-get" basis, probably because he considers the analytical quantity opposition as exceptional, and something you need clear empirical evidence for.⁷ The kind of evidence for analytic quantity that he wishes to consider is that which relates to specific types of vocalic distinctive properties, in particular those that use intra-vocalic positions as points of contrast, i.e., the beginning of a vowel as opposed to its end. As such, Trubetzkoy gets trapped in circular reasoning, which is particularly visible when he proposes that real tone languages (he refers to African languages, 1938a:119; 1938b:164, fn1) are also mora-counting, despite the fact that in many languages of this type the realization of a sequence of two or even three tones on a single vowel does not coincide with a length contrast, very often not even a phonetic one. In Trubetzkoy's view as expressed in his 1938b study, the set of mora-counting languages coincides more or less with the class of languages that show contrastive vocalic contour properties, either as a pitch-accent or as an across-the-board tonal contrast.⁸ From what pre-

⁶ I suppose that moras are considered sub-syllabic elements, because, apparently, languages that have moras, also have syllables, as is clear from the quote given as (5) below. In other words, according to Trubetzkoy, languages that have moras also have syllables.

⁷ As is very clear from the following statement (1938b:159): "Die einfachste Auffassung der Quantität liegt in den Sprachen mit nichtgipfelbildender Intensitätskorrelation vor" (italics as in the original text). In translation: "The simplest conception of quantity occurs in the languages that have a non-culminative intensity correlation." Recall that in Trubetzkoy's view these are languages like Latin, which are not considered to belong to the moraic type.

⁸ In (1938a:119) Trubetzkoy argues that the difference between one and two-moraic nuclei must also be assumed in languages with 'sted', such as Danish. This is because the glottal gesture only occurs 'at the end of' long nuclei (Silberträger) such

cedes it is clear that Trubetzkoy's concern is with the explanation of distinctive vowel length and how to represent it, not with the notion of syllable weight as it is conceived in modern theories of phonological (prosodic) representations. There is more evidence for this conclusion. Trubetzkoy (1938a/b) discusses Italian as an example of a language that opposes single consonants to geminate consonants.⁹ According to Trubetzkoy, the fact that a language uses the analytical quantity correlation in consonants is not enough for it to be a mora-type language. Since Italian belongs to the class of languages that implement vocalic quantity in a culminative distinctive function and because it is not a pitch accent language, the syllable, not the mora is the relevant prosodic unit. It must therefore be the case that, in Italian, one point of the geminate belongs to the left-hand syllable, the other to the right-hand syllable.¹⁰ What is also illuminating for his particular view of the mora is the fact that Trubetzkoy considers languages like Latin as using a monolithic length opposition, because Latin does not use intravocalic positions as points of contrast. Nevertheless, according to Trubetzkoy himself, the Latin stress rule counts syllables and moreover distinguishes between heavy and light syllables (see also Trubetzkoy 1938b:165, fn.1). How the Latin type of 'heaviness' is to be understood is not made clear, which is unsatisfying, because one wishes phonological theory to explain *why* long vowels, diphthongs, and short vowels followed by a tautosyllabic consonant (or part of a geminate consonant) pattern together in treating a Latin syllable as heavy for the purpose of stress.¹¹ Leaving this aside, the critical fact here is that the light vs. heavy syllable distinction, which is crucial for the definition of the Latin stress rule, does not rest upon the presence of moras. Indeed, Trubetzkoy is very explicit in distinguishing between languages that oppose light syllables to heavy syllables and languages that oppose monomoraic syllables to bimoraic syllables:

as long vowels, diphthongs and vowels followed by a sonorant consonant. According to Trubetzkoy, this shows that these nuclei, long vowels included, distinguish between a beginning and an end, which means that long vowels must be bi-moraic. Notice that from this 'behaves as X, therefore is structurally similar with X' type of argument the step to admitting that Latin vowels behave as consisting of two units would not be a big one. Yet, this step is not taken.

⁹ According to Trubetzkoy (1938a:120), the use of analytical quantity in consonants is typical for languages that use long consonants only between vowels, because in these languages the long consonant divides over two syllables.

¹⁰ For further discussion of Italian, see also *Principles* (1969:201).

¹¹ And, of course, why Latin could nevertheless have compensatory lengthening, as in *n[i:]dus* (< *nisdos) 'nest', *c[ɑ:]nus* (< *casnos) 'grey', *c[o:]mis* (< *cosmis*) 'cheerful', etc. We will return to this issue below.

- (5) Whereas in the languages with an 'energetic' conception of quantity only monolithic *syllables* exist, of which one part is heavy, the other light, in languages with an analytic conception of quantity it is not syllables but *moras* that are considered units. Here, not heavy and light syllables are opposed to each other, but bimoraic and monomoraic syllables (Trubetzkoy 1938b:164; italics are original). [My translation; LW].¹²

According to Trubetzkoy, there are languages that have a quantity distinction based on moras, languages that distinguish heavy syllables from light syllables, and languages that do not have either. Obviously, the distinction between mora-counting and heavy-syllable languages only makes sense if we understand that Trubetzkoy's conception of the mora is the (provisional) conclusion of his search for the proper representation of distinctive vowel length, combined perhaps with some intuitive (and possibly wrong) notion of the unmarked (i.e., non-analytic) phonetic implementation of this opposition.

2.1 Jakobson's reaction

If we reread Trubetzkoy's statement in (1) above in the light of the foregoing discussion, we would probably not wish to refer to it in order to dismiss a Portuguese or Spanish stress rule based on a mora count, because we would clearly be confusing different conceptions of the mora.

In the period from 1934, when he wrote the study referred to as 1938b and the years 1935 to 1938, when he was writing his *Principles*, something important happened that persuaded Trubetzkoy to revise entirely his view of the representation of phonological quantity. While he considered the use of analytical quantity the exceptional case in his 1938b study, Trubetzkoy states in his *Principles*:

- (6) It may be noted that the (non-culminative) correlation of intensity is a comparatively rare phenomenon. In any event, the correlation of prosodic gemination occurs much more frequently (1969:184).

What was it that made him change his mind so drastically? In a paper published in 1937, but written in 1936, Jakobson investigates the functions that word stress can have in different lan-

¹² "Während in den Sprachen mit 'energetischer' Quantitätsauffassung nur einheitliche Silben bestehen, von denen die einen schwer, die anderen leicht sind, werden in Sprachen mit analytischer Quantitätsauffassung nicht Silben, sondern *Moras* als Einheiten betrachtet. Es stehen hier nicht schwere und leichte, sondern zweimorige und einmorige silben einander gegenüber."

guages and how these functions relate to vocalic quantity. In this paper he adopts what he considers the 'important' distinction proposed by Trubetzkoy between languages where length is the expression of the "stretchability" of the segment, on the one hand, and languages that use the opposition of close contact, on the other. Surprisingly, he does not mention Trubetzkoy's further division of quantity languages into systems of monolithic and analytic quantity. Could it be that Jakobson rejects the relevance of this distinction? The idea that Jakobson is indeed preparing the ground for a severe criticism of Trubetzkoy's conception of quantity is confirmed by the fact that he relativizes Trubetzkoy's generalization (which is actually his own), stated as (2b,c) above, according to which distinctive vowel length cannot be combined with distinctive dynamic stress. He calls it a tautology, which he explains in the passage quoted in (7) below:

- (7) If in a language with distinctive quantity the accent is mobile [i.e. surface contrastive: LW], it can choose between two short contiguous syllables as well as between the beginning and the end of a long vowel, and would thus necessarily become a polytonic accent. [My translation: LW]¹³

The fact that Jakobson calls his own implicational law a tautology is interesting, because it means that vowel length is always of a composite nature.¹⁴ Distinctive vowel quantity is always of the analytic kind and languages that combine this with *distinctive* main accent will realize it as a pitch accent. It looks as if Jakobson wants to break out of the circle in which Trubetzkoy had placed himself. Indeed, he goes on to claim that the analytic quantity opposition is much more widespread than Trubetzkoy suggests. In particular, it must be assumed for any language in which at least one of the following conditions holds:

- (8) Languages with analytic vowel length (according to Jakobson 1937):
- Languages where a morpheme boundary can fall 'in the middle' of a long vowel.
 - Languages where it can be shown that diphthongs and long vowels function together in phonotactic restrictions.
 - Languages where long vowels count as two units for the localization of word stress.¹⁵
 - Pitch-accent languages.
 - Languages that have the contrast "with *stød*/without *stød*" where the *stød* appears contrastively only in long vowels, diphthongs and vowel + sonorant consonant sequences.
 - Languages that have diphthongs.

Jakobson obviously succeeded in convincing Trubetzkoy to change his mind about the relative markedness of the language-specific implementation of vocalic quantity, because in *Principles*, Trubetzkoy adopts all of Jakobson's criteria, except for the one stated in (10f).¹⁶

We can now make a correct assessment of the question we set out to solve, which is whether it is justified to hold Trubetzkoy responsible for the claim that languages without phonological quantity cannot have a stress rule that is based on a mora count. Although it is but a small step from the inventory of patterns that Trubetzkoy and Jakobson propose as evidence for analytic vowel length to the conception of the mora as it is used in non-linear phonology (cf. Hyman 1985, Hayes 1989), in *Principles* it is still part of a proposal for the representation of contrastive vowel length. As far as we have been able to check, Trubetzkoy did not study the universal parameters that define the nature of stress rules in human language. Therefore, even if it turns to be

¹³ Latin now becomes a mora counting language. In *Principles*, Trubetzkoy adopts Jakobson's formulation of the Latin stress rule which is that 'stress is on the penultimate mora before the last syllable'. This means, of course, that, in Latin, the coda consonant in a syllable containing a short vowel is moraic.

¹⁴ According to Jakobson one can consider diphthongs (phonetic or phonological) as long vowels with a segment-internal shift in their articulation, much like long vowels that carry a tone movement. In languages that have both long vowels and diphthongs, the diphthongs allow to deduce the composite nature of the 'flat' long vowels. It is unclear why Trubetzkoy could not accept the presence of diphthongs as a generally valid criterion for the identification of vowel quantity as analytic. Maybe, because it would imply that he had to give up his original distinction between monolithic and analytic length almost entirely. Maybe also because he simply disagreed with Jakobson on the issue of how to analyse (phonological) diphthongs, considering these as sequences of separate vowels. Whatever the reason, in *Principles* he maintains his original classification, although he now reverses the unmarkedness relation between monolithic and analytic quantity in favor of the latter.

¹⁵ "...fällt in einer Sprache mit freier Quantität die Betonung beweglich ist, so könnte sie ebenso wie zwischen zwei kurzen Nachbarsilben auch zwischen dem Anfang und dem Ende eines Langvokals wählen, und würde somit notwendig zu einer polytonischen Betonung".

¹⁶ At least it means that long vowels can at any time be analysed as consisting of two parts, which amounts to the same. Observe that in Trubetzkoy's interpretation of the law it was not tautological, since his view of the unmarked vocalic length was long vs. short. In such a view, stress cannot automatically distinguish between two parts of a long vowel. It does raise the question of how monolithic quantity can become analytic in the history of a language.

true that "in order for a -VC rime to be counted as heavy, the language must also have -V: rimes" (Hyman 1985:6), this law was not as such formulated by Trubetzkoy. The question whether in languages without phonemic vowel length the notion of 'heavy syllable', which is consequently limited to the conjunction of the (possibly empty) set of diphthongs and the set of (C)VC syllables, still makes sense was not addressed by him. We are thus back at the beginning, and what is at issue is the empirical question whether there are languages without contrastive quantity in which the location of stress is (co-) conditioned by the light versus heavy syllable distinction.

Although it is now clear that it was not Trubetzkoy who established the universal implication between quantity sensitive stress and phonemically long vowels, one could still ask whether the implication represents a valid cross-linguistic generalization. Interestingly, of the authors cited in the beginning of section 2 who assume the law's universal validity, Kuryłowicz (1948) does not attribute it to Trubetzkoy;¹⁷ rightly so, as we have just seen. Indeed, to the best of our knowledge, it was Kuryłowicz who first claimed explicitly that syllable quantity can only exist in languages with vowel quantity, as he states:¹⁸

Syllable quantity cannot be based exclusively on the opposition *e* ~ *et*, but requires the existence of *e*, which makes possible the relation *e* ~ *e*: = *et* [where *e* stands for any vowel and *t* for any consonant] (1948:220). (our translation, LW)

In the remainder of this paper we will therefore refer to the implicational law as **Kuryłowicz's Universal** and show that it is not valid as a cross-linguistic generalization.

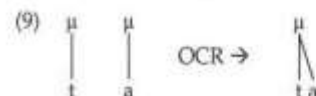
3 Weight-by-position and its relation to phonemic vowel length in modern theories of the mora

We will start our discussion with some post-structuralist views of the mora, and observe that, within these views, the question of phonological weight in tautosyllabic VC clusters is not made dependent on the presence of long vowels in a principled way.

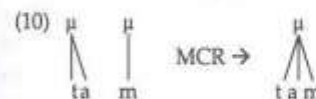
¹⁷ We know with certainty that Kuryłowicz knew Trubetzkoy's theory of vocalic quantity, because he was present at the Copenhagen conference when Trubetzkoy delivered his lecture *Die Quantität als phonologisches Problem*, as we can tell from the discussion session in which Kuryłowicz participated.

¹⁸ «...la quantité syllabique ne peut se fonder uniquement sur l'opposition *e* ~ *et*, mais exige l'existence d'un *e*, qui rend possible le rapport *e* ~ *e*: = *et* ».

The first comprehensive discussion of the mora and its role in phonology is by Hyman (1985). According to Hyman, moras are prosodic 'units of weight' consisting of segments or segment sequences. Lexically, associations between segments and weight units are one-to-one, except for phonologically long segments, which are associated with two weight units. Underlying associations between weight units and segments may differ from surface associations. One difference is systematic and is explained as the effect of a universal Onset Creation Rule (OCR). The OCR acts upon sequences of [+consonantal] and [-consonantal] segments which are joined to become a single weight unit in all of the world's languages. The OCR explains why a [+consonantal] segment always becomes an onset in front of a [-consonantal] segment, and, moreover, why onset consonants never contribute to the weight of a syllable. The universal OCR is exemplified in (9):



Consonants that do not precede a vowel immediately may remain moraic in some languages or lose their mora by language-specific rules of mora deletion and reassociation. For example, in Latin, the coda consonant contributes to the weight of the syllable as is shown by the stress rule of the language, among other phonological rules. In Hyman's view, the Latin coda consonants remain moraic at least until the level at which stress assignment takes place. Since coda consonants in Latin are not syllable peaks phonetically, the Margin Creation Rule (MCR) removes a consonantal weight unit from the representation, after the rules that need to refer to weight have applied. The effect of the language-specific MCR is shown in (10):

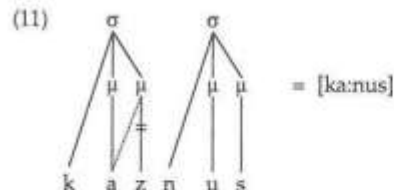


Since phonemic vowel length is expressed lexically as the association between a vocalic segment with a single mora (short vowel) or with two moras (long vowel), it correctly follows that in languages with phonologically long vowels, (C)VC syllables may not count as heavy for phonological generalizations that are based on a mora count, while open syllables containing long vowels count as light. On the other hand, there are languages in which

long vowels count as heavy, while (C)VC syllables are counted as short. In those languages, the MCR must apply to eliminate consonantal weight units before the application of the phonological rules that refer to weight. Interestingly, despite the fact that Hyman seems to endorse Kuryłowicz's Universal, it does not follow from his theory in a natural way. In fact, the *obligatory* application of the MCR in languages without phonological length would have to be independently stipulated. As we will see below, this is a fortunate co-incidence, because the implication does not hold universally.

A slightly different formalization of the role of the mora in the phonology of the world's languages is proposed by Hayes (1989). As in Hyman's theory, vowels are universally moraic and in languages with a vocalic length contrast long vowels are represented as single segments linked to two moras. Consonants are not moraic underlyingly, except for geminate consonants, which are attached to a single mora in their lexical representation. Additional moras are assigned to coda consonants by a language-specific rule of 'Weight by Position' (WbP). As in Hyman's proposal, the prediction is made that long vowels count universally as heavy. The problem of closed syllables constituting a natural class with syllables containing a long vowel is accounted for by a mechanism that adds moras to the representation (WbP), rather than one that deletes them (MCR).¹⁹

Moraic theory as proposed by Hyman (1985) and Hayes (1989) also permits the derivation of the principle of 'moraic conservation' (Hayes, 1989: 285), which explains compensatory phonological processes as the consequence of the preservation in the output of the number of moras that appear in the input. For example, in Latin [z] was deleted before anterior sonorants. Its deletion caused the preceding vowel to become long, as is illustrated below for *[kaznus] → [ka:nus] 'gray' (Hayes, 1989:262):



In (11), [z] is dissociated from the mora-tier, as indicated by the dissociation sign (=). The segmentally unaffiliated mora is subsequently linked to the tautosyllabic vowel (.....), which becomes long.

The interesting prediction that follows from mora theory and which bears directly upon the weight issue under discussion, is that, if (C)VC syllables do indeed count as bi-moraic in languages with a vowel length contrast only, one would not expect compensatory lengthening to be possible in languages without phonemic long vowels.²⁰ Hayes, who explicitly addresses this question, concludes: "a language that lacks a vowel length contrast, but has a syllable weight contrast, can create surface long vowels through a process essentially equivalent to CL" (1989:290). Hayes cites Ilokano as an example of such a language. Not only does the Ilokano stress system refer to syllable quantity, that is, to the distinction between (C)V and (C)VC, it also creates surface long vowels through a process of compensatory lengthening. It is clear from the above that Hayes does not adhere to Kuryłowicz's Universal. Since the application in a given language of his Weight-by-Position rule is not linked to the presence of phonemically long vowels, we expect languages like Ilokano to exist. Indeed, every language without phonemic quantity with a stress system that refers to weight, or that has a rule of compensatory lengthening, consonant gemination, or any other generalization that must be expressed in terms of mora structure, would be a counterexample to Kuryłowicz's Universal. In the remainder of this section we will see that these languages are not really as rare as one might think. We will first discuss a number of Romance languages, which have no length contrast, but which show compensatory effects. We will then look at a number of non-Romance languages that have stress rules referring to syllable weight without having a phonemic length contrast.

¹⁹ Notice that, from the point of view of lexical phonology, the theories make at least one interesting different empirical prediction. In Hyman's theory, it is predicted that, if a phonological rule that applies at a given level counts long vowels as heavy, but syllables closed by a consonant as short, the language should not have a rule applying at a later level that counts both syllable types as heavy. In Hayes's theory such a configuration of facts is in principle describable. On the other hand, Hayes's theory predicts that in languages with a phonological length distinction in vowels and consonants, rules that treat syllables containing long vowels as heavy should also treat syllables closed by (half of) a geminate consonant as heavy. One language that appears to falsify both predictions is Sri Lanka Creole Portuguese, studied by Smith (1978). Sri Lanka Creole Portuguese has both long and short consonants and long and short vowels. The language has a primary stress rule that applies lexically and only counts long vowels as heavy. Post-lexical secondary stress is distributed by a rule for which both closed syllables (including syllables closed by geminates) and syllables containing long vowels are counted as heavy.

²⁰ This is exactly the hypothesis defended by De Chene and Anderson (1979).

4 Languages without vocalic quantity but with a syllable weight distinction

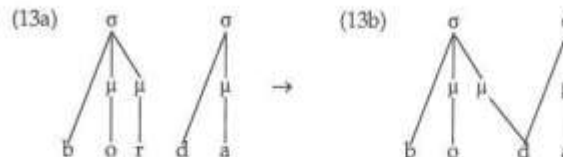
In this section we will discuss a number of languages that lack a vowel length distinction but nonetheless have a distinction between monomoraic and bimoraic syllables, where the latter take the form (C)VC/G.

In multi-tiered theories of phonology, deletion of phonological material is predicted to occur in different ways. If deletion involves both the segment and its associated mora, compensatory changes cannot occur. When deletion takes place on the segmental tier only, the stranded mora will survive through association with the preceding vowel or the following consonant, as was discussed above. As a matter of fact, in some languages a segmentally unaffiliated mora may in certain cases lead to vowel lengthening and in other cases to consonant gemination, as is illustrated for Tiberian Hebrew by Lowenstamm and Kaye (1986).²¹

Consonant gemination as a reaction to the loss of a coda consonant can be found in some varieties of Spanish.²² For example, in eastern Dominican and Havana Cuban Spanish a syllable-final /r/ is optionally deleted. The loss of /r/ is compensated for by the gemination of the following onset consonant (Jiménez Sabater, 1975; Guitart, 1976; Núñez Cedeño, 1994). The examples provided in (12) are taken from Núñez Cedeño (1994:26):

(12a)	karta	→	katta	letter	(12b)	kata	he tastes
	torpe	→	toppe	clumsy		tope	top
	marko	→	makko	I mark		mako	a kind of frog
	karga	→	kagga	load		kaga	he shits
	barba	→	babba	beard		baba	drool
	borda	→	bodda	aboard		boda	wedding

The words containing geminates in (12a) contrast with those in (12b), which contain single consonants. As Hayes (1989:279) observes, 'total assimilation' of consonants is formally equivalent to segment deletion followed by the association of the onset consonant to the stranded mora:



If this view of the gemination process is correct, the Spanish dialects under discussion must have had moraic structure prior to consonant lengthening. Similarly, in Cuban Spanish, the deletion of /s/ in word-internal codas is compensated by the lengthening of the preceding vowel, as is illustrated in the following examples, taken from Hammond (1986:33) (see also Núñez Cedeño (1986):

(14a)	/búske/	[bú:ke]	busque	search-imp
	/pastfjas/	[pa:tʃjas]	pastillas	pills
	/pekádo/	[pe:kádo]	pecado	fish
(14b)	/buque/	[búke]	buque	ship
	/patfjas/	[patʃjas]	patillas	whiskers
	/pekádo/	[pekádo]	pecado	sin

After the deletion of /s/ and vowel lengthening, the words in (14a) contrast with those in (14b). Again, if compensatory lengthening is to be explained as the preservation in the output form of a mora that is present in the input form, Cuban Spanish must have had a syllable weight distinction before the vowel lengthening took place.

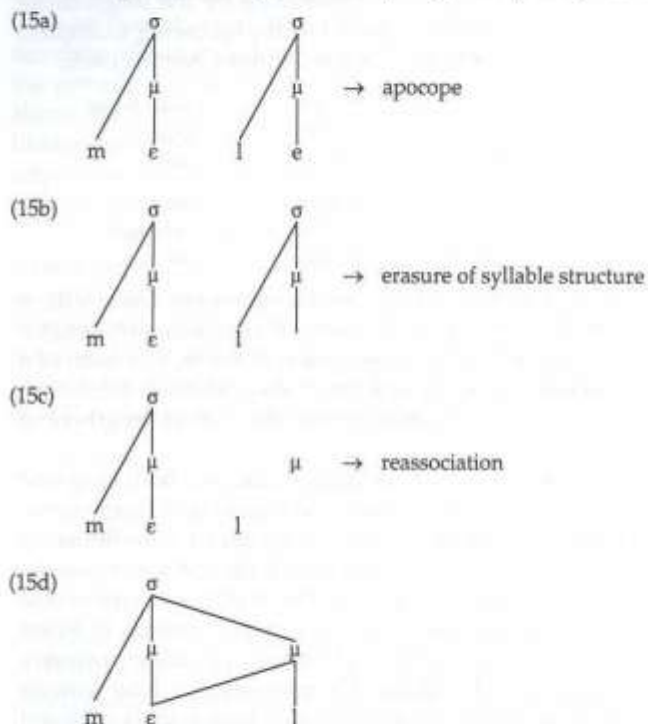
It is usually assumed that standard Italian has both long and short consonants, but lacks phonemic vowel length distinctions. The opposite situation holds for many varieties of Italo-Romance spoken in northern Italy, which have both long and short vowels, but no contrastive consonant length. The traditional diachronic explanation for the long vowels of the modern dialects is based upon the hypothesis that in the early stages of Italian, primary stressed syllables were bimoraic. The phonetically long vowels became phonologized when apocope created long vowels in closed syllables (C)V:C, as in [lūpu] > [lo:bo] > [lu:v] 'wolf',²³ next to the existing short vowels. When considered from the perspective of Kuryłowicz's Universal, it could be argued that for these languages moras became relevant at that point in time when the phonetic length had become phonologized through apocope. However, as Repetti (1992) shows, the traditional historical scenario cannot explain the long vowels in the Friulian dialect. The impor-

²¹ In Tiberian Hebrew, empty coda positions are filled by consonant gemination in the usual case. When gemination would lead to non-existing (guttural) geminates, long vowels are created. See also Wetzels (1986), where it is argued that vowel lengthening and gemination in different dialects of Ancient Greek, were the dialect-specific reactions to an identical rule of mora stranding.

²² To my knowledge, there are no varieties of Spanish that have phonemic long vowels, not counting the dialects that acquired long vowels through compensatory lengthening.

²³ The example is from the Emilian dialect, taken from Repetti, (1992:158).

tant observation with regard to Friulian is that, unlike most other northern Italian dialects (cf. [krú:da] 'raw-fem'), Friulian has no general vowel lengthening in open syllables (cf. [sé:ce] 'dry-fem' or [krú:de] 'raw-fem'). Repetti (1992) therefore believes that vowel lengthening in stressed open syllables did not occur in the history of Friulian. Instead, a process of compensatory lengthening took place, which created long vowels in words in which the vowel following the stressed syllable was deleted. Repetti illustrates this historical process using the word [mi:l], from [mele] 'honey':



The final vowel in the word in (15a) is deleted in (15b). Since the second syllable is now without a nuclear segment, its structure is automatically erased (15c) by a general principle which Hayes (1989:268) calls 'parasitic delinking'. In Friulian, the unaffiliated mora is associated with the stressed nucleus, which becomes long. As Repetti argues convincingly, vowel length must be considered underlying in contemporary Friulian. If Repetti's historical explanation is correct, Friulian is a clear case of a language which cre-

ated phonemic vowel length as a result of compensatory lengthening, without the prior existence of phonological quantity. This implies that Friulian must have been a mora language prior to the creation of vocalic quantity distinctions.

In all dialects of Spanish, two types of /r/'s are used, the phonetic properties of which may vary from one dialect to another. The different /r/'s are in almost complete complementary distribution, except between vowels, where they contrast. According to Harris (1983:62) "The standard realization of [r] is a single voiced alveolar flap, while [r̄] is articulated as a voiced alveolar trill of two to ten or more extremely rapid vibrations." Although both r's function as syllable onsets at the phonetic surface, Harris argues that the phonological contrast is one between single [r] and geminate [rr]. If Harris's analysis is correct, as we believe it is, and if, as in Hyman and Hayes's theories of the mora, phonological length oppositions are expressed through the mora-tier, all varieties of Spanish must be mora languages.

We have seen a number of phenomena that show that at least some of the Romance languages provide evidence for a syllable weight distinction without having a vowel length opposition. This puts the problem of whether these languages have a weight-sensitive stress rule in a different perspective. It is no longer a matter of whether or not these languages have a mora tier, but whether or not they use the existing mora structure for the purpose of distributing main stress. It could still be argued, however, that the reason why these languages should not have a weight-sensitive stress rule is the claimed relation between this type of stress rule and the necessary presence of phonemic vowel length, although the reason for this implication would be even more difficult to understand in the light of the foregoing discussion. We will therefore turn away momentarily from the Romance linguistic family in order to show that there are typologically unrelated languages that have weight-sensitive stress without having also contrastive vowel length.

The most northern of the Quechua languages is Inga, spoken by approximately five thousand Indians who live at the west end of the Sibundoy valley, state of Putumayo, Colombia. According to Levinsohn (1976), Inga has three vowel phonemes /i,a,u/. The language has no phonemic length. Primary stress falls within a three-syllable window at the right edge of the word. Stress is word-final when the last syllable is closed by /m,n,r,j/: *yawár* 'blood', *apamúy* 'to bring'. There is one systematic exception where stress is on the last vowel of future verbs to mark the future as 'not

immediate': *samúsa* 'I will come (soon)' as compared to *samúsá* 'I will come (later)'.²⁴ With certain suffixes, stress can be on the penultimate syllable: *nispaka* 'after', *imata* 'what'. Otherwise, stress falls on the penultimate syllable.

Kilivila is an Austronesian language spoken by a people living on the Trobriand Islands, Milne Bay Province, Papua New Guinea. Kilivila has five vowel phonemes, /i, e, a, o, u/, which do not contrast for duration. In Kilivila, heavy syllables are of the type (C)VGlide, or (C)V(Glide)m. Words that end in one of these syllables are stressed on the final syllable: *bakám* 'I will eat', *katupói* 'you will ask'. Stress is on the antepenultimate syllable when the last three syllables contain no morpheme boundaries and the structure of the last two syllables is either *C(i,u)Ca* or *ka(l,n)ja*: *lámína* 'outrigger', *líguta* '(type of) yams', *marákana* 'red', *pókala* 'tribute'. In all other words, stress is prefinal: *wága* 'canoe', *vivíla* 'girl', *bobwelíla* 'gift'.

The Sentani language is one of a group of closely related Papuan languages, named the Sentani group by Cowan (1965). Sentani proper is spoken by a people inhabiting the Sentani Lake district in North-Eastern West New Guinea. Sentani has a seven vowel system, /i, e, ε, a, ə, o, u/, without vocalic length distinctions. Primary stress is entirely predictable in the following way: primary stress is on the last syllable of the word if that syllable is heavy, otherwise stress is on the prefinal syllable, except when the final syllable is light and the pre-final syllable is a light syllable containing /ə/, in which case stress is predominantly on the antepenultimate syllable if and only if that syllable is closed. Examples are given in (16):

(16a) final heavy		(16b) final light	
ankéj	ear	hójbo	kill
awáw	mother's brother	hokólo	young
falém	head	mokódu	back
kolobój	carrying net	ukáwnə	he told him
hodobóm	let me kill	handebóke	we killed (something)

(16c) final and pre-final light, ante-penult heavy	
wáwnəle	thou wilt say to him'
kéjnəhi	throw it away'
ukájəle	they told him'

The generalization that applies to all the examples in (16a-c) is that stress is on the syllable containing the second mora counting from the right edge of the word, which is also the basic generalisation that, in my view, characterizes the stress system of Portuguese. Some special mechanism must block stress in an open syllable containing ə when the preceding syllable is heavy.

Another language that is claimed to use a syllable weight distinction without phonemically long vowels is Stoney, an Alberta (Canada) dialect of Assiniboine Dakota. According to Shaw (1985), the Stoney dialect is moving away from the basic Dakota pattern of second-syllable stress to an emerging pattern of final or penultimate stress. The innovative Stoney stress rule is claimed to be sensitive to syllable weight, in such a way that VCC rhymes count as heavy, while VC or V rhymes count as light.²⁵ In imperative forms an independent rule of word-final stress applies that is not sensitive to syllable weight.

This much is enough to show that weight-sensitive stress rules are found in a number of genetically unrelated languages. To be sure, the examples we have discussed do not exhaust the number of languages that are known to belong to this typological class. In the StressTyp database set up by Goedemans, Van der Hulst and Visch at Leiden University²⁶ at least twenty out of the five hundred languages represented in the data base turn out to have a syllable weight distinction for the purpose of stress placement without having phonemically long vowels. In his discussion of the typological aspects of the data base Goedemans (forthcoming) concludes: "Even if we discard the questionable cases..., there are still enough languages left to question the universality of the claim that all QS languages need to have long vowels".

It is clear by now that Kuryłowicz's Universal has not survived the test of empirical verification. Before we finish our discussion we will turn to one more typological claim, which is a little more specific than the one we have tested until now. The claim was made recently by Andrade e Mira Mateus (2000:117), who state: "...the pure quantity-sensitive hypothesis seems, in principle, to be incompatible with the coexistence of two stress subsystems, one for nouns and one for verbs".

²⁴ One way of looking at these facts is to assume that word-final consonants are extrametrical in Stoney.

²⁵ Many thanks to Rob Goedemans for putting the StressTyp database at our disposal.

²⁶ A very small number of words are exceptions to this rule: *iskay* 'two', *iri* 'yes'.

If the above quote is meant to be a statement about Portuguese, I agree with Andrade and Mira Mateus, because the distribution of stress in Portuguese verbs is indeed not conditioned by weight. Portuguese is therefore not a 'pure quantity-sensitive' system in the sense that syllable weight is only relevant for part of the lexical categories. If the statement is about languages in general, which I assume it is, meaning that there can be no stress system in which a quantity-sensitive subsystem co-exists with a subsystem that is not sensitive to syllable quantity, it is not valid as a cross-linguistic generalisation. As a matter of fact, of the four languages discussed earlier, Inga and Stoney combine a subsystem that is weight-sensitive with a subsystem that is morphologically conditioned. Another better known example in which two such systems co-occur is Turkish. Turkish normally has stress on the final syllable.²⁷ However, there are some word classes that behave idiosyncratically in not having word-final stress. One class includes toponyms and loans,²⁸ such as [antálja] 'Antalya', [montezú:ma] 'Montezuma', [ánkara] 'Ankara', [istánbul] 'Istanbul', [lokánta] 'restaurant'. As was shown by Sezer (1983), the stress pattern of this class is predictable if syllable structure is taken into account. Hayes (1995:262) analyses the prosodic structure of these words by constructing moraic trochees from right to left. A word-final consonant is marked extrametrical (cf. *Istanbul* below) and a word-final foot is marked extrametrical, if its head syllable clashes with the head syllable of the pre-final foot (cf. *Ankara* below):

(17)

Final C extrametricality	Antalya h h l	Istanbu<l> h h l	Ankara h l l
Final F extrametricality	(x) (x)	(x)(x)	(x)<(x .)>
End Rule Right (main stress)	x	x	x

Another exceptional class contains words ending in the adverbial suffix *-en/-an*: [nákten] 'in cash', [müftéren] 'mutually', [muvákkaten] 'temporarily', [esás:en] 'basically'. These words are easily accounted for on the assumption that the adverbial suffix is marked as extrametrical. With this proviso, moraic trochee construction applying from right to left will locate the main stress correctly: /müfterek<en>/ → /(müf)(tere)<en>/ → [müftéren], etc.

²⁷ With some suffixes being stress-neutral, causing main stress to fall to their immediate left.

²⁸ All the examples are taken from Hayes (1995).

Another example of a language in which two different word-prosodic systems co-occur, is Archi, a Southern Daghestanian language.²⁹ In Archi, stress is assigned within a two-syllable window at the left edge of the word. Stress in non-verbs is sensitive to the open vs. closed syllable distinction, as well as to the degree of sonority of the vowels that occur in the initial or post-initial syllable. In Archi, monosyllabic nominal roots are always closed. Suffixes may be consonant-initial or vowel-initial. When a consonant-initial suffix is added to the root, the root syllable remains closed and stress will always be initial: *dump* 'ball', *dúmp-li* 'ball-erg sg', *dúmp-mul* 'ball-pl'. If the addition of a vowel-initial suffix causes the root syllable to open, stress will be on the second syllable, unless its nuclear vowel is less sonorant than the vowel in the first syllable: [buχ] 'vein', [buχ-út] 'vein-nom pl', [q'es] 'boot', [q'és-i] 'boot-erg sg', [q'és-ur] 'boot-nom pl', [bel] 'spade', [bél-um] 'spade-nom pl', [č'ut] 'bug', [č'ut-á] 'bug-erg si', [č'ut-úr] 'bug-nom pl'. Disyllabic roots are in conformity with the general stress rule of Archi: [dijá] 'father', [zulú] 'spring', [gátu] 'cat', [génuk] 'egg', [sársi] 'sand'. In verbs, stress is on the initial vowel if the verb stem is disyllabic, whereas in monosyllabic verb stems stress shifts to the suffix: [kum-mús] 'eat-inf', [kun-né] 'eat-pst', [dáxi-s] 'beat-inf', [dá-r-χi-r] 'beat-prs', [dách-di] 'beat-pst'. Neither syllable weight, nor the sonority degree of vowels influences stress placement in verbs.³⁰ Interestingly, the set of lexical categories (non-verbs) that is submitted to the quantity-sensitive subsystem in Archi is identical to that of Portuguese.

Yet another example of a language that is claimed to have different prosodic systems for verbs and non-verbs takes us back into the sphere of Portuguese. The language is called Kristang, or Malacca Creole Portuguese, spoken in Malacca, West Malaysia. Baxter (1988:40) states: "It appears that rules for stress placement will have to apply to syntactic classes, e.g. verbs are stressed on the final syllable, nouns³¹ are stressed on the penultimate syllable if ending in a vowel, on [the] final syllable if ending in a consonant."

²⁹ Based on Kodzasov (1999), from which all the examples are taken.

³⁰ Notice that, since both syllable weight and sonority of the vowel play a role in the Archi stress rule, we may be witnessing here a prominence-sensitive stress rule rather than a weight-sensitive one, in the sense of Hayes (1995:273). Nevertheless, Archi is a language that combines two different prosodic subsystems, one for non-verbs and one for verbs. With regard to the vocalic sonority classes, it is interesting to note that /o/ patterns with the high vowels. As a matter of fact, historically /o/ derives from a central high vowel. Synchronically the assignment of vowels to sonority classes is partially unnatural.

³¹ That the quantity-sensitive part of the accent system applies to all non-verbs is made clear on page 37: "A large number of words have penultimate syllable main stress. This is particularly true of words ending in a vowel and especially so if they are

The Kristang verb does not show number and is modified for tense, aspect and mood by preverbal particles, as in *eli-ja-bai-mar-onti*, 3s-perf-go-sea-(yesterday), 'he went fishing yesterday'. Verbs take stress on the final syllable:

- (18) kumí to eat
 bebé to drink
 alkansá to reach
 striká to iron (from Dutch *strijken*, with stress on the first syllable)

Non-verbs have stress on the final or prefinal syllable, depending on whether the final syllable is open or closed:

- (19) abána fan amyáng tomorrow
 áti until anumbés perhaps
 grándi big didál thimble
 fórsa strength balór value
 káza house namás just

In Baxter (1988), very little is said about the morphology of Kristang. More in particular, it is unclear whether it makes sense to distinguish in Kristang between thematic and athematic nouns (or non-verbs). If, as we think, the theme vowel is not relevant as a morphological entity in this language, it is not possible to generalize over the words given in (19) by reference to the stem, such that in all of these words stress is stem-final. In the absence of theme vowels, the most straightforward way to account for the stress facts of Kristang, it seems to us, is by way of a rule as proposed by Baxter. Further study must show if the theme vowel is really irrelevant as a morphological category in Kristang.²²

5 Conclusion

In this paper we have investigated the often cited claims that Portuguese stress cannot belong to the class of languages that have a weight-sensitive stress rule for typological reasons. At the basis of this claim lies the implicational universal according to which only languages with a vowel length contrast can have a mora counting stress rule. We have seen that this claim was erroneously

nouns, pronouns, demonstrative determiners, adjectives or adverbs but rarely if they are verbs." All examples provided are taken from Baxter (1998).

²² In Kristang, the same classes of exceptional stresses exist as in Portuguese, although we understand from Baxter that the amount of words that belong to each class is much smaller than in Portuguese. Some examples are: [flóris] 'flower', [fásel] 'easy', [dagú] 'jaw', [naki] 'here', [étika] 'tuberculosis', [mbálidu] 'useless person'. See Baxter (1998:37/8)

attributed to Trubetzkoy. We have also seen that there are quite a few languages that contradict this cross-linguistic generalization. We have then tested the more specific claim that weight-sensitive and weight-insensitive subsystems may not co-exist in a single language and concluded that this claim cannot stand the test of empirical verification either. It follows that the rejection of a weight-sensitive stress rule for Portuguese, or any other language without phonemic vowel length, cannot be justified by typological arguments, but must be based on language-internal arguments only.

References

- ANDRADE, Ernesto de and Bernard Laks. 1991. Na Crista da Onda: O Acento da Palavra em Português. In *Actas do VII Encontro da Associação Portuguesa de Linguística*. Lisboa.
- BAXTER, Alan, N. 1988. *A Grammar of Kristang (Malacca Creole Portuguese)*. Pacific Linguistic Series B-No. 95. Department of Linguistics, Research School of Linguistic Studies. The Australian National University.
- BECKMAN, Mary. 1986. *Stress and non-Stress Accent*. Dordrecht, Foris.
- COWAN, H. K. J. 1965. *Grammar of the Sentani Language*. The Hague, Martinus Nijhoff.
- De CHENE, E. B. and S. R. Anderson. 1979. Compensatory Lengthening. *Language* 55: 505-535.
- GREENBERG, Joseph and D. Kaschube, 1976. 'Word Prosodic Systems: a Preliminary Report'. *WPLU*, 20: 1-18.
- GUIPART, Jorge, M. 1976. *Markedness and a Cuban Dialect of Spanish*, Washington, D. C., Georgetown University Press.
- HAMMOND, Robert. 1986. En Torno a una Regla Global en la Fonología del Español de Cuba. Rafael A. Nunez Cedeño, Iraset Páez Urdaneta, and Jorge M. Guitart (eds.) *Estudios sobre la Fonología del Español del Caribe*. Caracas, Ediciones La Casa de Bello: 31-39.
- HARRIS, James, W. 1983. *Syllable Structure and Stress in Spanish*. Cambridge, MA, MIT Press.
- HAYES, Bruce. 1989. Compensatory Lengthening in Moraic Phonology. *LI*, 20.2: 253-306.
- HAYES, Bruce. 1995. *Metrical Stress Theory. Principles and Case Studies*. Chicago, Chicago University Press.
- HYMAN, Larry (ed.). 1977. 'Studies in Stress and Accent', *Southern California Working Papers in Linguistics*, 4.

- HYMAN, Larry. 1985. *A Theory of Phonological Weight*. Dordrecht, Foris Publications.
- JAKOBSON, R. 1971. Die Betonung und ihre Rolle in der Wort- und Syntagmaphonologie. *Selected Writings I, Phonological Studies*. Den Haag Mouton:117-136. (First published in 1931 in *Travaux du Cercle Linguistique de Prague*).
- JIMÉNEZ SABATER, Max A. 1975. *Más Datos sobre el Español de la República Dominicana*. Santo Domingo: Ediciones INTEC.
- KODZASOV, Sandro. 1999. Caucasian: Daghestanian Languages. In Harry van der Hulst (ed.), *Word-Prosodic Systems in the Languages of Europe*. Berlin, Mouton de Gruyter: 995-1020.
- KURYŃOWICZ, Jerzy. 1973. Contribution à la théorie de la syllabe. *Esquisses linguistiques*, I. Wilhelm Fink Verlag, München.
- LEVINSOHN, Stephen H. 1976. *The Inga Language*. The Hague. Mouton.
- LOWENSTAMM, Jean and Jonathan Kaye. 1986. Compensatory Lengthening in Tiberian Hebrew. W. Leo Wetzels and Engin Sezer (eds.) *Studies in Compensatory Lengthening*. Dordrecht, Foris: 97-132.
- NEWMAN, Peter. 1972. Syllable Weight as a Phonological Variable, *SAL*, 3: 301-23.
- NUÑEZ CEDEÑO, Rafael. 1986. Alargamiento compensatório en el español cubano: Un análisis autosegmental. Robert Hammond & Melvyn Resnick (eds.) *Studies in Caribbean Spanish Dialectology*. Washington: Georgetown University Press: 97-102.
- NUÑEZ CEDEÑO, Rafael. 1994. The Alterability of Spanish Geminates and its Effects on the Uniform Applicability Condition. *Probus* 6,1: 23-42.
- OHSIEK, Deborah 1978. Heavy Syllables and Stress. In A. Bell and J.B. Hooper (eds.) *Syllables and Segments*. North-Holland: 35-43.
- REPETTI, Laura. 1992. Vowel Length in Northern Italian Dialects. *Probus* 4,2: 155-182.
- ROCA, Iggy. 1990. Diachrony and Synchrony in Word Stress. *J. Linguistics* 26:133-164.
- SENFT, Gunter. 1986. *Kilivila, The language of the Trobriand Islanders*. Amsterdam, Mouton de Gruyter.
- SHAW, Patricia. 1985. Coexistent and Competing Stress Rules in Stoney (Dakota). *IJAL* 51, 1: 1-18.
- SMITH, Ian R. 1978. *Sri Lanka Creole Portuguese Phonology*. Dravidian Linguistics Association. Tolkappiyar Hall, Kerala Paanini Buildings, Vanchiyoor, Trivandrum. India.
- TRUBETZKOY, Nikolaj. 1925. Einiges über die russische Lautentwicklung und die Auflösung der Gemeinrussischen Spracheinheit. *Zeitschrift für slavische Philologie* I. 287-319.

- TRUBETZKOY, Nikolaj. 1929. Zur allgemeinen Theorie der phonologischen Vokalsysteme. *Travaux du Cercle Linguistique de Prague*, 1. 39-67.
- TRUBETZKOY, Nikolaj. 1938a. Die Quantität als phonologisches Problem. *Actes du IVe Congrès des linguistes tenu à Copenhague du 27-8 au 1-9-1936*. Copenhagen: Einar Munksgaard.
- TRUBETZKOY, Nikolaj. 1938b. Die phonologischen Grundlagen der sogenannten "Quantität" in den verschiedenen Sprachen. *Scritti in Onore de Alfredo Trombetti*. Milan: Ulrico Hoepli Editore.
- TRUBETZKOY, Nikolaj. 1939/1969. *Principles of Phonology* (translation by Christiane A.M. Baltaxe). Berkeley and Los Angeles: University of California Press.
- WETZELS, W. Leo. 1986. Phonological Timing in Ancient Greek. W. Leo Wetzels and Engin Sezer (eds.) *Studies in Compensatory Lengthening*. Dordrecht, Foris: 279-344.
- WETZELS, W. Leo. Mid Vowel Neutralisation in Brazilian Portuguese. *Cadernos de Estudos Lingüísticos* 23, IEL, UNICAMP: 19-55.
- WETZELS, W. Leo. 1995. Mid Vowel Alternations in the Brazilian Portuguese Verb. *Phonology* 12: 281-304.
- WETZELS, W. Leo. 1997. The Lexical Representation of Nasality in Brazilian Portuguese. *Probus* 9: 203-232.