Speech Rhythm in Indo-Aryan and Dravidian Languages

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Introduction

Rhythm, a prosodic feature, refers to an event repeated regularly over a period of time. Pike (1946) and Abercrombie (1964, 1967) suggested that all spoken languages exhibit isochronous unit of speech, and those languages are either stress-timed or syllable-timed. In stress-timed languages, intervals between stresses or rhythm are said to be near equal, whereas in syllable-timed languages successive syllables are said to be of near-equal length. A third type of rhythm, mora timing, was proposed by Bloch (1950), Han (1962), and Ladefoged (1975). Mora- timing was exemplified by Japanese. Traditionally, morae are -units of syllables consisting of one short vowel and any preceding onset consonants. In mora timing, successive morae are said to be near equal in duration. Thus, mora-timed languages are more similar to syllable-timed languages than to stress-timed languages. These differences come from the perception of rhythm. When we hear a fast rhythm, typically faster than 330 ms per beat, we hear it as a whole. We can imitate a machine gun sound, but we can hardly count its beats. On the other hand, when we hear a slow rhythm, typically slower than 45 ms per beat, we can hear each beat separately. We can easily control the speed of slow rhythm beat by beat, such as hand clapping in music. If a language has a simple syllable structure, the difference between the simplest and the most complicated syllable is not wide, and it is possible to say that any syllable is less than 330 ms. Thus, we can use the fast syllable rhythm. If a language has complex syllables such as ones with consonant clusters, the difference between syllable can be very wide, such as 'a' (around 150 ms) and strength (around 620 ms) in English. In this case we have to use a slow stress-timed syllable. In a syllable timed language, the difference between the successive intervocalic duration is high and that between successive vocalic duration is low. But in mora-timed language the difference between the successive intervocalic and vocalic duration is low.

Rhythm Class Hypothesis (henceforth: RCH) states that each language belongs to one of the prototypical rhythm classes known as either syllable timed, stress timed or mora timed. A rhythm class is defined as assigning equal durations to its basic rhythmic units (i.e. syllables, inter-stress intervals or morae). Although popular among linguists, the RCH has been contradicted by numerous empirical studies. The idea that there are a small and finite number of possible classes along the rhythm dimension is attractive, but has so far not been subject to extensive test. Abercrombie (1967), conducted a study in which, tape recordings of six languages (French, Telugu and Yoruba as syllable timed and English, Russian and Arabic as stress timed) were examined to see if it was possible to assign languages to one of the two categories. Intensity meter traces were made and only one speaker of each language was studied. About two minutes of picture description and spontaneous speech was measured for each speaker. The standard deviation measured for six speakers were 75.5 (French), 86 (English), 66 (Telugu), 77 (Russian), 81 (Yoruba), and 76 (Arabic). This set of figures does not appear to support the claim.

Considerable attention has been given recently to ISOCHRONY in English speech (i.e. the occurrence of regular stress beats), and it has been shown that the regularity of stresses is more apparent than real, in that listeners tend to perceive isochrony even in sequences of interstress intervals that are manifestly far from equal (Allen, 1975, 1979; Lehiste, 1977; Donovan & Darwin, 1979). Information about the perceptual reality of stress-timed rhythm has been produced mainly in relation to English, and there is no comparable information about syllable-timed languages. A few languages, however, have been investigated with measurements of interstress intervals, including some reputedly syllable-timed languages. Uldall (1971) recorded the reading sample in English language and analyzed the acoustic signal. The measured inter-stress intervals did not show marked regularity. Pike (1946) and Hockett (1958) classified Spanish as syllable-timed language, whereas a detailed study of Chilean Spanish by Alvarez de Ruf (1978) showed that for this variety of Spanish at least, the label "syllable-timed" is not appropriate. Balaramanian (1980) obtained similar results in Tamil language. Tamil could neither be classified as stress-timed or syllable-timed.

One of the most familiar distinctions in phonetics is that between STRESS-TIMED and SYLLABLE-TIMED languages. Many textbooks refer to this, but nowhere is the distinction as explicitly made as in Abercrombie (1967), who writes: "As far as is known, every language in the world is spoken with one kind of rhythm or with the other . . . French, Telugu and Yoruba . . . are syllable-timed languages, . . . English, Russian and Arabic . . . are stress timed languages'. Most teachers of phonetics are used to being asked by students how one can tell if a particular language is syllable-timed or stress-timed; it is easy enough to construct and perform examples, such as a comparison between an English sentence:

'this is the 'house that 'Jack 'built

and a French one:

c'est absolument ridicule.

However, it is much more difficult to set out clear rules for assigning a language to one of the two categories. Within the traditional way of teaching phonetics such a question does not necessarily need to be answered with a statement that can be tested experimentally. The question might be answered in the same way as others such as "how can you tell if a vowel is centralized?' by saying that the ability to make such decisions comes through undergoing a certain amount of training with an expert phonetician.

Isochrones in moral-timing was investigated by Han (1962) Port, Al-Any and Maeda (1980), and Port, Dolby and O'Dell (1987). Port et al. (1987) argue that these studies provide some preliminary support for the moral as a constant time unit. But other researchers have questioned the acoustic basis for moral-timing (Yakima, 1971, Beckman, 1982, Heurist, 1983). Beckman (1982)'s data, for instance, did not show that segments vary in length in Japanese in order to compensate for intrinsic durations of adjacent segments so that morale are equal in length.

In short, although popular among linguists, the RCH has been contradicted by numerous empirical studies. Abercrombie's view of speech rhythm as a combination of chest and stress-pulses has long been disprove (e.g. Linefeed, 1967), destroying the physiological basis of a strict categorical distinction into stress- and syllable-timed languages. The predictions for speech timing arising from the RCH have suffered a similar fate.

Consequently Abercrombie's statement that the phonetician needs 'empathy with the speaker' to apprehend speech rhythm, and his claim that 'it is necessary to learn to listen differently in order to be able to analyze speech rhythm, whether of one's mother tongue or another language, and to describe it in general terms' suggest that the distinction between stress-timed and syllable-timed languages may rest entirely on perceptual skills acquired through training. It can be objected to this that there is an infinite regression involved in saying that one can only decide whether X should be assigned to Category A or to Category B when one has been trained by someone who knows how to do this. Is it possible to establish some experimental test, based on instrumental techniques, which would make it possible to assign a language to one category or the other?

The empirical basis of the RCH has been investigated extensively, but experimental support for isochrony in speech is lacking (Beckman, 1992, Laver, 1994). In stress-timed languages, interstress intervals are far from equal, and interstress-intervals do not pattern more regularly in stress-timed than in syllable-timed languages (Shen and Peterson, 1962, Bolinger, 1965, Delattre, 1966, Faure, Hirst and Chafcouloff 1980, Pointon, 1980, Wenk and Wioland, 1982, Roach 1982, Dauer, 1983, Manrique and Signorini, 1983, Nakatani, O'Connor and Aston, 1981, Dauer, 1987, Eriksson, 1991). Nor are syllables or morae of roughly equal length in syllable-timed languages (Pointon, 1980, Wenk and Wioland, 1982, Roach 1982, Dauer, 1983, 1987). Roach (1982), for instance, compared interstress intervals in languages classified as stress-timed and

languages taken to be syllable-timed. He investigated two claims made by Abercrombie (I967) about the difference between stress-timed and syllable-timed rhythm:

(i)   There is considerable variation in syllable length in a language spoken with stress-timed rhythm, whereas in a language spoken with syllable-timed rhythm, syllables tend to be equal in length, and

(ii)   In syllable-timed languages, inter-stress intervals are unevenly spaced.

Roach's (1982) findings did not support either claim. The syllable-timed languages in his sample exhibited greater variability in syllable durations than the stress-timed languages. Roach also observed a wider range of percent deviations in inter-stress intervals in stress-timed than in syllable-timed languages. Roach concluded that measurements of time intervals in speech could not provide evidence for rh\thm classes. Roach's view has been supported by Dauer's (1983) study. Dauer compared interstress intervals in English, Thai, Spanish, Italian and Greek. She found that interstress intervals were no more regular in English, a stress-timed language, than in Spanish, a syllable-timed language. Dauer concluded that the search for acoustic phonetic correlates of stress- and syllable-timing was futile.

Researchers have not provided support from duration measurements for isochronous timing, on any absolute basis (Laver, 1994). This failure has obliged some researchers to retreat from 'objective isochrony' to 'subjective isochrony'. These researchers describe the physical regularity of isochrony as a tendency (Beckman, 1992, Laver, 1994). True isochrony is assumed to be an underlying constraint, and the surface realizations of isochronous units are perturbed by phonetic, phonological and grammatical characteristics of the language. Other researchers have concluded that isochrony is primarily a perceptual phenomenon (e.g. Lehiste 1977, Couper-Kuhlen 1990, 1993). Proponents of the 'isochrony-as-perception' view argue that the differences in duration measured between interstress-intervals or syllable durations are well below

the threshold of perception. Consequently, isochrony may be accepted as a concept that relates to speech perception.

The weak empirical evidence for isochrony leads Dauer (1983, 1987) to propose a new system for rhythmic classification. In Dauer's view, speakers do not attempt to equalize interstress or intersyllable intervals. Instead, all languages are more or less stress-based. Dauer suggests that prominent syllables recur at regular intervals in English, a stress-timed language, but also in Spanish, a syllable-timed language. But in English, prominent syllables are perceptually more salient than in Spanish. Consequently, rhythmic diversity results from the combinations of phonological, phonetic, lexical and syntactic facts associated with different languages. Syllable-structure, the presence or absence of vowel reduction, and word stress are especially relevant to rh\thmic differences. In stress-timed languages, syllable structures are more varied than in syllable-timed languages. In syllable-timed languages, vowel reduction is rarely found.

Dasher and Bolinger (1982) suggested that the rhythm of a language is the result of specific phonological phenomena such as variety of syllable types, the presence or absence of phonological vowel length distinctions, and vowel reduction. Dasher and Bolinger argued that rhythm type is not a phonological primitive but results from the phonological structure of a given language.

The search for empirical evidence may indeed have focused too much on the notion of isochrony, i.e., that stress-timed languages should have inter-stress intervals of a roughly constant duration, whereas syllable-timed ones should have syllables of constant duration. However, another approach, based on the variability of the duration of vowels, was more successful. It relies on the idea that stress-timed languages allow vowel reduction, in contrast with syllable-timed languages. Therefore, vowel duration should be more variable in stress-timed languages. This approach first provided evidence for rhythmic differences between British and Singapore English.

Ramus, Nespor and Mehler (1999) measured vowel durations and the duration of intervals between vowels in a set of tightly controlled sentences from eight languages (5 sentences each produced by four speakers = 160 sentences). Ramus and colleagues argued that a viable account of speech rhythm should not rely on complex and language-dependent phonological concepts but on purely phonetic characteristics of the speech signal. These authors segmented speech into vocalic and consonantal intervals. Ramus et al. computed three acoustic correlates of rhythm from the measurements: (a)%V, the proportion of time devoted to vocalic intervals in the sentence, disregarding word boundaries; (b) AV: the standard deviation of vocalic intervals; (c) AC: the standard deviation of consonantal intervals, the sections between vowel offset and vowel onset.

On the basis of their findings, they reported that a combination of %V and AC provided the best acoustic correlate of rhythm classes. In English, which has full and reduced vowels, %V was smaller than in French, which does not have vowel reduction. On the other hand, AC was larger in English and reflected the more complex syllable options available in that language. Figure 1 recalls the main results. The results found that along two dimensions (%V: percentage of duration taken up by vocalic intervals: AC: standard deviation of the duration of consonantal intervals within a sentence), languages are not scattered randomly, but are clustered in groups that strongly resemble rhythm classes: English, Dutch and Polish as stress-timed languages, French, Spanish, Italian and Catalan as syllable-timed languages, and Japanese as a mora-timed language. Figure 2 shows the placement of languages.
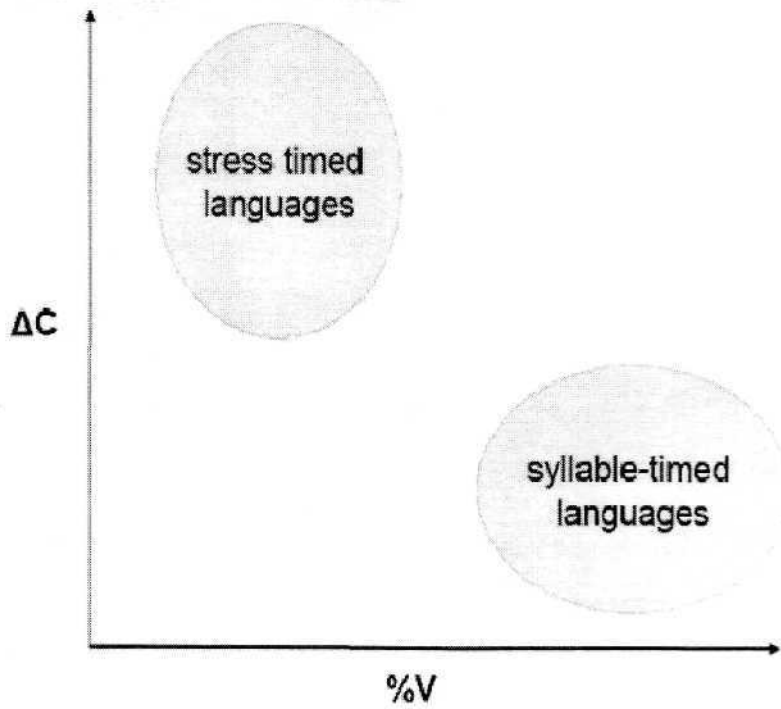
Figure 1: Illustration of stressed and syllable timed languages (Ramus et. al., 1999).
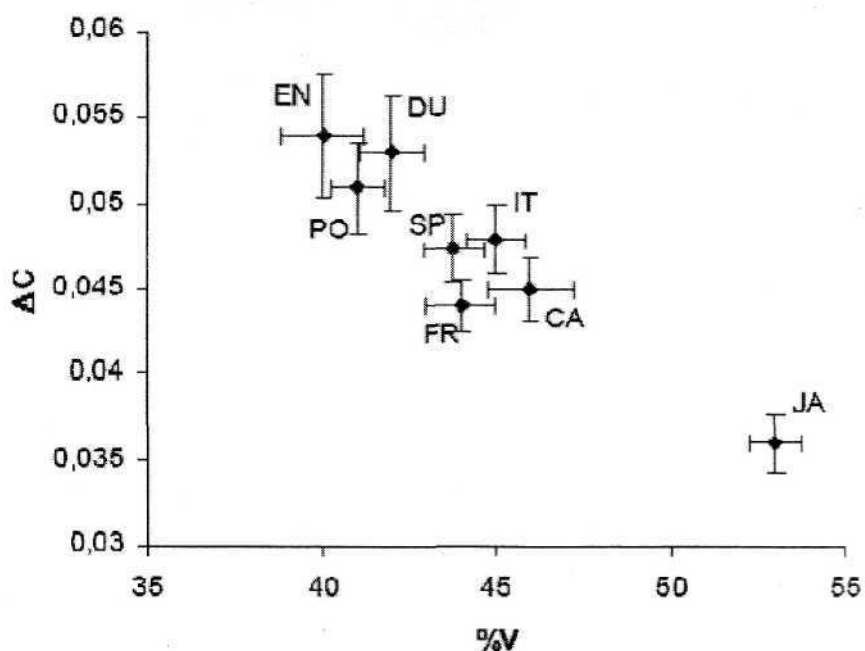
Figure 2: Standard deviation of consonantal intervals vs. proportion of vocalic intervals (EN- English, DU- Dutch, PO- Polish. FR- French. SP- Spanish, IT- Italian, CA- Catalan, JA- Japanese).

The results indicate that the measures taken reflect rhythmic differences, but not classes. It is indeed entirely possible that when more languages are added, the clusters will be drowned in a uniform rhythmic continuum or space.

The Pairwise Variability Index (PVI) is a quantitative measure of acoustic correlates of speech rhythm, which calculates the pattering of successive vocalic and intervocalic (or consonantal) intervals showing how one linguistic unit differs from its neighbour (Low, 1998). Grabe & Low (2000) developed "normalized Pairwise Variability Index" (nPVI) for rhythmic analysis of vocalic durations. The raw Pairwise Variability Index" (rPVI) is used for rhythmic analysis of intervocalic durations. The nPVI was devised as a new empirical tool of analyzing speech rhythm in the field of phonetics. In an independent study, Ramus (2002) examined the duration and variability

of vocalic and intervocalic intervals in eight languages. The rationale behind the consideration of inter-vocalic intervals is that stress-timed languages also tend to allow more complex syllables, and therefore longer and more variable sequences of consonants than syllable-timed languages.

Duration *of* vowels, and *the duration* of *intervals* between vowels (excluding pauses) are measured. Then a Pairwise Variability Index is computed for each type of measurement. The index expresses the level of variability in successive measurements. The raw Pairwise Variability Index (rPVI) is given in equation (1).

$$\mathrm{r}\,PVI = \frac{100}{\mathrm{m\text{-}1}} \times \left[\sum_{k=1}^{m-1} \left| \frac{d_k - d_{k+1}}{(d_k + d_{k+1})/2} \right| / (m-1) \right] \quad \text{- Equation 1}$$

where, m is number of intervals, vocalic or intervocalic, in the text and d is the duration of the kth interval. Notice that rPVI is not normalized for speech rate.

Low et al. used a normalized version of the Pairwise Variability Index in their measurements on vowel durations. The equation for this version, the normalized Pairwise Variability Index (nPVI), is as follows:

$$\mathrm{n}\,PVI = \frac{100}{\mathrm{m\text{-}1}} \times \left[\sum_{k=1}^{m-1} |d_k - d_{k+1}| / (m-1) \right] \quad \text{- Equation 2}$$

where, m is number of items in an utterance and d is the duration of the kth item.

Equation (2) shows that the nPVI is compiled by calculating the difference in duration between each pair of successive measurements, taking the absolute value of the difference and dividing it by the mean duration of the pair. Equation (1) for the rPVI differs only in omitting the third step. The differences are then summed and divided by

the number of differences. The output is multiplied by 100, because the normalization produces fractional values.

This approach has successfully shown an empirical difference between so-called stress-timed languages and syllable-timed languages, with less contrastiveness of successive vocalic durations for syllable-timed languages. Similarly, several studies (Warner & Aria, 2000; Ramus, 2002) revealed distinct rhythmic features of Japanese, which belongs to mora-timed languages. Table 1 summarizes the basic characteristics of each language class regarding relative values of vocalic nPVI and intervocalic rPVI.

Language class	Languages	Intervocalic rPVI	Vocalic nPVI
Stress-timed	English, Germany	High	High
Syllable-timed	French, Spanish	High	Low
Mora-timed	Japanese	Low	Low

Table 1: Summary of basic characteristics of each language class regarding relative values of vocalic nPVI and intervocalic rPVI.

Low, Nolan, and Grabe (2000) compared the nPVI with the standard deviation measures AV and AC. The authors concluded that a Pairwise Variability Index may be a better indicator of rhythmicity than AV or AC. In less tightly controlled data, Low and colleagues argued, that the standard deviation would reflect spurious variability introduced by changes in speaking rate within and across sentences and between-speaker differences in speaking rate. Consider a language where three successive long vowels follow three successive short vowels and another where long and short vowels alternate. Both would give the same standard deviation, although the pattern of vowel durations differs radically between the two.

The standard deviations measured by Ramus et al. (1999) showed that rhythmically mixed languages such as Catalan and Polish exhibit complementary levels of vocalic and intervocalic variability. In Polish, the standard deviation of vocalic intervals was relatively low, making Polish similar to the syllable-timed languages in the sample. But the standard deviation of intervocalic intervals was comparatively high. The reverse applied to Catalan. Low and colleagues suggested that a combination of their vocalic nPVI with a measure of intervocalic interval variability would provide a better indicator of rhythmic class than the vocalic nPVI alone. This combination would capture the rhythmic characteristics of stress-timed, syllable-timed and mixed languages. Low and colleagues predicted that English (stress-timed) should exhibit relatively high variability index values for vocalic and intervocalic intervals. Some English syllables are relatively complex and they find consonant clusters in the onset and in the coda. Others have a very simple structure. Consequently, intervocalic variability is likely to be high.

Spanish (syllable-timed) should have low values in both types of interval. Successive vowels are similar in length, and a large proportion of syllables have a simple CV structure (Dauer, 1983). Polish (mixed) would be low on the vocalic axis and high on the intervocalic axis. Catalan (mixed) would be high on the intervocalic axis, and low on the vocalic axis.

Grabe and Low (2002) calculated durational variability in successive acoustic-phonetic intervals using Pairwise Variability Indices. They compared measurements from languages traditionally classified as stress, syllable- or mora-timed with measurements from hitherto unclassified languages. They measured nPVI and rPVI on comparable passages of speech from eighteen languages. The values obtained agree with the classification of English, Dutch and German as stress-timed and French and Spanish as syllable-timed: durational variability is greater in stress-timed languages than in syllable-timed languages. Values from Japanese, a mora-timed language, are similar to those from syllable-timed languages. But previously unclassified languages do not fit into any of the

three classes. Instead, their values overlap with the margins of the stress-timed and the syllable-timed group. Table 2 shows the summary of results.

Language	Classification
British English	Stress-timed (Classe. 1939, Pike. 1946. Abercrombic. 1967)
German	Stress-timed (Kohler, 1982)
Dutch	Stress-timed (Ladefogcd, 1975, Smith, 1976)
Thai	Stress-timed (Luangthongkum, 1977)
Tamil	Syllable-timed (Corder, 1973, Asher, 1985)
Spanish	Syllable-timed (Pike, 1946, Hockett, 1958)
French	Syllable-timed (Abercrombie, 1967, Catford, 1977)
Singapore English	Syllable-timed (Tongue, 1979, Platt and Weber, 1980)
Japanese	Mora-timed (Bloch, 1950, Han, 1962)
Polish	Mixed (Dauer, 1987, Nespor, 1990)
Catalan	Mixed (Dauer, 1983, Nespor, 1990)
Estonian	Unclassified
Luxembourg	Unclassified
Greek	Unclassified
Malay	Unclassified
Mandarin	Unclassified
Rumanian	Unclassified
Welsh	Unclassified

Table 2: Traditional rhythmic classifications of languages investigated.

The PVI profiles provide acoustic evidence for rhythmic differences across languages. English, Dutch and German have been described as stress-timed and exhibit high vocalic nPVl values. French and Spanish have been described as syllable-timed and exhibit low vocalic nPVI values. This finding supports the rhythmic classification suggested by Pike (1946) and Abercrombie (1967), even if the evidence does not come from isochronous interstress-intervals or syllable-durations. The vocalic nPVI value for Polish is similar to that for syllable-timed French. But on the intervocalic axis, the two languages are some considerable distance apart. In fact, the intervocalic rPVI value for Polish is the highest in their set. Figure 3 shows PVI properties for data on 18 languages.
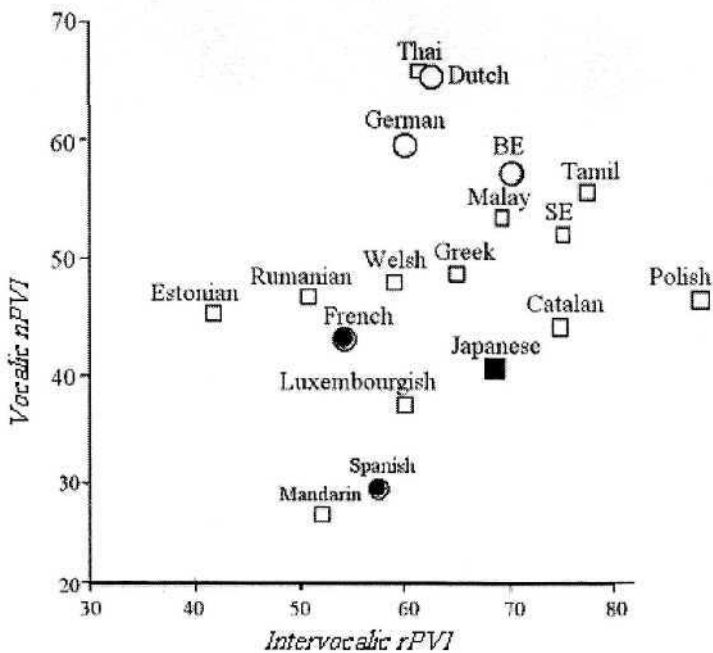
Prototypical[0] = stress-timed, • = syllable-timed, = mora-timed,

Q = mixed or unclassified

Figure 3: PVI profiles for data from eighteen languages.

Languages like Spanish and Catalan are separated on the vocalic nPVI axis. But the vocalic nPVI from Catalan, which has vowel reduction, is similar to that obtained from French, which does not. This finding illustrates a point made by Low et al. (2000) who compared spectral patterns of reduced vowels in Singapore English and British English. Significant differences appeared in the way vowels are reduced in these varieties of English. From a phonological point of view, Singapore English has vowel reduction, but reduced vowels are less centralized in the F1/F2 space than reduced vowels in British English. Reduced vowels in Singapore English are also longer than their counterparts in British English. These findings suggest that this may account for the vocalic nPVI data from French, Spanish, and Catalan on the basis of differences in vowel quality and vowel reduction.

Thai language patterns with the stress-timed group (Dutch, German, British English). Thai was classified as stress-timed by Luangthongkum (1977). These findings support his view. Singapore English, marked SE in Figure 3 was classified as syllable-timed by Tongue (1979), Platt and Weber (1980), Yeow (1987). Where as in present study Singapore English exhibits slightly less vocalic variability than British English. However, Singapore English is not at all close to the traditional syllable-timed languages French or Spanish.

Luxembourg and Mandarin pattern with the syllable-timed group. Mandarin data provide the lowest vocalic nPVI of all languages investigated in the present study. Overlapping with the edges of the stress-timed and the syllable-timed group, they found the unclassified languages Welsh, Greek, Malay, Tamil and Rumanian. Estonian exhibits the lowest intervocalic rPVI value. Apparently, with respect to intervocalic variability. Estonian is the opposite of Polish. Finally, the findings for Tamil go against Corder's (1973) and Asher's (1985) classification of Tamil as syllable-timed. They found Tamil as stress timed as it has high vocalic nPVI and high intervocalic rPVI values for Tamil.

Grabe and Low (2002) also computed %V, AV and AC on their corpus, but they did not find good clusters. They not only found a continuum of languages, but also an ordering of languages inconsistent with that of earlier studies. For example, on the %V scale, they found Catalan at the lower end close to British English, Japanese very close to Dutch, and French and Spanish with a far higher %V than Japanese. Henceforth they also concluded that %V, AV and AC are not reliable measures of rhythm, because they may reflect spurious rate and speaker variability.

These data indicate rhythm in various European languages. However, no Indo-Aryan or Dravidian languages (except Tamil) are investigated. In this context, the present study investigated rhythm in two etymologically unrelated languages - Indo-Aryan (Hindi) and Dravidian (Kannada). The study concerns the relationship between speech timing and rhythmic classifications of languages. The following were the research

questions asked: (a) are Kannada and Hindi rhythmically different? And (b) does the rhythm in reading and spontaneous speech differ in these two languages?

Method

Material: A 1000-word passage was prepared in Kannada and Hindi. All phonemes were incorporated with their respective frequency of occurrence (Jayaram, 1985; Ramakrishna, Nair, Chiplunkar, Atal, Ramachandran, & ramanian, 1962). Subject's spontaneous speech was also used.

Subjects: Twenty normal adult speakers (10 male and 10 females) of each language (Kannada and Hindi) in the age range of 18 to 25 years participated in the study. All the subjects had completed 1 0th standard.

Procedure: subjects were instructed to read the passage at their own pace at comfortable pitch and loudness. Subject's reading sample and spontaneous speech on a topic was audio-recorded using MZ-R30 digital Sony recorder and stored onto computer. Waveform display obtained from Cool Edit pro software was used to measure vocalic (V) and intervocalic (IV) interval. The vocalic measure (nPVI) refers to the duration of vowel, which was measured as the time duration from the onset of voicing to the offset of voicing for the vowels. Intervocalic measure (rPVI) refers to the duration between two vocalic segments. It was measured as the time duration between the offset of the first vocalic segments to the onset of second vocalic segment. A program in C language was developed (Vasanthakshlmi, 2005) to compute nPVI and rPVI. The following formula was used in developing the software:

$$\mathrm{n}\,PVI = \frac{100}{\mathrm{m\text{-}1}} \times \left[\sum_{k=1}^{m-1} |d_k - d_{k+1}| / (m-1) \right]$$

where, m is the number of intervals and dk is the duration of the kth interval.

$$\mathrm{r}\,PVI = \frac{100}{\mathrm{m\text{-}1}} \times \left[\sum_{k=1}^{m-1} \left| \frac{d_k - d_{k+1}}{(d_k + d_{k+1})/2} \right| / (m-1) \right]$$

where, m is the number of intervals and dk is the duration of the kth interval.

The duration difference between the first and second, the second and third vocalic segment and so on was averaged to get nPVI. The same procedure was used to obtain averaged intervocalic durations. Pauses between intonation phrases, as well as hesitations were excluded from the analysis.

Statistical analysis: The mean rPVI and mean nPVI values were calculated in Kannada and Hindi languages for both reading and spontaneous speech task. Two way repeated measure ANOVA with gender as independent factor was used to study the interaction effect (gender * language).

Results

Reading task

Two way repeated measures ANOVA indicated a significant difference between PVIs, [F (1, 18) - 54.56, p<0.001]. There was a significant difference between language groups on rPVI (intervocalic) value [t (38) - 6.86 at p<0.001 levels]. But there was no significant difference between language groups on nPVI (vocalic) values [t (38) - 0.398, p = 0.05]. Within language group there was no statistically significant difference between gender for rPVI [t (18) - 1.27, p= 0.05] and nPVI [t (15) - 1.44, p = 0.05]. The rPVI values in Kannada reading sample ranged between 35.90 and 52.10 with a mean of 46.18 and nPVI values ranged between 41.80 ms and 54.36 ms, with a mean of 46.95 ms. Table 3 shows the rPVI and nPVI values of twenty subjects in Kannada. The results indicated a low nPVI and rPVI.

Subject	Gender	rPVl	nPVI
1	F	41.30	44.66
2	F	35.90	41.80
3	F	45.90	47.20
4	F	48.40	45.30
5	F	47.70	48.39
6	F	46.87	44.82
7	F	45.12	46.82
8	F	44.34	45.34
9	F	50.83	49.17
10	F	45.61	46.92
11	M	46.30	44.26
12	M	44.72	44.48
13	M	45.52	46.58
14	M	52.10	54.36
15	M	44.50	44.80
16	M	48.68	50.30
17	M	47.50	48.60
18	M	50.38	51.83
19	M	47.60	46.80
20	M	44.41	46.58
Mean		46.184	46.950
95% CI	LB	44.538	45.594
	UB	47.829	48.307

Table 3: Mean rPVI and nPVI values and 95% confidence intervals of mean in Kannada reading sample.

The rPVI values in Hindi reading sample ranged between 51.24 and 90.3, with a mean of 65.39 and nPVI values ranged between 44.04 ms and 49.96 ms with a mean of 46.64 ms. Table 4 shows the rPVI and nPVI values of twenty subjects in Hindi. Figure 4 depicts mean rPVI and nPVI values in Hindi and Kannada languages.

Subject	Gender	rPVI	nPVI
1	F	6658	4528
2	F	6444	47.13
3	F	53.92	47.71
4	F	56.91	47.06
5	F	59.15	4442
6	F	83.78	4778
7	F	51.24	47.16
8	F	63.61	4754
9	F	53.48	4444
10	F	6148	44.64
11	M	55.61	44.69
12	M	54.29	44.83
13	M	60.72	45.42
14	M	75.1	4753
15	M	85.87	4946
16	M	90.32	4949
17	M	55.62	4846
18	M	6540	46.16
19	M	8176	48.73
20	M	6153	44.31
Mean		65.390	46.647
95% CI	LB	59.766	45.806
	UB	71.014	47.487

Table 4: Mean rPVI and nPVi values and 95% confidence intervals of mean in Hindi reading sample.
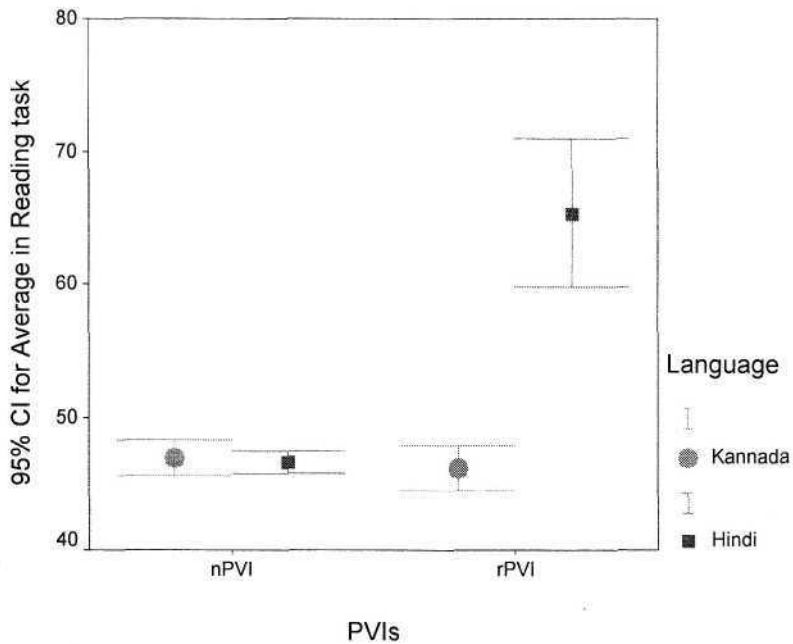
Figure 4: Mean rPVI and nPVI values in Hindi and Kannada reading sample.

Spontaneous speech

Two way repeated measures ANOVA indicated a significant difference between PVIs [F (1, 18) - 54.56, p<0.001]. There was a no significant difference between language groups on rPVI (intervocalic) value [t (38) - 1.741 at p=0.05 levels]. Whereas there was significant difference between language groups on nPVI (vocalic) values [t (38) - 3.584, p < 0.05]. Within language group there was no statistically significant difference between gender for rPVI [t (18) - 0.388, p= 0.05] and nPVI [t (18) - 0.72, p = 0.05].

The rPVI values in Kannada spontaneous speech ranged between 49.69 and 59.41 with a mean of 53.47 and nPVI values ranged between 39.58 ms and 57.39 ms, with a mean of 47.27 ms. Table 5 shows the rPVI and nPVI values of twenty subjects in Kannada. The results indicated a low nPVI and rPVI in Kannada.

Subject	Gender	rPVI	nPVI
1	F	51.66	46.38
2	F	54.07	54.76
3	F	51.75	43.32
4	F	50.98	47.31
5	F	50.34	48.82
6	F	56.35	4521
7	F	51.61	42.21
8	F	50.38	42.75
9	F	49.69	42.32
10	F	51.24	47.36
11	M	54.16	53.10
12	M	5724	57.39
13	M	55.57	52.06
14	M	56 89	49.81
15	M	53.46	4332
16	M	49.71	39.58
17	M	54.65	47.81
18	M	57.54	47.67
19	M	5289	47.36
20	M	5941	4742
Mean		53.479	47.278
95%CI	LB	52.114	45.155
	UB	54.844	49.400

Table 5: rPVI and nPVI values and 95% confidence intervals of mean in Kannada spontaneous sample.

The rPVI values in Hindi spontaneous speech sample ranged between 49.33 and 59.87, with a mean of 55.31 and nPVI values ranged between 39.26 ms and 47.76 ms with a mean of 43.19 ms. Table 6 shows the rPVI and nPVI values of twenty subjects in Hindi. Results indicated Hindi to be a syllable-timed language. Figure 5 depicts rPVI and nPVI values in Hindi.

Subject	Gender	rPVI	nPVI
1	F	59.87	44.08
2	F	59.02	4424
3	F	57.18	39.46
4	F	55.64	41.82
5	F	56.70	42.36
6	F	4933	42.53
7	F	47.67	41.02
8	F	59.65	42.37
9	F	59.38	46.66
10	F	51.94	47.76
11	M	59.33	41.39
12	M	57.16	4328
13	M	54.77	4121
14	M	58.39	3926
15	M	57.48	45.09
16	M	51.37	4112
17	M	51.32	4123
18	M	53.75	47.62
19	M	5310	4167
20	M	5116	4166
Mean		55.310	43.191
95% CI	LB	53.584	42.03
	UB	57.10	44283

Table 6: rPVI and nPVI values and 95% confidence intervals of mean in Hindi spontaneous speech sample.

No interaction effect of language * gender was observed. Also, paired t-test showed significant difference between reading and spontaneous speech on rPVI in both languages [Kannada - t (19) = 7.097 at P < 0.001, Hindi - t (19) = 3.409 at P O.003]. rPVI in spontaneous speech was higher than that in reading in Kannada and the trend was reverse in Hindi.
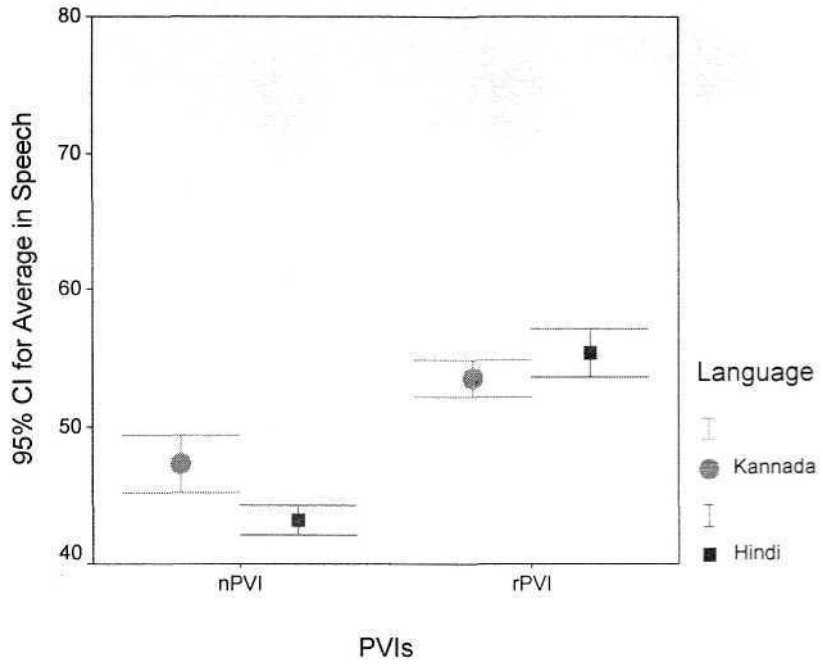
Figure 5: Mean rPVI and nPVI values in Hindi and Kannada spontaneous speech sample.

Discussion

The results indicated several points of interest. Firstly, the results indicated thai Kannada is a mora-timed language. In Kannada, each consonant or consonant cluster is followed by a vowel, and no word ends in a consonant. The value of rPVI and nPVI in Kannada are similar to that in Japanese language, which is been considered as prototypical mora-timed language.

Second, the results indicated Hindi to be a syllable-timed language. The results indicate that the variability index of Hindi language is very similar to Spanish and French languages, which are considered as syllable-timed languages. The difference between Kannada and Hindi lies in intervocalic intervals i.e., intervocalic intervals (rPVI) are longer in Hindi compared to Kannada. Figure 6 shows the nPVI and rPVI of both languages. Vocalic nPVI values are plotted on the horizontal axis against intervocalic rPVI values on the vertical axis.
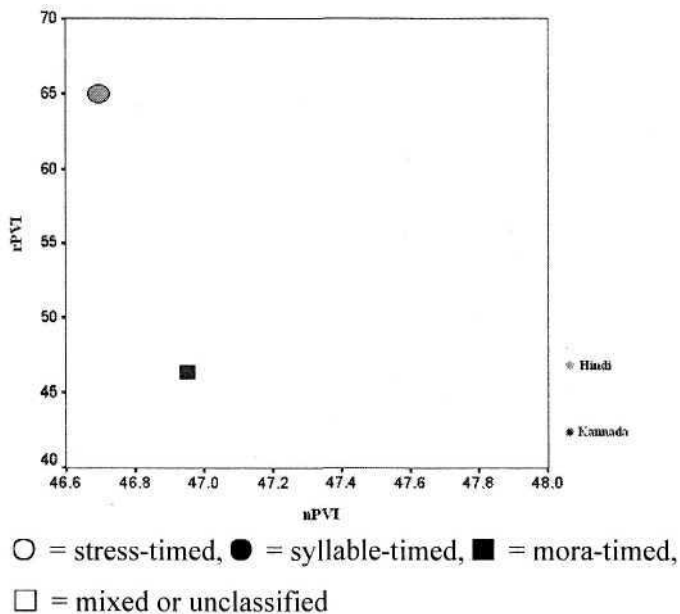

Figure 6: Mean rPVI and nPVI values in Kannada and Hindi languages.

Ramus (2002) reported that stress-timed language has complex combination of consonants such as CCCVCCC, and then the complexity decreases in syllable timed language and further decreases in mora timed language. The Syllable timed language has combination of consonants such as CCVCC. And mora timed has CVCV combination. Results of the study are in consonance with this statement. Kannada language has combination like CVCV and Hindi language follows combination such as CCVCC. Also, word- final or other consonants perceptually does not remain silent as in English language which is been considered as stress-timed language. Dauer (1982) also reported that, in syllable-timed language, vowel reduction is rarely found.

Third, other aspects of the study include the index to calculate the intervocalic and vocalic variability called the Pairwise variability Index (PVI). The first is why, when "syllable -timing' is at issue, the Pairwise variability of components of the syllable (vowel and consonant) have been favored and not the syllable itself. Low (1998) attributes her choice of the vocalic PVI to Taylore (1981), who claims that vowel duration is the key to syllable timing. And our results show that PVI approach has successfully shown an empirical difference between the so-called syllable-timed language and mora-timed language. And PVIs undoubtedly are good indicators of what rhythm really is. The two aspects of PVIs include the raw Pairwise variability index (rPVI) and the normalized Pairwise variability index (nPVI).

95% confidence interval of mean of rPVI in reading and monologue was higher in Hindi compared to Kannada. The possible explanation for this discrepancy could be that raw Pairwise variability in not normalized with respect to rate of speed across subjects, where as nPVI is normalized with respect to rate of speed.

Normalization involves expressing each difference as a proportion of the average of two units involved (e.g. their average duration). The original point of this was to neutralize the effect of utterance level rate variation, particularly between speaker differences in rate and phrase final lengthening. These results confirm that normalization

is desirable for vocalic intervals. The results for intervocalic intervals suggested that we might also need to normalize for intervocalic interval duration. However, this is not a necessary conclusion. The result thus indicates that intervocalic rPVI separates languages into a syllable-timed and a mora- timed group, but the vocalic nPVI does not.

Comparison of rPVI values across two tasks (reading and monologue), showed similar results in both the tasks in Kannada. Whereas in Hindi, rPVI values in monologue showed lower value compared to reading. This may be due to two reasons as follows: (a) it is possible that in monologue all the phonemes might not have occurred according to their frequency of occurrence and (b) in reading task the material is more predictable so the subject is well prepared. This may have an influence on the overall rate of speech in reading compared to monologue. Also, consonants may be clustered in monologue in Kannada. For example [marada me:le] in reading will become [maradme:le] in monologue thus resulting in increase in rPVI values. But, in Hindi there might be consonant deletion which might have contributed to reduced rPVI. Also, the nature of monologue itself affects rPVI.

Conclusions

Rhythm has been defined as an effect involving the isochronous recurrence of some type of speech unit. Basically languages have been organized under three types of rhythm i.e. stress-timed, syllable-timed and mora-timed. In stress-timed languages, intervals between stresses are said to be equal in length. Where as in syllable-timed languages, successive syllables are said to be of near-equal length. And the third type of rhythm is mora-timed, in that successive morae are said to be near equal in duration. Thus the mora-timed language is more similar to syllable-timed language. The present study investigated the rhythm in two etymologically unrelated languages - Kannada and Hindi. We have provided acoustic evidence for rhythmic diversity between languages from duration measurements. Unlike other researchers in the field of speech timing, we

did not measure inter-stress intervals or syllable durations, which are phonological units. Instead, we measured the vocalic and intervocalic intervals. The vocalic (v) measure refers to the durations of vowels and intervocalic measure refers to the duration consonants and then computed in an acoustic variability index, which expresses the level of variability in vocalic and intervocalic intervals. The results were compared with Grabe's (2002) chart. From the chart we can infer that Hindi has high intervocalic variation and low vocalic variation and Kannada has low intervocalic as well as vocalic variation.

The results show that Kannada is Mora-timed language and Hindi is syllable-timed language. So the rhythm of the language can be taught on this basis. For example syllable-timed approach will be appropriate for Hindi and mora-timed for Kannada language. Further, the results indicate differences in reading and monologue on intervocalic differences. The results also indicate that rPVI is a better measure of rhythm than nPVI. No differences between genders were observed.

The results have positive implications for a speech pathologist. Rhythm can be taught to patients with aprosodia provided one knows the type of rhythm in a language. For example, a visual feedback of equal syllable timing can be taught to a patient speaking Hindi and equal phoneme timing can be taught to a patient speaking Kannada. Also, prolongation therapy may suite speakers of both languages, as they are mora / syllable-timed languages.

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Appendix I - Reading Material

ಪಾರಿಯಾತ್ರೆಯೆಂಬ ವನದ ಮರದ ಮೇಲೆ, ಮೇಘವರ್ಮವೆಂಬ ಕಾಗೆ ತನ್ನ ಪರಿವಾರದೊಡನೆ ಸುಖದಿಂದ ಇರುತ್ತಿತ್ತು. ಒಂದು ಪರ್ವತದ ಗುಹೆಯಲ್ಲಿ ಚಿತ್ರಗ್ರೀವವೆಂಬ ಪಾರಿವಾಳವು ವಾಸವಾಗಿತ್ತು. ಒಂದು ದಿನ ಮೇಘವರ್ಮನು ಆಹಾರವನ್ನು ಹುಡುಕುತ್ತ ಪಟ್ಟಣದ ಮಾರ್ಗದಲ್ಲಿ ಬರುತ್ತಿವಾಗ ವಿಂಧ್ಯಕನೆಂಬ ಬೇಟೆಗಾರನು ಬಲೆಗಳನ್ನು ತಗೆದುಕೊಂಡು ಬರುವುದನ್ನು ಕಂಡಿತು. ಆಗ ಕಾಗೆ "ನಾನು ಆಹಾರಕ್ಕಾಗಿ ಹೋದರೆ, ಈ ಬೇಡನು ನನ್ನ ಪರಿವಾರವಿರುವ ಸ್ಥಳಕ್ಕೆ ಹೋಗಿ ಬಲೆಯನ್ನೊಡ್ಡಿ ಧಾನ್ಯಗಳನ್ನು ಎರಚಿದರೆ, ನನ್ನ ಪರಿವಾರವೆಲ್ಲ ಬಲೆಯೊಳಕ್ಕೆ ಸಿಕ್ಕಿಕೊಳ್ಳುವುದು" ಎಂದು ತಿಳಿದು, ಈ ಸಮಯದಲ್ಲಿ ಆಹಾರಕ್ಕಾಗಿ ಹೋಗುವುದು ಸರಿಯಲ್ಲವೆಂದು ತನ್ನ ಮರದ ಬಳಿ ಬಂದಿತು. ಈ ಸಂಗತಿಯನ್ನು ತನ್ನ ಪರಿವಾರಕ್ಕೆ ತಿಳಿಸಿ ಹೊರಗೆ ಹೋಗದಂತೆ ಹೇಳಿತು. ಅಷ್ಟರಲ್ಲಿ ಆ ಬೇಟೆಗಾರನು, ಬಲೆಯನ್ನು ಹರಡಿ, ಅದರಲ್ಲಿ ಧಾನ್ಯವನ್ನಿಟ್ಟು ದೂರದಲ್ಲಿ ಕುಳಿತನು.

ಆಗ ಚಿತ್ರಗ್ರೀವವೆಂಬ ಪಾರಿವಾಳವು ತನ್ನ ಪರಿವಾರದ ಆಹಾರವನ್ನು ಹುಡುಕಿಕೊಂಡು ಬಲೆ ಇರುವ ಸ್ಥಳಕ್ಕೆ ಬಂದು ವಿಚಾರಮಾಡದೆ ಧಾನ್ಯಕ್ಕಾಗಿ ಆಸೆಪಟ್ಟು ಮೋಸದಿಂದ ಬಲೆಯಲ್ಲಿ ಪರಿವಾರಸಮೇತವಾಗಿ ಸಿಕ್ಕಿಬಿದ್ದಿತು. ಆಗ ಬಹಳ ದುಃಖಪಟ್ಟು ಒಂದು ಉಪಾಯವನ್ನು ಯೋಚಿಸಿ, "ಒಂದೊಂದೇ ಹೋಗುವುದು ಸಾಧ್ಯವಿಲ್ಲ. ನಾವೆಲ್ಲಾ ಒಟ್ಟಿಗೆ ಬಲೆಯೊಡನೆ ಹಾರಿಹೋಗಬೇಕು" ಎಂದು ಬಲೆಯನ್ನು ಎತ್ತಿಕೊಂಡು ಬಹಳ ದೂರ ಹಾರಿಹೋದವು. ಇದನ್ನು ನೋಡಿ ಬೇಟೆಗಾರನು ಬಹಳ ಆಶ್ಚರ್ಯಪಟ್ಟನು. ದುಃಖಗೊಂಡ ಬೇಟೆಗಾರ ಮನಸ್ಸಿಗೆ ಧೈರ್ಯ ತಂದುಕೊಂಡು ಮನೆಗೆ ಹೋದನು. ಇದನೆಲ್ಲ ನೋಡುತ್ತಿದ್ದ ಮೇಘವರ್ಮವೆಂಬ ಕಾಗೆ ಬಲೆಯನ್ನು ಎತ್ತಿಕೊಂಡು ಹೋಗುತ್ತಿದ್ದ ಪಾರಿವಾಳವನ್ನು ಹಿಂಬಾಲಿಸಿಕೊಂಡು ಹೋಯಿತು. ಸ್ವಲ್ಪಹೊತ್ತಿಗೆ ಚಿತ್ರಗ್ರೀವವೆಂಬ ಪಾರಿವಾಳವು ತನ್ನ ಪ್ರಾಣಸ್ನೇಹಿತನಾದ ಹಿರಣ್ಯವರ್ಮವೆಂಬ ಮೂಷಕರಾಜನನ್ನು ತಮ್ಮನ್ನು ಈ ಬಂಧನದಿಂದ ಬಿಡುಗಡೆ ಮಾಡಬೇಕೆಂದು ಪ್ರಾರ್ಥಿಸಿತು.

ಆ ಇಲಿಯು ಬಲೆಯನ್ನು ಕಡಿದು, ಆ ಪಕ್ಷಿಗಳನ್ನು ಬಂಧನದಿಂದ ಬಿಡುಗಡೆಮಾಡಿತು. ಆ ಇಲಿ ಚಿತ್ರಗ್ರೀವವನ್ನು ಕುರಿತು "ನೀನು ಬಹಳ ಬುದ್ಧಿವಂತನು ಆದರು ಬಲೆಯೊಳಗೆ ಹೇಗೆ ಸಿಕ್ಕಿಕೊಂಡೆ" ಯೆಂದು ಕೇಳಿತು.ಅದಕ್ಕೆ ಚಿತ್ರಗ್ರೀವವು ವಿಧಿಯನ್ನು ತಪ್ಪಿಸಲು ಯಾರಿಂದಲು ಸಾಧ್ಯವಿಲ್ಲವೆಂದು ಹೇಳಿತು. ಅದನ್ನು ಕೇಳಿ ಆ ಮೂಷಕವು ಯಾವ ಕೆಲಸ ಮಾಡುವಾಗಲು ಬಹಳ ಎಚ್ಚರದಿಂದ ಇರಬೇಕು ಎಂದು ಬುದ್ಧಿ ಹೇಳಿ ಕಳಿಸಿತು.

ಇದನೆಲ್ಲ ಆ ಮೇಘವರ್ಮವೆಂಬ ಕಾಗೆ ನೋಡಿ ಈ ಇಲಿಯೊಡನೆ ಸ್ನೇಹ ಮಾಡಿಕೊಳ್ಳಬೇಕು ಎಂದು ನಿಶ್ಚಯಿಸಿ ಆ ಇಲಿ ಇರುವ ಬಿಲಕ್ಕೆ ಬಂದು ನಿಂತುಕೊಂಡಿತು. ಕಾಗೆಯನ್ನು ನೋಡಿ ಇಲಿ ಆಶ್ಚರ್ಯದಿಂದ "ನೀನಾರು?" ಯೆಂದು ಕೇಳಿತು. "ನಾನು ಚಿತ್ರಗ್ರೀವನ ಪ್ರಾಣಸ್ನೇಹಿತನಾದ ಮೇಘವರ್ಮವೆಂಬ ಕಾಗೆ: ನಿನ್ನ ಸ್ನೇಹವನ್ನು ಅಪೇಕ್ಷಿಸಿ ಬಂದಿದ್ದೇನೆ". ಎಂದು ಮೇಘವರ್ಮವು ಹೇಳಿತು. ಹಿರಣ್ಯವರ್ಮವೆಂಬ ಇಲಿ "ನಿಮಗೂ, ನಮಗೂ ಸ್ನೇಹವು ಹೇಗೆ ಕೂಡೀತು? ಲೋಕದಲ್ಲಿ ನಮ್ಮಂತೆ ಸಮಾನರಾದವರಿಗೆ ಮಾತ್ರ ಮಿತ್ರತ್ವವು ಹೊಂದುತ್ತದೆ. ನಾನು ನಿನ್ನ ಆಹಾರ; ನೀನು ನನ್ನ ಆಹಾರ; ಹೀಗೀರುವಾಗ ನಮ್ಮಿಬ್ಬರಲ್ಲಿ ಸ್ನೇಹ, ಕೂಡಿ ನಡೆಯಲಾರದು. ನಿನ್ನ ಪ್ರೀತಿ ನನ್ನ ವಿಪತ್ತಿಗೆ ಕಾರಣವಾಗುವುದು. ಎರಳೆಗೆ ನರಿಯ ಸ್ನೇಹದಿಂದ ಬಂಧನ ಪ್ರಾಪ್ತವಾದಂತೆ, ನನಗೂ ನಿನ್ನ ಸ್ನೇಹದಿಂದ ಬಂಧನವುಂಟಾದೀತು ಎಂದು ಹೇಳಿತು. ಈ ಮಾತನ್ನು ಮೇಘವರ್ಮವು ಕೇಳಿ,"ಎರಳೆಗೆ ಬಂಧನವು ಹೇಗೆ ಪ್ರಾಪ್ತವಾಯಿತು. ಹೇಳುವೆಯಾ?" ಎಂದು ಪ್ರಶ್ನಿಸಿತು. ಅದಕ್ಕೆ ಇಲಿ ಹೇಳುತ್ತದೆ. ಮಗಧ ದೇಶದ ಚಂಪಕಾರಣದಲ್ಲಿ ಒಂದು ಎರಳೆಯೂ ಕಾಗೆಯೂ ಸ್ನೇಹವಾಗಿದ್ದವು. ಎರಳೆಯಾದರೋ ತನ್ನ ಮನಸ್ಸಿಗೆ ಬಂದಂತೆ ಒಳ್ಳೆಯ ಎಳೆ ಎಳೆಯ ಹುಲ್ಲನ್ನು ಮೆಯ್ಯುದ ಪುಷ್ಟಶರೀರವಾಗಿದ್ದಿತು.

ಇದನ್ನು ಒಂದು ನರಿ ಕಂಡು ತನ್ನ ಮನಸ್ಸಿನಲ್ಲಿ "ಈ ಮೃಗವಾದರೋ ನನಗೆ ಸುಲಭ ಸಾಧ್ಯವಲ್ಲ, ಇದನ್ನು ಕಪಟದಿಂದ ಕೊಲ್ಲಬೇಕು" ಎಂದು ನಿಶ್ಚಯಿಸಿಕೊಂಡು, ಎರಳೆಯ ಸಮೀಪಕ್ಕೆ ಹೋಗಿ, "ಎಲ್ಲೆ ಸ್ನೇಹಿತನೆ, ಕ್ಷೇಮವಷ್ಟೆ!" ಎಂದು ಕೇಳಿತು.ಆ ಮಾತಿಗೆ ಎರಳೆ ನೀನಾರು? ಎಂದು ಕೇಳಿತು. "ನಾನು ಕ್ಷುದ್ರಬುದ್ಧಿಯೆಂಬ ನರಿ. ಈ ಅರಣ್ಯದಲ್ಲಿ ಆಪ್ತಹೀನನಾಗಿ ಒಬ್ಬನೇ ತಿರುಗುತ್ತಿದ್ದೇನೆ. ಇಂದು ನಿನ್ನನ್ನು ನೋಡಿ, ನನಗೆ ಬಹಳ ಸಂತೋಷವಾಗಿದೆ. ನಾನು ನಿನ್ನ ಸೇವಾತತ್ಪರನಾಗಿರಬೇಕೆಂದು ಬಯಸುತ್ತೇನೆ" ಎಂದು ನರಿ ಹೇಳಿತು. ಈ ಮಾತಿಗೆ ಎರಳೆ ಒಪ್ಪಿಕೊಂಡಿತು. ಅಷ್ಟುಹೊತ್ತಿಗೆ ಸೂರ್ಯಾಸ್ತವಾಗಲು ಉಭಯ ಪ್ರಾಣಿಗಳು ಕೂಡಿಕೊಂಡು, ಚಂಪಕ ಮರದ ಬುಡದಲ್ಲಿ ಬಂದು ಕುಳಿತುಕೊಂಡವು. ಆ ಮರದ ಮೇಲಿದ್ದ ಸುಬುದ್ಧಿಯೆಂಬ ಕಾಗೆ ಎರಳೆಯ ಸ್ನೇಹಿತನಾಗಿದ್ದಿತು. ಅದು ಈ ನರಿಯನ್ನು ನೋಡಿ, ಎರಳೆಯನ್ನುದ್ದೇಶಿಸಿ "ಎಲೇ ಮಿತ್ರನೆ! ಈ ಎರಡನೆಯ ಪ್ರಾಣಿ ಯಾವುದು?" ಎಂದು ಕೇಳಿತು.

ಅದಕ್ಕೆ ಎರಳೆ " ಈ ನರಿ ನನ್ನ ಸಂಗಡ ಸ್ನೇಹವನ್ನು ಕೋರಿ ಬಂದಿದೆ. ಈಗ ನಾವಿಬ್ಬರು ಗೆಳೆಯರಾಗಿದ್ದೇವೆ" ಎಂದು ಹೇಳಿತು. ಇದನ್ನು ಕೇಳಿ ಕಾಗೆ " ಮಿತ್ರನೆ, ಆಕಸ್ಮಾತ್ತಾಗಿ ಒಂದು ಅಪರಿಚಿತ ಪ್ರಾಣಿ ಬಂದರೆ ಅದರ ಮೇಲೆ ವಿಶ್ವಾಸ ಮಾಡಬಾರದು. ಆದಲ್ಲದೆ ಕುಲಶೀಲಗಳನ್ನು ತಿಳಿಯದವರಿಗೆ ಯಾರಿಗೂ ಸ್ಥಳವನ್ನು ಕೊಡಬಾರದು ಒಂದು ವೇಳೆ ಆಶ್ರಯವನ್ನು ಕೊಟ್ಟರೆ, ಬೆಕ್ಕಿಗೆ ಹದ್ದು ಆಶ್ರಯ ಕೊಟ್ಟು ಮರಣ ಹೊಂದಿದಂತಾಗುವುದು" ಎಂದು ಹೇಳಿತು. ಎರಳೆ " ಹದ್ದು ಬೆಕ್ಕಿನ ಕೈಯಲ್ಲಿ ಹೇಗೆ ಮರಣ ಹೊಂದಿತು, " ಎಂದು ಕೇಳಲು ಕಾಗೆ ಹೇಳುತ್ತದೆ.

ಒಂದು ಮರದ ಕೆಳಗೆ ಒಂದು ಹದ್ದು ಜೀವಿಸುತಿತ್ತು. ಅದರ ಸಂರಕ್ಷಣೆಗಾಗಿ ಪಕ್ಷಿಗಳು ತಂತಮ್ಮ ಆಹಾರದಲ್ಲಿ ಸ್ವಲ್ಪ ಭಾಗವನ್ನು ಕೊಡುತ್ತಿದ್ದುವು. ಒಂದು ದಿನ ಬೆಕ್ಕು ಪಕ್ಷಿಯ ಮರಿಗಳನ್ನು ಭಕ್ಷಿಸುವ ನಿಮಿತ್ತದಿಂದ ಆ ಮರದ ಕೆಳಗೆ ಬಂದಿತು. ಬೆಕ್ಕನ್ನು ನೋಡಿ ಪಕ್ಷಿಯ ಮರಿಗಳು ಭಯದಿಂದ ಶಬ್ದ ಮಾಡಿದವು.

ಈ ಶಬ್ದವನ್ನು ಕೇಳಿ ಆ ಮುದಿ ಹದ್ದು "ನೀವು ಏನು ಕಾರಣ ಭೀತಿಗೊಂಡಿರಿ, ಇಲ್ಲಿ ಯಾರು ಬಂದಿದ್ದಾರೆ?" ಎಂದು ಮರಿಗಳನ್ನು ಕೇಳಿತು. ಅಷ್ಟರಲ್ಲಿ ಆ ಹದ್ದನ್ನು ನೋಡಿ ಬೆಕ್ಕು ಗಾಬರಿಯಾಗಿ ಮನಸ್ಸಿನಲ್ಲಿ ಧೈರ್ಯವನ್ನು ತಂದುಕೊಂಡು "ಈ ಶತ್ರುವಿನ ಕೈಯೊಳಗಿಂದ ದಾಟಿ ಹೋಗಲು ನನಗೆ ಶಕ್ತಿಸಾಲದು, ಆದ್ದರಿಂದ ಇದರ ಸಮೀಪಕ್ಕೆ ಮೊದಲು ಹೋಗುತ್ತೇನೆ. ಆಮೇಲೆ ಏನು ಆಗುತ್ತದೆಯೋ ನೋಡೋಣ" ಎಂದು ನಿಶ್ಚಯಿಸಿ ಪಕ್ಷಿಯ ಸಮೀಪಕ್ಕೆ ಹೋಗಿ ಮೆಲ್ಲನೆ "ಎಲೇ ಸಮರ್ಥನೆ ನಿನ್ನನ್ನು ವಂದಿಸುತ್ತೇನೆ" ಎಂದು ಹೇಳಿತು. ಹದ್ದು ಈ ಮಾತನ್ನು ಕೇಳಿ "ನೀನು ಯಾರೆಂದು ವಿಚಾರಿಸಿತು. ಅದಕ್ಕೆ ಬೆಕ್ಕು, "ನಾನು ಧೀರ್ಘಕರ್ಣನೆಂಬ ಮಾರ್ಜಾಲನು" ಎಂದು ಉತ್ತರ ಕೊಟ್ಟಿತು. ಇದನ್ನು ಕೇಳಿ ಹದ್ದು ಕೋಪಿಸಿಕೊಂಡು, "ನೀನು ಬೇಗನೆ ಈ ಸ್ಥಳದಿಂದ ಹೊರಟು ಹೋಗು, ಇಲ್ಲವಾದರೆ ವ್ಯರ್ಥವಾಗಿ ಸತ್ತು ಹೋಗುತ್ತೀಯೇ" ಎಂದು ಗದರಿಸಿತು.

ಈ ಮಾತಿಗೆ ಮಾರ್ಜಾಲವು "ನಾನು ನನ್ನ ವೃತ್ತಾಂತವನ್ನು ತಮ್ಮಲ್ಲಿ ಅರಿಕೆಮಾಡಿಕೊಳ್ಳುತ್ತೇನೆ. ಆ ಮೇಲೆ ಕೊಲ್ಲಬೇಕೆಂದರೆ ಕೊಲ್ಲಬಹುದು"ಎಂದು ಹೇಳಿತು. ನೀನು ಇಲ್ಲಿ ಬಂದ ಕಾರಣವೇನು ಎಂದು ಹದ್ದು ಕೇಳಿದುದಕ್ಕೆ ಬೆಕ್ಕು" ನಾನು ಗಂಗಾತೀರದಲ್ಲಿ ನಿತ್ಯವೂ ಗಂಗಾಸ್ನಾನ ಮಾಡಿ ನಿಯಮ, ವ್ರತಗಳನ್ನು ಆಚರಿಸುತ್ತ ಸತ್ಕಾಲಕ್ಷೇಪ ಮಾಡುತ್ತಿದ್ದೇನೆ. ನೀನು ಬಹಳ ಪುಣ್ಯಶಾಲಿ ಎಂಬುದನ್ನು ಕೇಳಿ ನಿನ್ನ ದರ್ಶನಕ್ಕಾಗಿ ಬಂದೆನು. ನೀನಾದರೋ ಧರ್ಮವನ್ನು ಬಿಟ್ಟು ನನ್ನನ್ನು

ಕೊಲ್ಲುವುದಕ್ಕೆ ಸಿದ್ಧನಾಗಿದ್ದೀಯ"ಎಂದು ಹೇಳಿತು. ಹದ್ದು ಈ ಮಾತುಗಳನ್ನು ಕೇಳಿ"ಮಾರ್ಜಾಲವು ಮಂಸಾಹಾರಿ ಎಂದೂ, ಹಿಂಸ ಪ್ರಾಣಿ ಎಂದು ಕೇಳಿದ್ದೇನೆ ನಿಜವಲ್ಲವೆ? "ಎಂದು ಪ್ರಶ್ನಿಸಿತು. ಇದನ್ನು ಕೇಳಿದ ಕೂಡಲೆ ಬೆಕ್ಕು" ನಾನು ಭೂಮಿಯ ಮೇಲೆ ಪ್ರತಿಜ್ಞೆಮಾಡಿ ಹೇಳುತ್ತೇನೆ.

ನಾನು ಧರ್ಮಶಾಸ್ತ್ರ ಶ್ರವಣದಿಂದ ಪರಮವೈರಾಗ್ಯಶಾಲಿಯಾಗಿ ದುಷ್ಕರ್ಮವನ್ನು ತ್ಯಜಿಸಿದೇನೆ ಏಕೆಂದರೆ, ಅನೇಕ ಶಾಸ್ತ್ರಗಳಲ್ಲಿ ಹಿಂಸೆಯಂಥ ಪಾತಕಕ್ಕಿಂತ ಹೆಚ್ಚಿನ ಪಾತಕವಿಲ್ಲವೆಂದು ಉಕ್ತವಾಗಿದೆ. ಆದ್ದರಿಂದ ಬೇರೆಯವರ ಪ್ರಾಣವನ್ನು ತೆಗೆದು ಸುಖ ಅನುಭವಿಸುವವರು ನರಕಭಾಗಿಗಳಾಗುವರು" ಎಂದು ಹೇಳಿತು. ಈ ಮಾತಿನಲ್ಲಿ ಹದ್ದಿಗೆ ವಿಶ್ವಾಸ ಹುಟ್ಟಿ, ಆ ಮಾರ್ಜಾಲವನ್ನು ತನ್ನ ಮನೆಯಲ್ಲಿಟ್ಟುಕೊಂಡಿತು. ಆಮೇಲೆ ಆ ಮಾರ್ಜಾಲವು ನಿತ್ಯವೂ ಪಕ್ಷಿಗಳ ಮರಿಗಳನ್ನು ತಂದು ಭಕ್ಷಿಸುತ್ತ ಇರತೊಡಗಿತು. ಒಮ್ಮೆ ತನ್ನ ಮರಿಗಳನ್ನು ಕಳೆದುಕೊಂಡು ಒಂದು ಪಕ್ಷಿ ಬಹಳ ಕಳವಳಗೊಂಡು, ತನ್ನ ಸಹವಾಸಿ ಪಕ್ಷಿಗಳನ್ನೆಲ್ಲ ಕೂಡಿಕೊಂಡು ಮರಿಗಳನ್ನು ಶೋಧಿಸುತ್ತ ತಿರುತಿರುಗಿ ಹದ್ದು ಇರುವ ಸ್ಥಳಕ್ಕೆ ಬಂದಿತು. ಇದನ್ನು ನೋಡಿದ ಕೂಡಲೆ ಬೆಕ್ಕು ಅಲ್ಲಿಂದ ಓಡಿ ಹೋಯಿತು. ಪಕ್ಷಿಗಳು ಆ ಹದ್ದಿನ ಗೂಡಿನೊಳಗೆ ಪ್ರವೇಶಿಸಿ, ಅಲ್ಲಿ ಬಿದ್ದಿದ್ದ ಮರಿಗಳ ಎಲುಬುಗಳನ್ನೂ ರೆಕ್ಕೆಗಳನ್ನು ನೋಡಿ, "ನಮ್ಮ ಮರಿಗಳನ್ನು ಈ ಹದ್ದೇ ತಿಂದಿರಬೇಕು" ಎಂದು ನಿಶ್ಚಯಿಸಿಕೊಂಡು. ಅದನ್ನು ಕೊಂದು ಹಾಕಿ ಬಿಟ್ಟಿತು. ಹೀಗೆ ಆ ಕಾಗೆ ಎರಳೆಯ ಕತೆಯನ್ನು ಹೇಳಲು, ನರಿ ಕಾಗೆಯನ್ನು ಕುರಿತು"ಪ್ರಥಮದಲ್ಲಿ ನಿನ್ನ ಸ್ವಭಾವವು ಎರಳೆಗೆ ತಿಳಿದಿದ್ದಿತೇ? ಹಾಗೆ ಸಜ್ಜನರಿಗೆ ಸ್ವಭಾವ ತಿಳಿವ ಆವಶ್ಯಕತೆಯಿಲ್ಲ. ಅವರ ದರ್ಶನಮಾತ್ರದಿಂದಲೆ ಮಿತ್ರತ್ವವು ಸಂಘಟಿಸುತ್ತದೆ " ಎಂದು ಹೇಳಿತು.

ನರಿಯ ಈ ವಚನವನ್ನು ಕೇಳಿ ಎರಳೆಗೆ ಅದು ನಿಶ್ಚಯವೆಂದು ತೋರಿತು. ಆ ಎರಳೆ ಕಾಗೆಯನ್ನುದ್ದೇಶಿಸಿ "ನನ್ನನ್ನು ನೀನು ಹೇಗೆ ಮಿತ್ರನೆಂದು ಭಾವಿಸಿರುವೆಯೋ, ಹಾಗೆಯೇ ಈ ನರಿಯೂ ಮಿತ್ರನಾಗಿರಲಿ" ಎಂದು ಹೇಳಿ ಆದನ್ನು ತನ್ನ ಬಳಿಯಲ್ಲಿಟ್ಟುಕೊಂಡಿತು. ಆ ಮೇಲೆ ಈ ಮೂರೂ ಹಗಲಿನಲ್ಲಿ ಆಹಾರಕ್ಕಾಗಿ ಹೊರಗೆ ಹೋಗಿ, ಸಾಯಂಕಾಲದ ಹೊತ್ತಿಗೆ ಬರುತ್ತಿದ್ದವು. ಒಂದು ದಿನ, ಎರಳೆಯನ್ನುದ್ದೇಶಿಸಿ ನರಿ, ಈ ಅರಣ್ಯದಲ್ಲಿ ಒಂದು ದಿವ್ಯವಾದ ಹೊಲವುಂಟು. ಅದನ್ನು ನಿನಗೆ ತೋರಿಸುತೇನೆ." ಎಂದು ಹೇಳಿ ಕರೆದುಕೊಂಡು ಹೋಗಿ ತೋರಿಸಿತು.

ಎರಳೆ ನಿತ್ಯವೂ ಆ ಹೊಲಕ್ಕೆ ಹೋಗಿ ಮೇಯುತ್ತಿತ್ತು. ಹೀಗೆ ಮೇಯುತ್ತಿರುವಾಗ ಹೊಲದ ಯಜಮಾನನು ಎರಳೆಯನ್ನು ನೋಡಿ, ಒಂದು ಬಲೆಯನ್ನು ಹಾಕಿದನು. ಎರಳೆ ಮೇಯುವುದಕ್ಕೆ ಹೋಗಿ ತಿಳಿಯದೆ ಸಿಕ್ಕಿಕೊಂಡಿತು. ಆಗ ಅದು ತನ್ನ ಮನಸ್ಸಿನಲ್ಲಿ "ನನ್ನನ್ನು ಈ ಬಂಧನದಿಂದ ನನ್ನ ಮಿತ್ರರ ಹೊರತು ಯಾರು ಬಿಡಿಸಲಾರರು" ಎಂದು ಯೋಚಿಸುತ್ತಿರುವಷ್ಟರಲ್ಲಿಯೇ, ನರಿ ಅಲ್ಲಿಗೆ ಬಂದು ಈ ಎರಳೆಗೆ ಉಂಟಾದ ಅವಸ್ಥೆಯನ್ನು ನೋಡಿ, ಮನಸ್ಸಿನಲ್ಲಿ ಹಿಗ್ಗಿ, "ಇದು ನನ್ನ ಮನೋರಥವು ಪೂರ್ಣವಾಯಿತು. ಇದರ ಮಾಂಸವು ಬಹಳವಾಗಿದೆ. ಆದನ್ನು ಭಕ್ಷಿಸಿಬಿಡುತೇನೆ." ಎಂದು ಯೋಚಿಸುತ್ತಾ, ಅಲ್ಲಿಯೇ ನಿಂತುಕೊಂಡಿತು. ಅದನ್ನು ಕಂಡ ಎರಳೆ " ಏಲೇ ಮಿತ್ರನೆ! ನನ್ನನ್ನು ಈ ಬಂಧನದಿಂದ ಬಿಡಿಸಿ ನನ್ನ ಪ್ರಾಣವನ್ನು ರಕ್ಷಿಸು, ಎಂದು ಹೇಳಿತು. ಆದಕ್ಕೆ ನರಿ "ಅಯ್ಯಾ ಮಿತ್ರನೇ! ಏನು ಮಾಡಲಿ! ಇವತ್ತು ನನ್ನ ವ್ರತದ ದಿನ. ಆದಕಾರಣ ಚರ್ಮದ ಬಲೆಯನ್ನು ಈಗ ನಾನು ಮುಟ್ಟಲಾರೆನು, ನಾಳೆ ನೀನು ಹೇಳಿದ ಹಾಗೆ ಮಾಡುವೆನು."ಎಂದು ಹೇಳಿ ಆದರ ದೃಷ್ಟಿಯಿಂದ ತಪ್ಪಿಸಿಕೊಂಡು ಅಲ್ಲಿಯೇ ಅಡಗಿ ನಿಂತಿತು.

ಕಾಗೆ ತನ್ನ ಮಿತ್ರ ಎರಳೆಯನ್ನು ಅತ್ತಿತ್ತ ಹುಡುಕುತ್ತ ಎರಳೆಯಿದ್ದ ಜಾಗಕ್ಕೆ ಬಂದಿತು. ಅದರ ಅವಸ್ಥೆಗೆ ಕಾರಣ ಕೇಳಿತು. ಆದಕ್ಕೆ ಎರಳೆ, "ನಿನ್ನ ಮಾತು ಕೇಳಲಿಲ್ಲ ಎಂದು ಪಶ್ಚಾತ್ತಾಪ ಪಟ್ಟಿತು. ಕಾಗೆ "ನಿನ್ನ ಗೆಳಯ ನರಿ ಎಲ್ಲಿ ಹೋಯಿತು? ಎಂದು ಕೇಳಿದುದಕ್ಕೆ ಎರಳೆ ನನ್ನ ಮಾಂಸವನ್ನು ತಿನ್ನುವುದಕ್ಕಾಗಿ ಇಲ್ಲೆ ಅಡಗಿಕೊಂಡಿರಬೇಕು ಎಂದು ಹೇಳಿತು.ಆದಕ್ಕೆ ಕಾಗೆ "ತನಗೆ ಹಿತವನ್ನು ಹೇಳುವಂತ ಮಿತ್ರರ ವಚನವನ್ನು ಕೇಳದವರು, ತೀವ್ರದಲ್ಲಿಯೆ ವಿಪತ್ತಿನೊಳಗೆ ಸಿಕ್ಕಿ ಬೇಲುತ್ತಾರೆ. ಅಲ್ಲದೆ ಶತ್ರುವಿಗೂ ಅವರು ಆನಂದವನ್ನುಂಟು ಮಾಡುತ್ತಾರೆ." ಹೀಗೆಂದು ಹೇಳುತ್ತಿರುವಷ್ಟರಲ್ಲಿಯೆ ಹೊಲದ ಯಜಮಾನನು ಕೈಯಲ್ಲಿ ಕಟ್ಟಿಗೆಯನ್ನು ಹಿಡಿದುಕೊಂಡು ಬರುವುದನ್ನು ಕಾಗೆ ಕಂಡಿತು.

ಆಗ ಕಾಗೆ ಎರಳೆಯೆ ನೀನು ಸತ್ತ ಹಾಗೆ ಬಿದ್ದುಕೊಂಡಿರು ಅವನು ನಿನ್ನನ್ನು ನೋಡಿ ಇದು ಸತ್ತಿದೆಯೆಂದು ತಿಳಿದು ಬಲೆಯನ್ನು ಕಟ್ಟಿಕೊಳ್ಳುವನು ಆಗ ನಾನು ಶಬ್ದ ಮಾಡುತ್ತೇನೆ ನೀನು ಓಡಿಹೋಗು ಎಂದು ಹೇಳಿತು. ಹೊಲದ ಯಜಮಾನ ಅದನ್ನು ನೋಡಿ ಸತ್ತಿದೆಯೆಂದು ಸುಮ್ಮನಾದ. ಆಗ ಕಾಗೆ ಶಬ್ದ ಮಾಡಿತು. ಕೂಡಲೆ ಎರಳೆ ಓಡಿಹೋಯಿತು. ಹೊಲದ ಯಜಮಾನ ಆದಕ್ಕೆ ಕಟ್ಟಿಗೆಯಿಂದ ಹೊಡೆದ ಅದು ಎರಳೆಗೆ ತಪ್ಪಿ ಅಲ್ಲಿಯೆ ಇದ್ದ ನರಿಯ ತಲೆಗೆ ತಾಕಿ ಸತ್ತುಹೋಯಿತು.

पारियात्रा नामक जंगल में एक पेड़ पर मेघवर्मा नामक कौआ अपने परिवार के साथ सुख से रहता था । एक पहाड़ के गुफ़ा में चित्रग्रीव नामक कबूतर रहता था । एक दिन मेघवर्मा कौआ आहार की खोज में शहर के राह से जा रहा था तभी उसने एक विध्यंक नामक शिकारी को जाल के साथ आते हुए देखा । उसने सोचा "अगर मैं आहार की खोज में जाऊँगा तो यह शिकारी मेरे परिवार के सदस्य जहाँ रहते हैं वहाँ जाकर अपनी जाल बिछाकर दाना छिड़केगा और मेरे परिवार के सारे सदस्य निश्चय ही इस जाल में फँस जाऐंगे" । ऐसा सोचते हुए कि मेरा अब बाहर जाना ठीक नहीं है वह कौआ पेड़ के पास आ गया । परिवार के सदस्यों से यह बात कहकर उसने उन्हें कहीं न जाने का आदेश दिया । इतने में वह शिकारी अपनी जाल बिछाकर दाना बिखेरकर दूर जाकर बैठा ।

इसी समय चित्रग्रीव नामक कबूतर अपने परिवार के साथ दाने की खोज में वहाँ आया और दाना देखते ही बिना किसी सोच विचार के धोखे में आकर अपने परिवार के साथ जाल में फ़स गया । इस उलझन से बाहर कैसे आए ? ऐसा विचार करते हुए कि "हमारा एक एक करके हर्मॉस यहाँ से निकलना नामुमकिन है । इसलिए हम सभी मिलकर इस जाल के साथ ही उड़ जाएँ ।" ऐसा सोचकर सभी पंछी जाल को अपने साथ लेकर बहुत दूर तक उड़ गए । इसे देखकर शिकारी आश्चर्य में पड़ गया । दुखी होकर वह अपने मन में धीरज धरते हुए घर लौटा । ये हादसा देख रहे मेघवर्मा कौए ने भी जाल के साथ उड़ रहे कबूतर का पीछा किया ।

कुछ देर में चित्रग्रीव (कबूतर) चूहे का राजा हिरण्यवर्मा नामक एक दोस्त से अपने परिवार को इस बंधन से मुक्ति दिलाने की विनती की ।

उस चूहे ने जाल काटकर पंछियों को बंधन से मुक्ति दिलाई और उसने चित्रग्रीव से पूछा "तुम तो बहुत अकलमंद हो, फ़िर भी इस जाल में कैसे फँस गए ?" चित्रग्रीव ने बताया "होनी को कोई टाल नहीं सकता।" तो चूहे ने कहा "कोई भी काम करते समय होशियारी बरतना चाहिए।" ऐसा कहकर उसने उन्हें विदा किया।

इन सभी बातों को देख रहा मेघवर्मा कौए ने निश्चय कर लिया कि "मैं इस चूहे से दोस्ती करूँगा।" यह सोचकर वह चूहे के सुराख के पास आकर खड़ा हुआ। कौए को देखकर चूहे ने अचरज से पूछा "तुम कौन हो ?" "मैं चित्रग्रीव का अच्छा दोस्त हूँ, मेरा नाम मेघवर्मा है। मैं आपसे दोस्ती करना चाहता हूँ।" हिरण्यवर्मा चूहे ने उससे कहा "कहाँ राजा भोज और कहाँ गंगूँ तेली। इस संसार में दोस्ती करना है तो हम - तुम एक समान होना चाहिए। मैं तेरा आहार हूँ और तू मेरा। ऐसी हालात में हम दोनों की दोस्ती जचेगी नहीं, तुम्हारा प्यार मेरा विनाश होगा। जैसे लोमड़ी की दोस्ती करने से हिरण को बंधन में फँसना पड़ा, ठीक वैसे ही तुमसे दोस्ती करने से मैं भी बंधन में फँस जाऊँगा।" यह बात सुनकर कौए ने पूछा "क्या तुम मुझे बता सकते हो कि हिरण बंधन में कैसे फँसा ?" चूहे ने जवाब दिया -

मगध देश में चंपक नामक जंगल में, एक हिरण और एक कौआ दोस्त बनकर रहते थे। हिरण अपने मन चाहे हरा घास खाकर तन्दुरस्त हो गया।

एक बार एक लोमड़ी ने इस हिरण को देखकर मन ही मन सोचा "यह मृग आसानी से मेरे हाथ न आनेवाला है। इसे धोखे से मारना चाहिए।" ऐसा तय करके

तुम कौन हो?” “मैं क्षुद्रबुद्धि नामक लोमड़ी हूँ । इस वन में मेरा कोई दोस्त नहीं है । अकेली घूम रहा हूँ । आज तुम्हें देखकर बहुत खुशी हुई । मैं तुमसे दोस्ती करना चाहता हूँ” लोमड़ी ने कहा । उसकी इस बात से हिरण मान गई । तब तक सूरज आसमान में डूब रहा था । दोनों जानवर एक चंपक के पेड़ के नीचे आकर बैठ गये । उसी पेड़ के ऊपर सुबुद्धि नामक एक कौआ रहता था जो हिरण का दोस्त था । उसने लोमड़ी को देखकर हिरण से पूछा “हे दोस्त, यह दूसरा जानवर कौन है?”

हिरण ने कहा, “यह लोमड़ी है । मुझ से दोस्ती करने के लिए आयी है । अब हम दोनों दोस्त हैं ।” यह बात सुनकर कौए ने कहा “अरे! दोस्त, अचानक यदि कोई अजनबी जानवर कहीं से आ जाय तो तुम्हें उस पर भरोसा नहीं करना चाहिए । जब तक तुम उसका अता-पता नहीं जानोगे तब तक किसी को जगह नहीं देनी चाहिए । अगर ऐसा किया तो गीदड़ और बिल्ली की कहानी बन जाएगी । गीदड़ बिल्ली को आश्रय दे कर आप खुद मर गया ।” कौए के इस बात को सुनते ही हिरण ने पूछा “बिल्ली के हाथों गीदड़ की मृत्यु कैसे हुई ।” कौए ने जवाब दिया -

एक पेड़ के नीचे एक गीदड़ रहता था । उसकी जीविका के लिए पास में रह रहे पंछी अपने खाने में से एक भाग उस गीदड़ को देते थे । एक दिन एक बिल्ली वहाँ आयी । उसके मन में था कि वह छोटी छोटी पंछियों को खाएँ । बिल्ली को देखकर पंछी के चूज़े डर से आवाज़ करने लगे ।

इस आवाज़ को सुनकर बूढ़े गीदड़ ने उनसे पूछा “आप पंछी क्यों इतने डरे हुए हो, यहाँ कौन आया है ।” इतने में गीदड़ को देखकर बिल्ली भी घबरा गयी । लेकिन धीरज

बाँधकर उसने ठान लिया कि "इस शत्रु के हाथ से पार कर जाना मेरे बस की बात नहीं ।
इसलिए पहले इसके पास जाऊँगी, बाद में क्या होगा यह देखा जाएगा ।" ऐसा सोचकर
बिल्ली ने गीदड़ के पास आकर धीमी आवाज़ में कहा "प्रणाम सरकार ।" गीदड़ ने यह
सुनकर पूछा "तुम कौन हो?" बिल्ली ने जवाब दिया "मेरा नाम दीर्घकर्ण है ।" गीदड़
आपे से बाहर हो गया और ज़ोर से बोला "तुम तुरंत यहाँ से भाग जाओ । नहीं तो बेकार
में तुम अपनी जान हाथ से खो जाओगी ।"

इस बात को सुनकर बिल्ली ने कहा "मैं पहले आप से अपनी कहानी अर्ज करना
चाहती हूँ । उसके बाद यदि आप चाहे तो मुझे मार डालना ।" अब कुछ चारा भी पहीं
था तो गीदड़ ने बिल्ली से उसके यहाँ आने का कारण पूछा और बिल्ली ने जवाब दिया "मैं
गंगा तट पर रोज़ गंगा में नहाकर व्रत नियमों का पालन करते हुए समय का सदुपयोग
करती आ रही हूँ । यह सुनकर कि तुम महात्मा हो, तुम्हारे दर्शन के लिए यहाँ आयी,
लेकिन तुम हो कि अपने धर्म को छोड़कर मुझे मारने पर तुले हुए हो ।"

बिल्ली की इन बातों से गीदड़ को अचरज हुआ । उसने पूछा "सुना है कि मार्जाल
मांसाहारी हैं और क्रूर भी हैं । क्या यह सच नहीं है? बिल्ली ने झट से जवाब दिया मैं इस
पृथ्वी का कसम खाती हूँ ।"

"मैंने धर्मशास्त्र का श्रवण करते हुए वैरागी बनकर कुकर्मों को त्याग दिया है ।
कई शास्त्रों में लिखा हुआ है कि हिंसा से बढ़कर कोई पाप नहीं है । इसलिए दूसरों के
प्राण हर कर सुख भोगने वाले नरक में जाएँगे ।" बिल्ली की इन बातों में आकर गीदड़ ने
उसे अपने घर में जगह दे दी । अब क्या कहना । बिल्ली हर रोज़ पंछी के चूज़े को

हड़पकर खाने लगी । एक बार एक पंछी के चूज़े खो जाने से वह बहुत तड़पने लगी । वह और पंछियों को साथ लेकर चूज़ों की खोज में भटकते हुए गीदड़ के रहने की जगह पर आई । उसको देखते ही बिल्ली वहाँ से नौ दो ग्यारह हो गई । सभी पंछी गीदड़ के घोंसले में घुसकर देखते हैं अपने सभी चूज़ों की हड्डियाँ और पंख वहाँ बिखरे पड़े हैं । उन्होंने सोचा "हमारे इन चूज़ों को गीदड़ ही खा गया है ।" एेसा सोच कर, बिना कुछ सोचे या देखे, उन्होंने गीदड़ को मार डाला । इस प्रकार कौए ने जब हिरण को कहानी सुनायी तो लोमड़ी ने कौए से कहा "क्या शुरूआत में ही हिरण को पता चल गया था कि तुम्हारा मिजाज कैसा है? यूँ देखें तो यह परखने की ज़रूरत नहीं है कि सज्जन कैसे होते हैं । उनके दर्शन करने मात्र से दोस्ती हो जाती है । "

लोमड़ी की बातें सुनकर हिरण ने भी सोचा कि यही सही है । तो उसने कौए से कहा "जैसे तुम मुझे अपना दोस्त समझते हो वैसे ही यह लोमड़ी भी मेरी मित्र बनकर रहेगी ।" एेसा कहकर लोमड़ी को उसने अपने पास ही रख लिया । उस दिन के बाद तीनों मित्र सुबह आहार की खोज में बाहर निकलते, शाम होते ही लौट आते थे । एक दिन लोमड़ी ने हिरण से कहा "इस जंगल में एक बहुत हरा-भरा खेत है, जो मैं तुम्हें दिखाना चाहता हूँ ।" यह कहकर उसने हिरण को खेत दिखाया ।

तदुपरांत हिरण हर रोज़ उस खेत में जाकर आराम से घास चरती थी । एेसे में खेत के मालिक ने उसे देखकर एक जाल बिछा दिया । हिरण बिना कुछ सूझ बूझ के, चरने गई और उसमें फंस गई । उसने अपने मन में सोचा "मुझे मेरे दोस्तों के सिवा और कोई भी इस बंधन से मुक्त नहीं कर पायेंगे ।" इतने में लोमड़ी वहाँ आयी, हिरण की दशा देखकर मन ही मन फूले न समाई । "आज मेरे मन की मुराद पूरी हो गई । इसका मांस

बहुत ज्यादा है । मैं उसे ... ।" यह सोचते हुए लोमड़ी वहीं खड़ी हो गयी । उसे देखकर हिरण ने कहा "ऐ मेरे दोस्त, मुझे इस जाल से आज़ाद करो । मेरी रक्षा करो ।" लोमड़ी ने जवाब दिया "अरे दोस्त, मैं क्या करूँ, आज मेरा व्रत है । इस कारण मैं यह जाल आज छू नहीं सकती । कल तुम जैसा कहोगे, वैसा ही करूँगी।" यह कहकर लोमड़ी हिरण की नज़रों से बचते हुए वहीं आड़ में छिप गयी ।

अब कौआ अपनी दोस्त हिरण की खोज में उसी जगह पर आ गया । उसकी इस हालत की वजह पूछी । हिरण पछताने लगी कि "मैंने तेरी बात नहीं मानी ।" कौए ने पूछा "तेरी दोस्त लोमड़ी कहाँ चली गयी ।" हिरण ने जवाब दिया "मेरे हाड़ मांस खाने की चाह में यहीं कहीं छिप कर बैठी होगी ।" इस पर कौए ने कहा - "जो अपने हित में दोस्तों का कहा नहीं मानता तो वह जल्दी ही संकट में पड़ जाता है । इतना ही नहीं, उसके दुश्मन भी उसकी हँसी उड़ाते हैं ।" इतने में कौए ने खेत के मालिक को हाथ में लकड़ी पकड़ कर आते हुए देखा ।

कौए ने हिरण से कहा - "तुम अब ऐसे पड़े रहो कि तुम्हें देखकर वह समझे कि तुम मर गये हो । तो वह अपनी जाल बाँधने लगेगा । तभी मैं आवाज़ देता हूँ और तुम भाग जाना ।" ठीक इसी के मुताबिक मालिक ने सोचा कि हिरण मर गई है । तब कौए ने आवाज़ लगाई । झट से हिरण भागने लगी । इसे देखकर मालिक ने लकड़ी से उसे मारा । लेकिन उसका डंडा हिरण पर न जाकर वहीं आड़ में छिपे लोमड़ी के सिर पर लगा और लोमडी ने वहीं दम तोड़ दिया ।