Vedic Accents

Following the rules of Pāṇini in the formation of a word from its rudimentary elements, the vowels acquire one of three basic pitch accents or svara:

(a) **udātta**, raised pitch [1.2.29],
(b) **anudātta**, not raised [1.1.30],
(c) **svarīta**, a blend of the first two [1.2.31].

The pronunciation of the svarīta is initially udātta for the period of half a short vowel and anudātta for the rest (i.e. one and a half measures for a long vowel) [1.2.32]. In continuous speech or saṃhitā, all anudātta syllables following a svarīta are called pracaya and are pronounced ekaśruti (monotone, between anudātta and udātta) [1.2.39], however, the anudātta immediately preceding a svarīta or udātta is pronounced sannatara (lower than anudātta) [1.2.40]. The Vedas may also be recited entirely in ekaśruti (with exceptions) [1.2.36 ff.], nonetheless be aware that the accent may affect the meaning of a word, particularly a compound [6.1.223, 6.2.1] (e.g. su-kṛta, ind. well done; su-kṛtá, n. a good deed).

With rare exceptions, a word standing alone has at most one vowel accented udātta or svarīta, the rest being anudātta [6.1.158]. This is the basis of the Western system of marking Vedic accents in transliteration. Since most vowels are anudātta, this is taken as the basic or unaccented form, and the other accents are marked as:

(a) acute (’’) for the udātta (e.g. kārma).
(b) grave (’’) for the svarīta (e.g. vākyā).

Vowel sandhi, besides producing a new vowel sound, also blends their accents: if this blending produces a svarīta accent, it is called an independent svarīta by Western grammarians. Where this independent svarīta is within a word it is called nitya or jātya (innate), and where it arises due to the joining of words in saṃhitā (continuous speech) [8.2.4,6] it is further classified according to the type of sandhi:

(a) **Kṣaipra** (quick) when the first vowel is replaced by its semivowel [6.1.77]; the name arises from the shortening of the time measure from that of a vowel to that of a semivowel. The svarīta accent replaces an anudātta occurring immediately after the semivowel substitution for an udātta or svarīta vowel [8.2.4] (e.g. apsú antāḥ ⇒ apsvāntāḥ).
(U or S) + A ⇒ semivowel + S .............................. (1)

where U=udāta, S=independent svarīta, and A=anudāta.

(b) Praśīṣṭa (coalescence) when both vowels are replaced by a single vowel [6.1.84ff]; the single substitute of an anudāta at the beginning of a word and the preceding udāta, becomes svarīta optionally [8.2.6] (e.g. nā eva ⇒ nāvā).

U + A ⇒ S  ..................................................... (2)

This rule applies to sandhi between words, whereas the general rule is that the single replacement of udāta and anudāta vowels (in either order) is udāta [8.2.5].

U + A or A + U ⇒ U  ..................................................... (3)

(c) Abhinīhīta (close contact) when a following a is absorbed by a final e or o [6.1.109]; the rule for the accent follows that of the praśīṣṭa (e.g. rayāḥ avānīḥ ⇒ rayō'vānīḥ).

An independent svarīta, when the next syllable has an udāta or independent svarīta accent, is pronounced kampa (tremolo) in some traditions: this would apply in the above three examples.

S_1 - (S_1 or U) ⇒ K - (S_1 or U)

where K=kampa svarīta.

In saṃhītā there is a further svarīta called śuddha (simple, mere); Western grammarians name it the dependent, substitute, or enclitic svarīta. An anudāta syllable following one that is udāta becomes svarīta [8.4.66], unless it is in turn followed by an udāta or svarīta [8.4.67].

U - A ⇒ U - S_d  ..................................................... (4)

where S_d= dependent svarīta.

But U - A - (U or S) ⇒ U - A - (U or S)  ..................................... (5)

These rules combine to produce a rhythm in the sound:

Au - U - S_d - Ae - Ae - caused by the udāta, and
Au - S_1 - Ae - Ae - caused by the independent svarīta,

where A_s=sannatara, and A_e=ekaśruti.

The cadence becomes more complex with the reduction of syllables separating the main accents (U and S), so as to eliminate the ekaśruti or even the dependent svarīta.
At this point it would be useful to present a practical illustration of these accent changes that arise in continuous speech. The example is taken from the *Rgveda* (10.125.7): the verse is shown as separate words and then in *sanphitā* showing the applicable rules.

\textit{ahám suve pitáram asya mārdhán mána yónih apsú antāḥ samudré,}  
táto ví tiṣṭhe bhúvanā ánu víśvā utá amān dyām varśmánapá úpa sprśāmi.  

\begin{center}
(4) \hline (4) \hline (5) \hline (4) \hline (1, kampa) \hline
\end{center}

\textit{ahám suve pitáram asya mārdhán mána yónirapsvántāḥ sāmudré,}  
táto ví tiṣṭhe bhúvanánu víśvotámám dyām varśmánapá sprśāmi.  

\begin{center}
(5) \hline (4) \hline (5)(3)(5) \hline (5) \hline (3) \hline (4)
\end{center}

(* optionally, rule 2 could apply here and become \textit{kampa}.)

The tradition of Western sanskritists emphasizes grammar and translation, and thus will use the form of separated words in transliteration; it is unusual to find fully accented *sanphitā* text in transliteration: at best only the \textit{udāṭṭa} and \textit{jāṭya svarīta} are marked. India, on the other hand, has an oral tradition which emphasizes pronunciation and rhythm, and thus the marking of accents in *devanāgarī* script is optimized for correct pronunciation; in fact, the written form is a much later development and has given rise to different methods of accent notation. The various traditions are discussed separately:

(a) *Rgveda* has \textit{udāṭṭa} unmarked; the \textit{svarīta} (\textit{jāṭya} or \textit{suddha}) is marked with a vertical line above the syllable (e.g. \textit{ṛ}), but the \textit{kampa} is indicated by a numeral 1 following the vowel if it is short, or the numeral 3 if it is long, and in both cases there is a vertical line above the numeral and a horizontal line below it; in the case of the long \textit{kampa} vowel the syllable usually also has a horizontal line below it (e.g. \textit{ṛṛ ṛṛ ṛṛ}). The \textit{anudāṭṭa} is marked with a horizontal bar below the syllable: this applies to all \textit{anudāṭṭa} syllables before the first \textit{udāṭṭa} or \textit{svarīta} in a line of verse, after which only those \textit{anudāṭṭa} that immediately precede an \textit{udāṭṭa} or \textit{svarīta} (i.e. \textit{sannatara}) is marked, and the rest of the \textit{anudāṭṭa} (i.e. \textit{ekaśrutī}) are not marked.

Using the sample verse from the *Rgveda*, the accent marking in transliteration and the original *devanāgarī* is:
(b) Sāmaveda accents are marked with a numeral, or numeral and letter, above the syllable: udātta, svarita, and anudātta are marked with the numerals 1, 2, and 3 respectively; the figure 2 is also used to indicate an udātta when there is no following svarita; ekaśruti syllables are not marked. Special marking is used for particular accent sequences:

\[
\begin{align*}
U - U - S & \Rightarrow 1 - \text{unmarked} - 2r \\
U - U - A & \Rightarrow 2u - \text{unmarked} - 3 \\
A - S_i & \Rightarrow 3k - 2r
\end{align*}
\]

Using the same passage from the Rgveda as an illustration, the marking in transliteration and devanāgarī would be:

\[
\begin{align*}
\text{a} & \text{h}a \text{ŋ} \text{ su} \text{v}e \text{ pītārāma} \text{sya} \text{ mūrdha} \text{nma} \text{m}a \text{ yonīra} \text{psva} \text{n} \text{tāḥ} \text{ sa} \text{mu} \text{d} \text{re}, \\
\text{tato} \text{ vī} \text{ṭīṣ} \text{h} \text{e} \text{ bhuvanā} \text{n} \text{u} \text{ viśvō} \text{ta} \text{m} \text{a} \text{ṃ} \text{ d} \text{vā} \text{ṃ} \text{ vṛṣṇa} \text{nopa} \text{ṃ} \text{ śrṣāmi}.
\end{align*}
\]

\[
\begin{align*}
\text{a} & \text{h} & \text{h} & \text{s} & \text{v}e & \text{p} & \text{i} & \text{t} & \text{a} & \text{r} & \text{a} & \text{m} & \text{a} & \text{y} & \text{m} & \text{m} & \text{a} & \text{ y} & \text{o} & \text{n} & \text{i} & \text{r} & \text{a} & \text{p} & \text{s} & \text{v} & \text{t} & \text{a} & \text{ḥ} & \text{s} & \text{a} & \text{m} & \text{d} & \text{r} & \text{e}, \\
\text{t} & \text{a} & \text{t} & \text{o} & \text{ v} & \text{i} & \text{ṭ} & \text{i} & \text{ṣ} & \text{h} & \text{e} & \text{b} & \text{h} & \text{u} & \text{v} & \text{a} & \text{n} & \text{ā} & \text{n} & \text{u} & \text{ v} & \text{i} & \text{s} & \text{v} & \text{ō} & \text{t} & \text{a} & \text{m} & \text{a} & \text{ṃ} & \text{ d} & \text{v} & \text{ā} & \text{ṃ} & \text{ v} & \text{ṛ} & \text{ṣ} & \text{n} & \text{a} & \text{n} & \text{opa} & \text{ṃ} & \text{ ś} & \text{ṛ} & \text{s} & \text{ā} & \text{mi}.
\end{align*}
\]
(c) Śatapatha-Brāhmaṇa uses only two accents, udāṭta and anudāṭta: a horizontal line below the syllable indicates anudāṭta (as in the Rgveda). The relationship to the grammatical accents described by Pāṇini is rather indirect: the anudāṭta marked here are the syllables before those which would be marked svarīta in the Rgveda with rule (5) not applying.

Using the sample verse from the Rgveda, the accent marking would be:

अहं सूवे पित्रस्मस्य मूर्धन्मम योजित्स्वस्यः समुद्रे।
ततो वि तिष्ठे भुवनानु विश्वोतामु द्वार वर्षनोप स्यृशामि॥

**Caution:** beyond this point, the information to hand is incomplete and should be treated circumspectly.

(d) Maitrāyaṇī-Saṃhitā marks the udāṭta with a vertical line above the syllable; the independent svarīta is indicated by a curve below (_errno); the dependent svarīta has a horizontal line crossing the middle of the syllable or three vertical strokes above it (_errno) or a dot below it (_errno); the anudāṭta is marked with a horizontal line below.

(e) Kāṭhaka-Saṃhitā marks the udāṭta with a vertical line above the syllable; the independent svarīta is indicated by a curve below (_errno) only if an anudāṭta follows, otherwise by a hook below (_errno); the dependent svarīta has a dot below the accented syllable (_errno); the anudāṭta is marked with a horizontal or vertical line below (_errno,_errno).

(f) Taṅṭirīya-Saṃhitā, -Brāhmaṇa, and -Āraṇyaka, and Atharva-Veda, and Vājasaṅgeyī-Saṃhitā are marked as the Rgveda, with minor differences, mainly in the marking of the svarīta before an udāṭta.

Works consulted:
(a) S.M. Katre, Aṣṭādhyāyī of Pāṇini, Motilal Banarsidas.
(b) Ś.C. Vasu, The Siddhānta Kaumudi, Motilal Banarsidas.
(c) A.A. Macdonell, A Vedic Grammar for Students, Appendix III.
(d) W.D. Whitney, Sanskrit Grammar, para.80–97.
(e) M. Williams, A Practical Grammar of the Skt. Lang., para.975–985.
(f) K.V. Abhyankar, A Dictionary of Sanskrit Grammar, M.S.Univ. Baroda.
(g) Bureau of Indian Standards, ISCI (1991), Annex G.
(h) The Bhāṣika Accentuation System, George Cardona,
<table>
<thead>
<tr>
<th>Notation</th>
<th>udāṭta</th>
<th>svarīta</th>
<th>anudāṭta</th>
<th>special</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ṛgveda</td>
<td>ṛ</td>
<td>ṛ</td>
<td>ṛ</td>
<td>ṛ</td>
</tr>
<tr>
<td>Sāmaveda</td>
<td>ṛ</td>
<td>ṛ</td>
<td>ṛ</td>
<td>ṛ</td>
</tr>
<tr>
<td>Śatapatha</td>
<td>ṛ</td>
<td></td>
<td></td>
<td>ṛ</td>
</tr>
<tr>
<td>Maitrāyaṇī-Saṃhitā</td>
<td>ṛ</td>
<td>ṛ</td>
<td>ṛ</td>
<td>ṛ</td>
</tr>
<tr>
<td>Kāṭhaka-Saṃhitā</td>
<td>ṛ</td>
<td>ṛ</td>
<td>ṛ</td>
<td>ṛ</td>
</tr>
<tr>
<td>Taittirīya-Brāhmaṇa, -Saṃhitā, -Āraṇyaka</td>
<td>ṛ</td>
<td></td>
<td></td>
<td>ṛ</td>
</tr>
<tr>
<td>Atharvaveda</td>
<td>ṛ</td>
<td>ṛ</td>
<td>ṛ</td>
<td>ṛ</td>
</tr>
<tr>
<td>Vājasaneyi-Saṃhitā</td>
<td>ṛ</td>
<td>ṛ</td>
<td>ṛ</td>
<td>ṛ</td>
</tr>
<tr>
<td>Taittirīya-Upaniṣad</td>
<td>ṛ</td>
<td>ṛ</td>
<td></td>
<td>ṛ</td>
</tr>
<tr>
<td>Śukla Yajurveda</td>
<td>ṛ</td>
<td></td>
<td></td>
<td>ṛ</td>
</tr>
<tr>
<td>Non-Tait.° Yajurveda</td>
<td>ṛ</td>
<td></td>
<td></td>
<td>ṛ</td>
</tr>
<tr>
<td>???. Sentence ending</td>
<td>ṛ</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>