

Alphabet or Abracadabra ?

ABCDEFGHIJKLMNOPQRSTUVWXYZ

Reverse Engineering The Western Alphabet

Did the Western alphabet sequence,
in spite of it looking quite disorderly at first glance,
follow a pattern invented perhaps more than 3700 years ago...
a Pre-Sanskrit, early Brāhmī alphabet from India?

A	B	C	D
E	F	G	H
I/J	K/L	M	N
O	P	Q	R/S/T
U	V/W	X/Y	Z

Wim Borsboom

Why is ABCD followed by EFG?

Reverse Engineering the Western Alphabet

A groundbreaking discovery!

In spite of it looking quite disorderly, our Western alphabet's letter-sequence (properly called *abecedary*) was originally modeled after an orderly pattern of characters (called *abugida*) that was invented about 3700 years in what is now India and Pakistan.

It must have been around the same time that an inquisitive Near-Eastern language student was on a study trip in India, and while there, he copied a grid of sound-signs (graphemes of phonemes) that an ancient Indian linguist was showing him.

The problem was, while copying, the student made two errors...

Indeed...! Two errors of historic proportion!

The result?

The haphazard order of the characters in our Western ABC!

In an attempt to trace the origins of the current Western alphabet's letter-sequence, the writer discovered those errors, but by being able to track how, when and why they were made, he was able to reconstruct and approximately date the original format of the Western alphabet.





Triple Gem Press

Explanations and terminology in this study are also aimed at the non-expert reader. Those with expert knowledge in linguistics and epigraphy will naturally find some concepts and descriptions simplified.

*Some rather complex charts accompany the text.
The three sheets at the end of this booklet feature the same charts
and can be used alongside the text for easier interpretation.
(Online readers could print them out separately.)*

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Earliest cuneiform abecedary (alphabet) found.
 Ugarit, Syria, 1400-1200 BCE
 clay tablet, 20 cm

𐎀	𐎁	𐎂	𐎃	𐎄	𐎅	𐎆	𐎇	𐎈	𐎉	𐎊	𐎋	𐎌
ʔa	b	g	ḥ (x)	d	h	w	z	ḥ (ḥ)	ṯ	y	k	
𐎍	𐎎	𐎏	𐎐	𐎑	𐎒	𐎓	𐎔	𐎕	𐎖	𐎗	𐎘	𐎙
m	ḡ (ḡ)	n	z (ḡ)	s	ṯ	p	ṣ	q	r	ṯ (ḡ)		
𐎚	𐎛	𐎜	𐎝	𐎞								
ḡ (y)	t	ʔl	ʔu	s ₂								

𐎀	𐎁	𐎂	𐎃	𐎄	𐎅	𐎆	𐎇	𐎈	𐎉	𐎊	𐎋	𐎌	𐎍	𐎎	𐎏	𐎐	𐎑	𐎒	𐎓	𐎔	𐎕	𐎖	𐎗	𐎘	𐎙	𐎚	𐎛	𐎜	𐎝	𐎞	𐎟	𐎠	𐎡	𐎢	𐎣	𐎤	𐎥	𐎦	𐎧	𐎨	𐎩	𐎪	𐎫	𐎬	𐎭	𐎮	𐎯	𐎰	𐎱	𐎲	𐎳	𐎴	𐎵	𐎶	𐎷	𐎸	𐎹	𐎺	𐎻	𐎼	𐎽	𐎾	𐎿	𐏀	𐏁	𐏂	𐏃	𐏄	𐏅	𐏆	𐏇	𐏈	𐏉	𐏊	𐏋	𐏌	𐏍	𐏎	𐏏	𐏐	𐏑	𐏒	𐏓	𐏔	𐏕	𐏖	𐏗	𐏘	𐏙	𐏚	𐏛	𐏜	𐏝	𐏞	𐏟	𐏠	𐏡	𐏢	𐏣	𐏤	𐏥	𐏦	𐏧	𐏨	𐏩	𐏪	𐏫	𐏬	𐏭	𐏮	𐏯	𐏰	𐏱	𐏲	𐏳	𐏴	𐏵	𐏶	𐏷	𐏸	𐏹	𐏺	𐏻	𐏼	𐏽	𐏾	𐏿	𐐀	𐐁	𐐂	𐐃	𐐄	𐐅	𐐆	𐐇	𐐈	𐐉	𐐊	𐐋	𐐌	𐐍	𐐎	𐐏	𐐐	𐐑	𐐒	𐐓	𐐔	𐐕	𐐖	𐐗	𐐘	𐐙	𐐚	𐐛	𐐜	𐐝	𐐞	𐐟	𐐠	𐐡	𐐢	𐐣	𐐤	𐐥	𐐦	𐐧	𐐨	𐐩	𐐪	𐐫	𐐬	𐐭	𐐮	𐐯	𐐰	𐐱	𐐲	𐐳	𐐴	𐐵	𐐶	𐐷	𐐸	𐐹	𐐺	𐐻	𐐼	𐐽	𐐾	𐐿	𐑀	𐑁	𐑂	𐑃	𐑄	𐑅	𐑆	𐑇	𐑈	𐑉	𐑊	𐑋	𐑌	𐑍	𐑎	𐑏	𐑐	𐑑	𐑒	𐑓	𐑔	𐑕	𐑖	𐑗	𐑘	𐑙	𐑚	𐑛	𐑜	𐑝	𐑞	𐑟	𐑠	𐑡	𐑢	𐑣	𐑤	𐑥	𐑦	𐑧	𐑨	𐑩	𐑪	𐑫	𐑬	𐑭	𐑮	𐑯	𐑰	𐑱	𐑲	𐑳	𐑴	𐑵	𐑶	𐑷	𐑸	𐑹	𐑺	𐑻	𐑼	𐑽	𐑾	𐑿	𐒀	𐒁	𐒂	𐒃	𐒄	𐒅	𐒆	𐒇	𐒈	𐒉	𐒊	𐒋	𐒌	𐒍	𐒎	𐒏	𐒐	𐒑	𐒒	𐒓	𐒔	𐒕	𐒖	𐒗	𐒘	𐒙	𐒚	𐒛	𐒜	𐒝	𐒞	𐒟	𐒠	𐒡	𐒢	𐒣	𐒤	𐒥	𐒦	𐒧	𐒨	𐒩	𐒪	𐒫	𐒬	𐒭	𐒮	𐒯	𐒰	𐒱	𐒲	𐒳	𐒴	𐒵	𐒶	𐒷	𐒸	𐒹	𐒺	𐒻	𐒼	𐒽	𐒾	𐒿	𐓀	𐓁	𐓂	𐓃	𐓄	𐓅	𐓆	𐓇	𐓈	𐓉	𐓊	𐓋	𐓌	𐓍	𐓎	𐓏	𐓐	𐓑	𐓒	𐓓	𐓔	𐓕	𐓖	𐓗	𐓘	𐓙	𐓚	𐓛	𐓜	𐓝	𐓞	𐓟	𐓠	𐓡	𐓢	𐓣	𐓤	𐓥	𐓦	𐓧	𐓨	𐓩	𐓪	𐓫	𐓬	𐓭	𐓮	𐓯	𐓰	𐓱	𐓲	𐓳	𐓴	𐓵	𐓶	𐓷	𐓸	𐓹	𐓺	𐓻	𐓼	𐓽	𐓾	𐓿	𐔀	𐔁	𐔂	𐔃	𐔄	𐔅	𐔆	𐔇	𐔈	𐔉	𐔊	𐔋	𐔌	𐔍	𐔎	𐔏	𐔐	𐔑	𐔒	𐔓	𐔔	𐔕	𐔖	𐔗	𐔘	𐔙	𐔚	𐔛	𐔜	𐔝	𐔞	𐔟	𐔠	𐔡	𐔢	𐔣	𐔤	𐔥	𐔦	𐔧	𐔨	𐔩	𐔪	𐔫	𐔬	𐔭	𐔮	𐔯	𐔰	𐔱	𐔲	𐔳	𐔴	𐔵	𐔶	𐔷	𐔸	𐔹	𐔺	𐔻	𐔼	𐔽	𐔾	𐔿	𐕀	𐕁	𐕂	𐕃	𐕄	𐕅	𐕆	𐕇	𐕈	𐕉	𐕊	𐕋	𐕌	𐕍	𐕎	𐕏	𐕐	𐕑	𐕒	𐕓	𐕔	𐕕	𐕖	𐕗	𐕘	𐕙	𐕚	𐕛	𐕜	𐕝	𐕞	𐕟	𐕠	𐕡	𐕢	𐕣	𐕤	𐕥	𐕦	𐕧	𐕨	𐕩	𐕪	𐕫	𐕬	𐕭	𐕮	𐕯	𐕰	𐕱	𐕲	𐕳	𐕴	𐕵	𐕶	𐕷	𐕸	𐕹	𐕺	𐕻	𐕼	𐕽	𐕾	𐕿	𐖀	𐖁	𐖂	𐖃	𐖄	𐖅	𐖆	𐖇	𐖈	𐖉	𐖊	𐖋	𐖌	𐖍	𐖎	𐖏	𐖐	𐖑	𐖒	𐖓	𐖔	𐖕	𐖖	𐖗	𐖘	𐖙	𐖚	𐖛	𐖜	𐖝	𐖞	𐖟	𐖠	𐖡	𐖢	𐖣	𐖤	𐖥	𐖦	𐖧	𐖨	𐖩	𐖪	𐖫	𐖬	𐖭	𐖮	𐖯	𐖰	𐖱	𐖲	𐖳	𐖴	𐖵	𐖶	𐖷	𐖸	𐖹	𐖺	𐖻	𐖼	𐖽	𐖾	𐖿	𐗀	𐗁	𐗂	𐗃	𐗄	𐗅	𐗆	𐗇	𐗈	𐗉	𐗊	𐗋	𐗌	𐗍	𐗎	𐗏	𐗐	𐗑	𐗒	𐗓	𐗔	𐗕	𐗖	𐗗	𐗘	𐗙	𐗚	𐗛	𐗜	𐗝	𐗞	𐗟	𐗠	𐗡	𐗢	𐗣	𐗤	𐗥	𐗦	𐗧	𐗨	𐗩	𐗪	𐗫	𐗬	𐗭	𐗮	𐗯	𐗰	𐗱	𐗲	𐗳	𐗴	𐗵	𐗶	𐗷	𐗸	𐗹	𐗺	𐗻	𐗼	𐗽	𐗾	𐗿	𐘀	𐘁	𐘂	𐘃	𐘄	𐘅	𐘆	𐘇	𐘈	𐘉	𐘊	𐘋	𐘌	𐘍	𐘎	𐘏	𐘐	𐘑	𐘒	𐘓	𐘔	𐘕	𐘖	𐘗	𐘘	𐘙	𐘚	𐘛	𐘜	𐘝	𐘞	𐘟	𐘠	𐘡	𐘢	𐘣	𐘤	𐘥	𐘦	𐘧	𐘨	𐘩	𐘪	𐘫	𐘬	𐘭	𐘮	𐘯	𐘰	𐘱	𐘲	𐘳	𐘴	𐘵	𐘶	𐘷	𐘸	𐘹	𐘺	𐘻	𐘼	𐘽	𐘾	𐘿	𐙀	𐙁	𐙂	𐙃	𐙄	𐙅	𐙆	𐙇	𐙈	𐙉	𐙊	𐙋	𐙌	𐙍	𐙎	𐙏	𐙐	𐙑	𐙒	𐙓	𐙔	𐙕	𐙖	𐙗	𐙘	𐙙	𐙚	𐙛	𐙜	𐙝	𐙞	𐙟	𐙠	𐙡	𐙢	𐙣	𐙤	𐙥	𐙦	𐙧	𐙨	𐙩	𐙪	𐙫	𐙬	𐙭	𐙮	𐙯	𐙰	𐙱	𐙲	𐙳	𐙴	𐙵	𐙶	𐙷	𐙸	𐙹	𐙺	𐙻	𐙼	𐙽	𐙾	𐙿	𐚀	𐚁	𐚂	𐚃	𐚄	𐚅	𐚆	𐚇	𐚈	𐚉	𐚊	𐚋	𐚌	𐚍	𐚎	𐚏	𐚐	𐚑	𐚒	𐚓	𐚔	𐚕	𐚖	𐚗	𐚘	𐚙	𐚚	𐚛	𐚜	𐚝	𐚞	𐚟	𐚠	𐚡	𐚢	𐚣	𐚤	𐚥	𐚦	𐚧	𐚨	𐚩	𐚪	𐚫	𐚬	𐚭	𐚮	𐚯	𐚰	𐚱	𐚲	𐚳	𐚴	𐚵	𐚶	𐚷	𐚸	𐚹	𐚺	𐚻	𐚼	𐚽	𐚾	𐚿	𐛀	𐛁	𐛂	𐛃	𐛄	𐛅	𐛆	𐛇	𐛈	𐛉	𐛊	𐛋	𐛌	𐛍	𐛎	𐛏	𐛐	𐛑	𐛒	𐛓	𐛔	𐛕	𐛖	𐛗	𐛘	𐛙	𐛚	𐛛	𐛜	𐛝	𐛞	𐛟	𐛠	𐛡	𐛢	𐛣	𐛤	𐛥	𐛦	𐛧	𐛨	𐛩	𐛪	𐛫	𐛬	𐛭	𐛮	𐛯	𐛰	𐛱	𐛲	𐛳	𐛴	𐛵	𐛶	𐛷	𐛸	𐛹	𐛺	𐛻	𐛼	𐛽	𐛾	𐛿	𐜀	𐜁	𐜂	𐜃	𐜄	𐜅	𐜆	𐜇	𐜈	𐜉	𐜊	𐜋	𐜌	𐜍	𐜎	𐜏	𐜐	𐜑	𐜒	𐜓	𐜔	𐜕	𐜖	𐜗	𐜘	𐜙	𐜚	𐜛	𐜜	𐜝	𐜞	𐜟	𐜠	𐜡	𐜢	𐜣	𐜤	𐜥	𐜦	𐜧	𐜨	𐜩	𐜪	𐜫	𐜬	𐜭	𐜮	𐜯	𐜰	𐜱	𐜲	𐜳	𐜴	𐜵	𐜶	𐜷	𐜸	𐜹	𐜺	𐜻	𐜼	𐜽	𐜾	𐜿	𐝀	𐝁	𐝂	𐝃	𐝄	𐝅	𐝆	𐝇	𐝈	𐝉	𐝊	𐝋	𐝌	𐝍	𐝎	𐝏	𐝐	𐝑	𐝒	𐝓	𐝔	𐝕	𐝖	𐝗	𐝘	𐝙	𐝚	𐝛	𐝜	𐝝	𐝞	𐝟	𐝠	𐝡	𐝢	𐝣	𐝤	𐝥	𐝦	𐝧	𐝨	𐝩	𐝪	𐝫	𐝬	𐝭	𐝮	𐝯	𐝰	𐝱	𐝲	𐝳	𐝴	𐝵	𐝶	𐝷	𐝸	𐝹	𐝺	𐝻	𐝼	𐝽	𐝾	𐝿	𐞀	𐞁	𐞂	𐞃	𐞄	𐞅	𐞆	𐞇	𐞈	𐞉	𐞊	𐞋	𐞌	𐞍	𐞎	𐞏	𐞐	𐞑	𐞒	𐞓	𐞔	𐞕	𐞖	𐞗	𐞘	𐞙	𐞚	𐞛	𐞜	𐞝	𐞞	𐞟	𐞠	𐞡	𐞢	𐞣	𐞤	𐞥	𐞦	𐞧	𐞨	𐞩	𐞪	𐞫	𐞬	𐞭	𐞮	𐞯	𐞰	𐞱	𐞲	𐞳	𐞴	𐞵	𐞶	𐞷	𐞸	𐞹	𐞺	𐞻	𐞼	𐞽	𐞾	𐞿	𐟀	𐟁	𐟂	𐟃	𐟄	𐟅	𐟆	𐟇	𐟈	𐟉	𐟊	𐟋	𐟌	𐟍	𐟎	𐟏	𐟐	𐟑	𐟒	𐟓	𐟔	𐟕	𐟖	𐟗	𐟘	𐟙	𐟚	𐟛	𐟜	𐟝	𐟞	𐟟	𐟠	𐟡	𐟢	𐟣	𐟤	𐟥	𐟦	𐟧	𐟨	𐟩	𐟪	𐟫	𐟬	𐟭	𐟮	𐟯	𐟰	𐟱	𐟲	𐟳	𐟴	𐟵	𐟶	𐟷	𐟸	𐟹	𐟺	𐟻	
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Introduction

When one looks cursorily at the way the Western alphabet characters are strung together, one hardly ever wonders why they are in the sequence in which they are. From the age of being a preschooler we have become so familiar with the alphabet's sequence of sounds that to most of us when we recite or sing the alphabet, it might even feel like we are reciting or singing an age-old rhyme. Could it be though, that there is actually 'rhyme *and* reason' to the fact that ABCD is followed by EFG?

Actually, as we shall see, in spite of looking quite disorderly, hidden within that disorder we will find order.

To discover that order though we need to do some sleuthing, but with the help of linguistics - specifically epigraphy and phonetics - we will make some surprising discoveries.

We will eventually be able to establish, using as evidence the 1400-1200 BCE Ugarit abecedary from Syria (page 9) and the historical presence of early Pre-Ashokan Brāhmī script (Subramanian 2004) ¹, that phonetics must have begun to be studied centuries before 1700 BCE.

The ancient Sanskrit grammarian Pāṇini (India, ca 600-500 BCE) in his treatise on Sanskrit ², expanded on earlier Indian studies from around 700 BCE (Taylor, 2003). Pāṇini's work gave a more refined and detailed account of the "place and manner of articulation of consonants".

vowels	guttural	palatal	cerebral	dental	labial
a अ	ka क	cha च	ta ट	ta त	pa प
e ए	kha ख	chha छ	tha ठ	tha थ	pha फ
i इ	ga ग	ja ज	da ड	da द	ba ब
o ओ	gha घ	jha झ	dha ढ	dha ध	bha भ
u उ	na ङ	na ञ	na ण	na न	ma म

He may even have produced something like Table 1, although without the vowels column and in a different script - rather than Devanāgarī he used Brāhmī - and of course... less colorful.

Table 1

The major Indic alphabets³ today still order their vowels and consonants according to Pāṇini's classification.

VOWELS												
initial	अ	आ	इ	ई	उ	ऊ	ऋ	ॠ	ए	ऐ	ओ	औ
mātrā	क	का	कि	की	कु	कू	कृ	कै	कौ	को	कौ	कौ
	ka	kā	ki	kī	ku	kū	kṛ	ke	kai	ko	kau	kau
CONSONANTS												
	unvoiced				voiced							
	unaspirated		aspirated		unaspirated		aspirated		nasals			
velar	क	ख	ग	घ	(ङ)							
	ka	kha	ga	gha	ṅ							
palatal	च	छ	ज	झ	(ञ)							
	ca	cha	ja	jha	ña							
retroflex	ट	ठ	ड	ढ	ण							
	ṭa	ṭha	ḍa	ḍha	ṇa							
dental	त	थ	द	ध	न							
	ta	tha	da	dha	na							
labial	प	फ	ब	भ	म							
	pa	pha	ba	bha	ma							
semivowels	य	र	ल	व								
	ya	ra	la	va, wa								
sibilants	श	ष	स									
	śa	ṣa	sa									
glottal	ह											
	ha											

Figure 1
The Devanāgarī alphabet^{3,4}.
Current traditional representation. (Pritchett)

When comparing Table 1 with Figure 1, notice that a differently organized row and column format is used. The reason for that will become clear once the method of the discovery as described in this study, is explained.

ABCDEFGHIJKLMNOPQRSTUVWXYZ

It is not obvious that the Western alphabet sequence (above) derived from a grid similar to Table 1, the one now universally used by the Devanāgarī alphabet or *abugida*, but that is the theory offered here.

The way the theory in this study began to be developed (1975) started on a hunch. At some point I tried to force the Western alphabet characters into some kind of tabular form starting out by lining-up the vowels in a column. Subsequently, by fitting 3 to 4 character groups of sequential consonants into adjacent columns, a somewhat orderly result was obtained.

Years later, after I compared this first character grid with an early simpler format of Table 1's Devanāgarī grid, I got another hunch: I should be able to find clear, perhaps even obvious links between the two alphabets, just based on their character arrangement.

That second hunch led to the study and theory presented here: the dependence (if not direct, then at least indirect) of the Western Late-Roman Alphabet arrangement on the Devanāgarī Alphabet.

This dependent linkage between the Western Late-Roman and the Devanāgarī alphabets is, as we shall see, evidenced by their similar if not **almost** identical ordering of characters in grids of comparable phonetic categories.

In this study though, the origin of the **dissimilarities** - which turned out to be caused by human error - will also be traced back: two errors made by an ancient (budding?) linguist!

(It must be said though that even if his were mistakes - as will be seen - they were 'somewhat understandable'.)

As the Western Late-Roman Alphabet in this study's tabular arrangement (see front cover) appeared to be irregular in certain places, especially when compared to the highly organized and well ordered Devanāgarī alphabet grid, this study will show how, why and approximately when those irregularities came about.



Figure 2
Fayum, Egypt, 800 BCE.

One of five copper plaques originally joined together 'concertina fashion'.

The abecedyary on this plaque is the Fayum Alphabet⁵. It is the earliest Greek codex found. It is an amazingly clear preservation of a scribe's or scholar's exercise writing two different alphabets in their native form. The alphabets are repeated over and over: the 22 Phoenician letters from 'ayin' to 'taw', and the Greek ones from 'aleph' to 'tau', all in order and 'scratched' from right to left (sinistrograde) in continuous lines.

We will discover that after the error identifications (described in detail), and after taking into account the varying but close pronunciations of a number of comparable characters in both alphabets, and while focusing on the proper placement of nearly all Western Late-Roman alphabet characters in their appropriate vowel, labial, guttural and dental columns, that we arrive at an 85.00 % match between the order of characters in both alphabets. We will also be able to conclude that the clay tablet from Ugarit, Syria (page 9) is evidence that even before it was inscribed with its cuneiform abecedary, that a 'West-of-India' style **irregular** alphabetic sequence was already in use, a sequence which in origin was based on an early simple format of a Pre-Ashokan Brāhmī abugida grid of script characters. This Pre-Ashokan Brāhmī abugida grid must even have existed before 1700 to 1300 BCE ⁶.

Notes to the Introduction

¹ "Recent claims for earlier dates include fragments of pottery from the trading town of Anuradhapura in Sri Lanka, which have been dated to between the 6th and the early 4th centuries BCE (Salomon 1998); from Bhattiprolu; and on pieces of pottery in Adichanallur, Tamil Nadu, which have been radio-carbon dated to the 6th century BCE (Subramanian 2004)."
http://en.wikipedia.org/wiki/Br%C4%81hm%C4%AB_script#cite_note-5

² *Unadisutra, Dhatupatha, and Ganapatha.*
<http://en.wikipedia.org/wiki/P%C4%81%E1%B9%87ini> - cite_note-Pan-1
http://dsal.uchicago.edu/reference/gazetteer/pager.html?objectid=DS405.1.I34_V02_298.gif

³ For the sake of simplicity I will mostly use the nomenclature 'Devanāgarī *alphabet*' in this study. However, although often used, that identification is only partially correct as it is actually an *abugida* or *alpha-syllabary*. An *abugida* is a series of writing characters (*aksharas* ⁷) in which each complex non-vowel character (e.g. फ *pha*) represents the sound of a complex consonant-vowel combination. It is not a complete syllable though. When an abugida character is pronounced by itself, it ends with a short 'a'. But that short 'a' is not all the time pronounced when that character's sound is part of a word. For example, देवनागरी is pronounced *devnāgrī* not *devanāgarī*.

When an *a* is to be pronounced, it appears in western print as *ā* and in *Devanāgarī* as न, which is न plus an extra l. Thus न is nā, or /na:/ in phonetic format.

⁴ Whenever I refer to or show Indic characters in the Devanāgarī format, it is for convenience sake only, as it is not conclusively known which kind of script Pāṇini used in his treatise on Sanskrit, but in all likelihood it was pre-Ashokan Brāhmī.

The earliest form of the Nāgarī script proper is from the 8th century CE, and an early version of Devanāgarī is from 992 CE (Taylor, 2003). That version shows the emergence of the horizontal bar to letters or groups of letters - indicating distinct words.

⁵ Since putting this study on paper, more detailed and nuanced analyses enabled me to find out more exactly how Pre-Ashokan Brāhmī, Brāhmī, Nāgarī, Devanāgarī on the one hand, and Syrian (Ugarit), Aramaic, Phoenician, Greek, Etruscan and Roman alphabets on the other, are related.

Of course it is already well known that they are, but it is possible by analyzing the difference in distribution, number and kind of character (e.g. the number of vowels instead of diacritics) to establish which came before which. Currently, the scholarly consensus favors the Aramaic alphabet (Salomon, 1996) although the well known Indian archeologist and philologist S. R. Rao is not at all convinced about that.

Which alphabet influenced what alphabet has been a debate for a long time (Hemple 1930). It seems to me that all too often cultural, national and even religious biases are involved.

It is my intention to arrive at a more definite conclusion in a follow-up study.

⁶ There exists a Proto-Sinaitic script (from between 1700 to 1300 BCE) from which the Aramaic script developed.

There is even earlier Proto-Sinaitic script (Figure 3) 'Proto Alphabetic' from 1900 BCE (Colles - 2009) discovered in Upper Egypt. Thus far it is accepted that this script is influenced by Egyptian hieroglyphs. (Zuckerman, Swartz Dodd - 2003, Colles - 2009)

"There have been two major discoveries of inscriptions that may be related to the Proto-Sinaitic script, the first in the winter of 1904–1905 in Sinai by Hilda and Flinders Petrie, dated to the mid 19th century BCE, and more recently in 1999 in Middle Egypt by John and Deborah Darnell, dated to the 18th century BCE." (http://en.wikipedia.org/wiki/Proto-Sinaitic_alphabet)

This early Upper Egyptian script and Brāhmī from before 400 BCE (Salomon, 1994) have much in common (which I will detail in a follow-up study) although the spread in time between them is about 1500 years. So far it appears that this "Proto-Alphabet" has no vowels, whereas the earliest Brāhmī does.

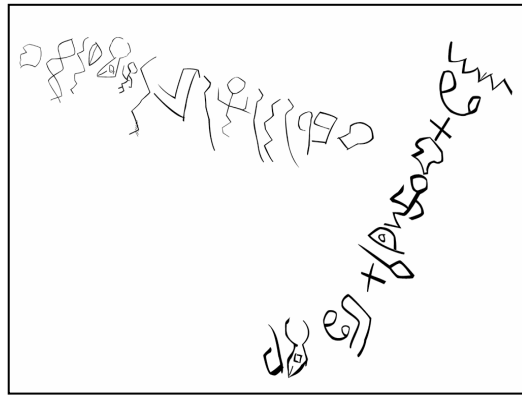


Figure 3
Wadi el-Hol, Egypt, 1900 BCE
Early Proto-Sinaitic,
'Proto-Alphabetic' rock inscriptions.

As far as I know, having vowels or not, is not an argument used to establish precedence of a script. According to linguistic theory vowels are normally used to distinguish alphabetic from syllabic writing systems. But there are some indications (and vowels come into play) which could lead to a conclusion that Brāhmī is the more ancient.

It is significant that the Brāhmī and Devanāgarī alphabets do not show any error in their consonant and vowel order of phonemic categories, whereas the Ugarit, Phoenician, and Greek abecedaries do - and of course the later Roman and Western alphabet versions.

If that is indeed the case, then the earliest Pre-Ashokan Brāhmī is prior to all of them. Then only the link between Pre-Ashokan Brāhmī, the Early Proto-Sinaitic script from 1900 BCE and Egyptian glyphs remains to be found.

But that search will have to wait; now we will just concentrate on the theory at hand.

⁷ Referring to *aksharas* "*Sri Chitrugupta namastubhyam vedakshardatre*" ("Greeting to Chitrugupta [patron deity of the scribes] who gave letters to the Vedas.")

~ *Garuda Purana*

"The *akshara* or script character is not lost like a spoken sound which, once spoken, is lost to the air that momentarily carried it. The *akshara* being the capture of that sound in a picture is indestructible."

~ Amit N. Sinha (2012)

Chapter One Abracadabra ?

Why is there no order to the Western – Late Roman Alphabet? Or is there...?

ABCDEFGHIJKLMNOPQRSTUVWXYZ

Why is there no order to the Western – Late Roman Alphabet? Or is there...?

A	B	C	D
E	F	G	H
I	J	K/L	M
N	O	P	Q
R/S/T	U	V/W	X/Y
Z			

On a bunch, forming the alphabet characters into a grid, fitting the vowels into the first column.

vowels	labial	glottal	dental	palatal
A	B	C	D	
E	F	G/H		
I/J	M	K	N	L
O	P	Q	R/S/T	
U	V/W	X	Z	Y

Analysing and categorizing... Why capital characters? (अनुसंधान और वर्ण)

labial	glottal	dental
A	B	C
E	F	G/H
I/J	M	K
O	P	Q
U	V/W	X
		Z
		Y

Separating 2 columns. What do I have in mind?

labial	glottal	dental
क	ख	ग
घ	ङ	च
ज	झ	ट
झ	ञ	ठ

Keep the critical characters in mind. I had a hunch...

Transition from an early Devanagari grid to Panini's expanded Devanagari grid.

Note: Vowels, dia critical marks, etc. are not included.

1	2	3
glottal	dental	labial
ka क	ta त	pa प
ga ग	tha थ	pha फ
na ण	na न	ma म

Nagari - Original

1	2	3
glottal	dental	labial
ka क	ta त	pa प
ga ग	tha थ	pha फ
na ण	na न	ma म

Step 1

lab	Zab	3
glottal	dental	labial
ka क	ta त	pa प
ga ग	tha थ	pha फ
na ण	na न	ma म

Step 2

1a	1b	2a	2b	3
glottal	palatal	coronal	dental	labial
ka क	dha ङ	ta त	ta त	pa प
ga ग	chha छ	tha थ	tha थ	pha फ
na ण	ja ज	da ढ	da ढ	ba ब
gha ङ	jha झ	dha ढ	dha ढ	bha ब
na ण	na न	na न	na न	ma म

Devanagari - Expanded (Panini)

Step 3

Chart One

The Western or Late-Roman Alphabet

"No one is sure why those particular sequences of letters. Maybe it is some mnemonic device that we no longer understand..."

~ Lawrence Lo.

Markandey Katju recently wrote in an essay in "Frontline" the weekly magazine of the Indian national newspaper "The Hindu" (Jan. 28-Feb. 10, 2012) ¹:

"[...] Take, for example, the alphabet in the English language. The letters have been arranged in a haphazard manner. Why is B followed by C? Why is D followed by E? There is no reason why F comes after E, P is followed by Q, or Q is followed by R.

In Sanskrit, on the other hand, Pāṇini arranged the alphabet in a scientific manner. For example, take the consonants. There is a sequence ka, kha, ga, gha, na (called the 'ka varga'). All these sounds come from the throat. Also, the second and the fourth consonants in this sequence are what are known as aspirants. An aspirant means a consonant in which 'ha' is added. The second and fourth consonants in every sequence (of five consonants) are aspirants.

The sounds in the second sequence of five consonants ('ca varga') ca, cha, ja, jha, ha, all come from the middle of the tongue. The sounds in the 'ta varga', ta, tha, da, dha, na, come from the roof of the mouth; the sounds in the sequence ta, tha, da, dha, na come from the tip of the tongue; the sounds in the sequence pa, pha, ba, bha, ma come from the lips.

We can see how scientifically these consonants are arranged."

vowels	guttural	palatal	cerebral	dental	labial
a अ	ka क	cha च	ta ट	ta त	pa प
e ए	kha ख	chha छ	tha ठ	tha थ	pha फ
i इ	ga ग	ja ज	da ड	da द	ba ब
o ओ	gha घ	jha झ	dha ढ	dha ध	bha भ
u उ	na ङ	na ञ	na ण	na न	ma म

Table 2

For the purpose of this study I am using an abridged inventory of vowels and consonants.

Chart One illustrates as to how and why. Also see Closing Remark 6 on page 47.

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

Υ Φ Χ Ψ Τ ς ϑ Ϙ ϙ Ϛ ϛ Ϝ ϝ Ϟ ϟ Ϡ ϡ Ϣ ϣ Ϥ ϥ Ϧ ϧ Ϩ ϩ Ϫ ϫ Ϭ ϭ Ϯ ϯ ϰ ϱ ϲ ϳ ϴ ϵ ϶ Ϸ ϸ Ϲ Ϻ ϻ ϼ Ͻ Ͼ Ͽ Ͽ

The Marsiliana tablet *abecedarium*, ca. 700 BC:
ABGDEVZHΘIKLMNEOPŚQRSTUXΦΨ, read right to left

Figure 4
Now and Then

Table 2 on page 19 shows how in Sanskrit the language sounds are arranged in a tabular format of columns and rows:

1. Each column identifies a particular area in the mouth from where language sounds are voiced and articulated: from the back to the front - from the throat to the lips:
 - The first column lists the vowels. Vowels are initially sounded from the back of the throat at the top of the windpipe or trachea. It is the variation in curvature of the tongue and the shape of the mouth opening that gives each vowel its distinct sound. (Figure 5 shows some of them.)
 - The adjacent columns list the consonant categories: gutturals, palatals, cerebrals, dentals and labials.
2. The row arrangement is according to how air passes through the aperture between the tongue and the roof of the mouth (the uvula and the soft and hard palate), the teeth and the lips: from sharp or raspy, to soft or velvety, or nasally without air or with very little air passing through the mouth.

In the above quoted essay, Markandey Katju makes an excellent point telling us about the scientific arrangement of the Devanāgarī alphabet. But is the English alphabet - or more correctly - is the Roman alphabet really a haphazard mix of characters without any order to them? Is it actually so, that "*The letters have been arranged in a haphazard manner.*"?

Around 1975, when I was trying to familiarize myself with Sanskrit, I was - like Mr. Katju - struck by the neat order of the Sanskrit Devanāgarī alphabet. (It also made learning the characters so much easier.) Then, one day, while I was in a Canadian restaurant, an idea popped into my head, and while grabbing a napkin and a pencil (this restaurant purposely had pencils on all its tables - not just crayons for the kids) I started reciting the Western alphabet to myself while I - on a hunch - put emphasis on the vowels A E I O U where they appeared in the alphabet.

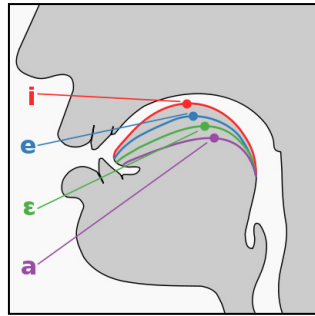


Figure 5
The highest point of the tongue position for certain vowels

I was thinking,
"What if they showed some order?"
And I repeated:
"A E I O U."

I did not pronounce them the usual English way though, but the Dutch way, the way the vowels sound in the English words 'far, net, it, cot, null':
'a, e, i, o, u'.

I noticed, as I repeated the sounds again, but now as 'glottal stops', that my lips went from wide apart to closer together as I was forming and voicing those vowels. I took the pencil and wrote them down on the napkin but... in vertical order:

a
e
i
o
u

(Somehow nobody noticed me in that restaurant, which was a good thing... pursing my lips could have been misunderstood.)

Then - again on a hunch - I added the consonants to them, but in short row format which made the scheme look like:

a b c d
e f g h
i j k l m n
o p q r s t
u v w x y z

Looking closer I noticed that (except for the middle row) the second character sounds ('b f p v') were all labials (formed by the lips). So I mused, what if the third characters in each row are also similar to each other... 'c g k q x' - not the 'w' as I knew that the 'v' and 'w' were so similar that I could consider them as one sound, and I also knew that in the 'days of yore' the 'c' was pronounced as 'k', e.g. Julius Caesar or Kaiser Wilhelm.

Well, 'c g k q x' are all similar, they are what you call guttural sounds (velar and palatal), which means that the back of the tongue touches the roof of the mouth while they are being voiced.

What about the fourth characters on each row?

Here I ran into trouble... Hmmm?!

But nevertheless, I thought there was enough correspondence to not deem the overall 'order' accidental or "haphazard".

Some years later (I was then a Montessori teacher) I drew the grid that you see on the left of the chart on the blackboard.

"Not bad!" I said to myself.

The Three Vertical Strips the 'ka', 'ta', 'pa' *vargas* (The top right on Chart One)

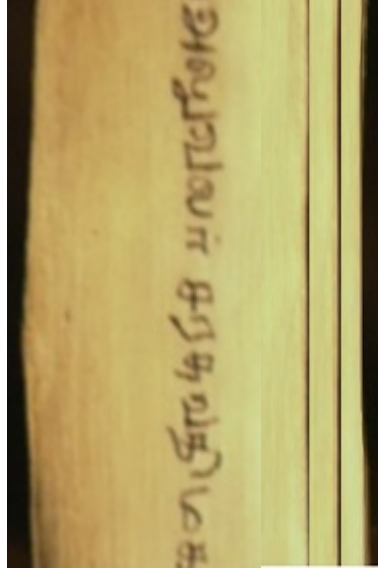


Figure 6
Resemblance of the 3 palm leaves
- except for the lettering -
See Table 3 on page 31
for more detail.

A few years later, I took up Sanskrit again, so much so that I even dreamed about it.

In one particular dream 'I was in a scene from very long ago', looking over somebody's shoulder, while that 'somebody' was scratching signs that were unfamiliar to 'me', on a number of palm leaf strips.

When I woke up I could not recall if the signs were Sanskrit letters or not, and in those days, as I was just learning Sanskrit, I did not know about Brāhmī yet.

In a subsequent dream I was handling three leaves that I had stacked up and carried 'home' with me, but now (still in my dream) I was trying to arrange them, but I had forgotten their original order.

(I wish I could remember where 'home' was.)

In 2007 I took this idea up again, remembering the palm leaves in a similar way as the three vertical strips that you see at the top right of Chart One - the 'ka', 'ta', 'pa' *vargas* ².

So far so good; with a bit of creativity I could make the Roman alphabet characters fit the same order as a simple version of the Devanāgarī alphabet.

Notice on Chart One (and remember for later) the two small white ovals containing the letters K/L and Y. They didn't fit the scheme properly, no matter how hard I tried, but 'miraculously', after some more 'confusion', the K/L found an open spot and the Y (the *Ypsilon* or '*I Grecque*' in French, which is not a common sound in some Indo-European languages) happens to be a first century BCE Roman insertion influenced by the Greek language.

I'm showing the Late Roman Alphabet; the earlier one (called Ancient Latin ³) did not have the G and the J, nor the V and W, while the K, X, Y and Z were only used for words with a Greek origin. By the way, I'm using majuscule (capital) characters, as their minuscule (lower case) version is a much later medieval invention.

The Four Multi-Colored Tables ⁴

(The bottom tables on Chart One)

Quoting Markandey again:

"In Sanskrit, on the other hand, Pāṇini arranged the alphabet in a scientific manner."

I am sure that Pāṇini (600-500 BCE) in his treatise did come up with something that looked like Table 1 and Figure 1, but foreseeing some 'reverse engineering' and actually taking my dreams seriously, I could see that before Pāṇini the tabular arrangement must have been much simpler, and also, **in retrospect**, I'm now sure that Pāṇini and his predecessor used an early form of Brāhmi: Pre-Ashokan Brahmi.

The three tan colored vertical strips must have been from a time between an original simple grid of just nine characters (the small table at the bottom left of the chart) and one that had grown to fifteen. Steps 1, 2 and 3 represent the transition from 12 to 15 to Pāṇini's 25 characters.

Dating the Ancient Linguistic Errors

The already confusingly ordered Syrian (Ugarit) cuneiform abecedary from between 1400 and 1200 BCE (R. D. Woodard, 2008) - or one very similar to it - must have been the basis for the much later 'Old-Italic' Roman alphabet arrangement.

It even became clear that two different Near-Eastern linguists must have been involved, because the older Ugarit alphabet was vowel-less while the much younger 'Old Italic' alphabet had vowels. One of the linguists (the one I dreamed of) the one who went to study in India, must have returned with only three palm leaves instead of four, he never brought the leaf strip back with the Brāhmī vowels... and it was that lack of vowels and his confused re-arrangement of the palm leaves that caused the Ugarit abecedary - or one very similar to it - to be disorderly and vowel-less.

Another linguist, who may also have gone to India, but much later, must have returned with the Brāhmī vowels that his predecessor had missed or lost. These were then subsequently added to the already flawed alphabet arrangement.

There is a difference of some 500 years between the Ugarit alphabet from Syria and Figure 7's voweled Greek/Etruscan one from ca 800 BCE.

Right: Figure 7
(To be viewed from the right,. Read from right to left.)
Marsiliana d'Albegna, Etruria. 8th century BCE.
Edge of ivory writing table, Greek/Etruscan abecedary.
It is both the oldest Etruscan and the oldest Greek.

Below: Figure 7a
7th Century BCE, Galassi tomb Caere Regolini, Cristofani, Italy.
Fragment (Read from left to right.)



The 'Old-Italic Roman' alphabet was based on the Etruscan one, which in turn was based on a Greek alphabet which was in turn based on a Phoenician alphabet

Looking at the dating of the tablets and the sequence of the characters we can tell that the first error had already been made before the Ugarit tablet, and that the second error must have happened much later. Perhaps we can find out when.

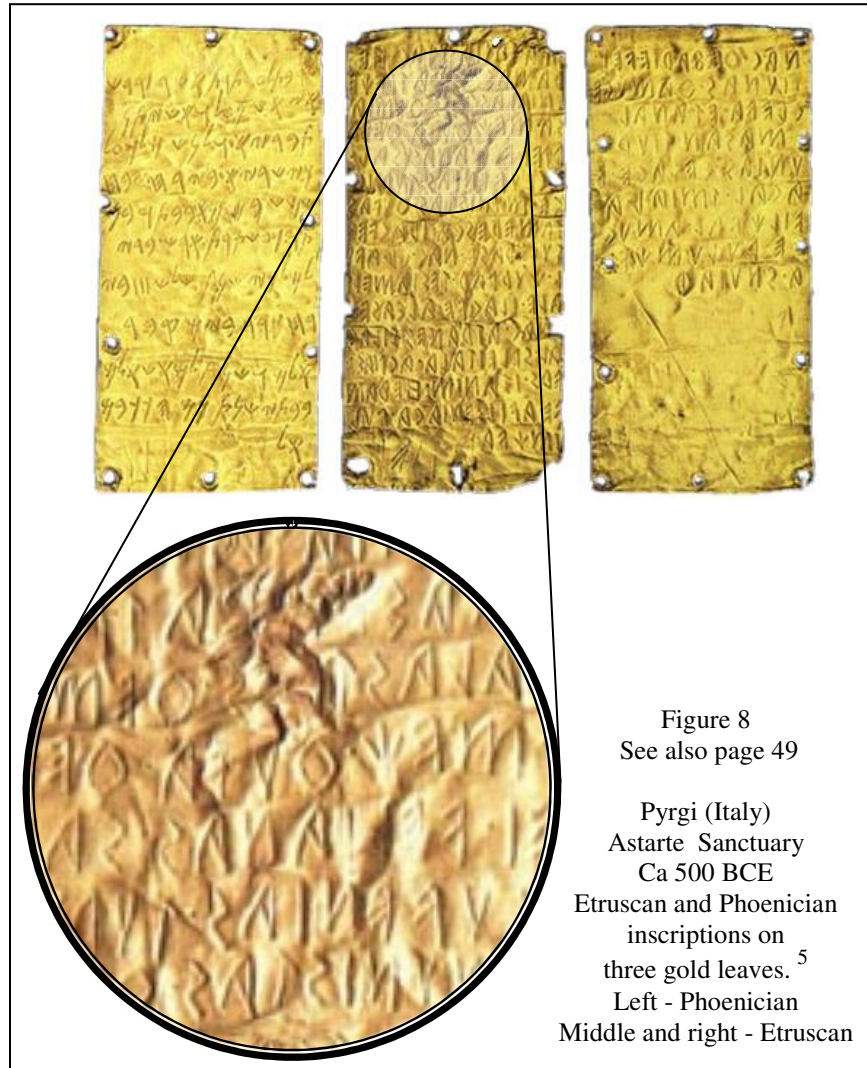


Figure 8
See also page 49

Pyrgi (Italy)
Astarte Sanctuary
Ca 500 BCE
Etruscan and Phoenician
inscriptions on
three gold leaves. ⁵
Left - Phoenician
Middle and right - Etruscan

ABRACADABRA

Magic or a Vestige of Phonetics?

I will use capitals (majuscules) for ABRACADABRA ^{6, 7}, as in its pre-medieval days lower-case wasn't in use yet.

ABRACADABRA has an interesting history. Originally it had nothing to do with magic. Look at the syllables A-BRA-CA-DA-BRA...

1. Take note of that last syllable BRA, the word 'algebra' ends the same. People doing algebra were talking '-gebra', 'gibberish'. 'Algebra' derives from the Persian '*al-jabr*', which can mean constructing, restoring or putting things in order. Hence 'ABRACADA BRA' - the linguistic science of putting sounds and their representative signs 'in order'. To the lay-person though it may have had to do with mysterious sounds or even sleight of hand. In Hebrew '*Aberah KeDaber*' means 'someone is talking gibberish', but it could also mean dubious or 'creative' accounting ⁸.



Figure 9

2. The vowel 'A' is the first letter of all alphabets and abugidas.
3. BRA ⁶ may originally have been BA which is the second letter of the various alphabets that were constructed after the three palm leaves with Brāhmī characters scratched on them got put in the wrong order. We will see how that happened in the next chapter.
4. CA is the third letter of the various alphabets that were constructed after the 'three-palm-leaves-confusion'.
5. DA is the fourth letter of the various alphabets that were constructed after the mix-up.

As we have seen, the three palm leaves were written on vertically and had the Brāhmī characters 'ka, ta, pa' at the top of the lists of consonants, but after they got mixed up, their order became 'pa, ka, ta' and eventually 'b, c, d' and thus 'a-bacada-bra'.

'Abugida', the other name for 'alphasyllabary' contains the same erroneous mis-ordering of sounds: 'a-bu-gi-da'.

Dating - A Preliminary Conclusion

Repeating some paragraphs from page 20:

Table 2 on page 19 shows how in Sanskrit the language sounds are arranged in a tabular format of columns and rows:

1. *Each column identifies a particular area in the mouth from where language sounds are voiced and articulated: from the back to the front - from the throat to the lips:*
 - *The first column lists the vowels. Vowels are initially sounded from the back of the throat at the top of the windpipe or trachea. It is the variation in curvature of the tongue and the shape of the mouth opening that gives each vowel its distinct sound. (Figure 5 shows some of them.)*
 - *The adjacent columns list the consonant categories: gutturals, palatals, cerebrals, dentals and labials. (For the purpose of this study I am using an abridged vowel and consonant inventory. See closing remark 6 on page 47.)*
2. *The row arrangement is according to how air passes through the aperture between the tongue and the roof of the mouth (the uvula and the soft and hard palate), the teeth and the lips: from sharp or raspy, to soft or velvety, or nasally without air or with very little air passing through the mouth.*

Any alphabet grid or alphabetic sequence of characters ⁹ that does not follow that order of natural progression can only be post-Brāhmī.

Notes to Chapter One

¹ <http://hindu.com/fline/fl2902/stories/20120210290208900.htm>

² Vargas - divisions.

³ Link to an article about the Latin alphabet:
<http://www.orbilat.com/Languages/Latin/Grammar/Latin-Alphabet.html>

⁴ The simplified *Nāgarī* tables at the bottom half of Chart One, reflect my earliest findings. It may be that some of the specific *Nāgarī* character columns need to be reviewed. It could be in Step 3 on Chart One that the choices I made between the two yellow columns (guttural or palatal) as well as between the two green columns (cerebral or dental) need to be reversed. This nevertheless would not alter the basic tenet of the theory as presented.

⁵ <http://lila.sns.it/mnamon/index.php?page=Esempi&id=10&lang=en&PHPSSESID=8f921b5dcdbe75b261dd8c3597bad232>

⁶ In various European languages (Finish, Estonian, French, Dutch) 'abacadabra' (no 'r' in the second syllable) is used alongside 'abracadabra'. Although 'abracadabra' is referenced in various dictionaries as a 2nd century CE incantation believed to have healing power, nothing substantial is explained about the word itself or its components, nor why just that word might have those specific powers. <http://en.wikipedia.org/wiki/Abacadabra#History>

⁷ Encyclopædia Britannica considered 'abracadabra' to be analogous to Abraxas (Gk. ΑΒΡΑΞΑΣ). It appears though that Abraxas was originally spelled Abrasax. The difference between the spelling of Abraxas and Abrasax probably originated from the confusion between the Greek letters Sigma and Xi during Latin transliteration. <http://en.wikipedia.org/wiki/Abraxas>

⁸ 'Abacus' derives from the Greek 'abax' (notice the x) via the Hebrew 'abaq' (dust). The abacus was originally a board covered with dust or fine sand that could be written on or used for (ac)counting purposes, or... perhaps algebra. <http://www.etymonline.com/index.php?term=abacus>

⁹ There is a one caveat: it is of course hard to say whether the mis-ordering was done to alphabets that originally had the right sequence. This was a caveat that I kept in mind from very early on in this research. It made me strive to keep looking for earlier and earlier abecedaries. Never finding one with right order though convinced me that the method I used to trace the irregularities and retrace how they came about, was correct.

Chapter Two

Two Errors of Historic Proportion

Quite a while ago, someone must have displaced a column and a row...

labial	ka	ta	pa	va
dental	ka	ta	pa	va
guttural	ka	ta	pa	va
labial	ka	ta	pa	va

labial	B	C	D	V/W
dental	B	C	D	V/W
guttural	B	C	D	V/W
labial	B	C	D	V/W

labial	ka	ta	pa	va
dental	ka	ta	pa	va
guttural	ka	ta	pa	va
labial	ka	ta	pa	va

labial	B	C	D	V/W
dental	B	C	D	V/W
guttural	B	C	D	V/W
labial	B	C	D	V/W

labial	ka	ta	pa	va
dental	ka	ta	pa	va
guttural	ka	ta	pa	va
labial	ka	ta	pa	va

labial	B	C	D	V/W
dental	B	C	D	V/W
guttural	B	C	D	V/W
labial	B	C	D	V/W

OOPS !!!

guttural	ka	ta	pa
dental	ka	ta	pa
labial	ka	ta	pa
labial	B	C	D

OOPS !!!

labial	pa	pha	ba	bha	ma
dental	pa	pha	ba	bha	ma
guttural	pa	pha	ba	bha	ma
labial	B	F	M	P	V/W

OOPS !!!

labial	B	C	D	V/W
dental	B	C	D	V/W
guttural	B	C	D	V/W
labial	B	C	D	V/W

Chart Two

1	2	3	labial
ka	ta	pa	va
kha	tha	pha	va
ga	da	ba	va
gha	dha	bha	va
na	na	na	na

1	2	3	guttural
ka	ta	pa	va
kha	tha	pha	va
ga	da	ba	va
gha	dha	bha	va
na	na	na	na

1	2	3	dental
ka	ta	pa	va
kha	tha	pha	va
ga	da	ba	va
gha	dha	bha	va
na	na	na	na

1	2	3	labial
pa	pha	ba	bha
ma	ma	ma	ma
B	F	M	P
V/W	V/W	V/W	V/W

labial	B	C	D	V/W
dental	B	C	D	V/W
guttural	B	C	D	V/W
labial	B	C	D	V/W

The Student's First Error

The top left, tan colored table (above the first 'OOPS!!!') is the same as the three separate tan (palm leaf based) strips from the previous chart, except here the western notation (IAST) is added.

The strips are joined together and in the proper order:

- 'ka' - guttural,
- 'ta' - dental,
- 'pa' - labial.

In 2008 I decided to compare the two grid arrangements: the tan table (the transition stage between Step 1 and Step 2 from the previous chart) and the light yellow table, the corresponding table with Late Roman Alphabet letters. I expected them to be the same, but as you might remember, the second one of my two dream scenes - the one having to do with arranging the palm leaves - was tainted by an uncomfortable feeling.

I wanted to find out why that was, so I kept checking, but at first it did not seem at all obvious what might have caused my dream's discomfort.

In the first place, the non-Indian linguist must have lost one of the leaves, the one with the vowels. And secondly, in retrospect, I now also know what happened *then*. It is something that happens to everyone...

Have you ever had a stack of photos, and after you have gone through them, you somehow forgot to return to the very first photo - the one that should be at the top?

What our linguist saw (r. to l.) in Brāhmī. He lost the vowel leaf				What the linguist reconstructed		
𑀓	𑀔	𑀕	𑀖	𑀓	𑀕	𑀔
𑀗	𑀘	𑀙	𑀚	𑀗	𑀙	𑀘
𑀛	𑀜	𑀝	𑀞	𑀛	𑀝	𑀜
𑀟	𑀠	𑀡	𑀢	𑀟	𑀡	𑀠

Table 3
Pre-Ashokan Brāhmī^{1,2}
When I first came to this theory, I didn't know Brāhmī yet, so in this study Devanāgarī is used.

In the case of the three palm leaves, something similar must have taken place, here though, the one that was originally supposed to be at the bottom was now at the top, or - after I laid them out in my dream - it had become the left-most. But as I (in my dream) had only a vague memory of which sounds those scratches really stood for, I had no way of knowing what their right order was.

Let's take a closer look.

Compare the two adjacent tables between the red arrows in the top center of the Chart Two. Below them I am showing the top row of each table to compare their character sequence...

Yes...! OOPS!!!

The three strips are now as shown at the top right of the chart: the wrong order - as in my dream - except, in the dream I did not know!

The two multi-colored tables on the bottom left of the chart show the error in another way: column three accidentally had become column one.

Another Error?

At that point I expected that the character correspondence was a match albeit in the wrong order. It was clear to me how the Roman alphabet had become mangled.

But something else must have gone wrong as I was to discover next. Too bad though that I had no more clarifying dreams.

For now just check the purple and light-yellow columns underneath the second 'OOPS': the bottom 'ma' moved up two rows (to eventually become the Roman M), while taking the two 'na's with it. To unravel that problem, and to reconstruct how that happened, some real detective work was needed.

Of course right now we have the advantage of knowing how it all eventually turned out, but this ancient linguist had to reconstruct it all by himself and, in spite of some more challenges (at least one more 'oops') he did a pretty good job.

Of course he did not use Roman characters, nor Greek or Aramaic ones as he was from a time much before those developed. Also, instead of a more complete 'Brāhmī Character Set' (Figure 10 on the right) he had an earlier simpler version (the 3 dark tan colored columns of Table 3, page 31) and he set-out to match his own characters^{3, 6} to it. The cuneiform Syrian Ugarit Abecedary from between 1400 and 1200 BCE (page 9) contain the errors he made, *but* that alphabet also includes vowels. We can tell from that, that therefore his matching attempt must have been even earlier than that.

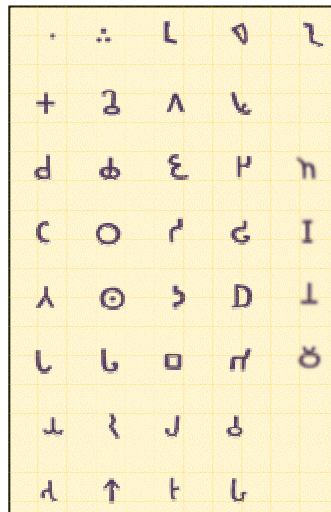


Figure 10
Pre-Ashokan Brāhmī⁴
Much before 300 BCE

By the way, it turns out that the Ugarit characters are a cuneiform version of the character shapes he used¹.

Notes to Chapter Two

¹ Ideally, I would have started this project by comparing the cuneiform Syrian Ugarit Abecedary with Pre-Ashokan Brāhmī alphabet formats, but as my original discovery went via Devanāgarī and the Western alphabet, and as Western characters are more widely recognizable (*and* we don't have to deal with two series of non-Western characters) I believe that the way this turned out is good. In any case, I will pursue the connection between Brāhmī and the later Ugarit Syrian and other alphabets (Fig. 11) in more detail in an upcoming study.

² <http://hindu.com/2005/02/17/stories/2005021704471300.htm>
www.thehindu.com/news/states/tamil-nadu/article2538550.ece?homepage=true&css=print

"Rice paddy samples that were contained in an engraved pot [with Pre-Ashokan Brahmi inscriptions] found inside one of the graves were found to be from 450 BC when analysed using Accelerator Mass Spectrometry (AMS) by the Beta Analytic Lab, USA" he said, addressing a private gathering organised by the Manarkeni journal.

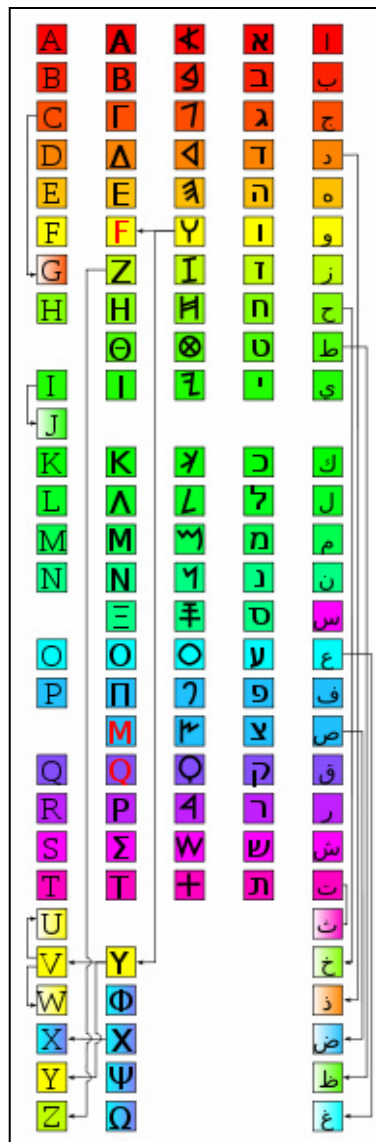


Figure 11
 Left to right: Latin, Greek,
 Phoenician, Hebrew, Arabic.
 Each letter of the Phoenician
 alphabet (center column) gave way
 to a new form in a 'daughter' script.

³ The difference between Indian speech and Near-Eastern speech is that in the latter the 'h' and the 'g' are more raspingly pronounced (laryngeal); as well, aspiration of their consonants differs quite a bit. In addition the flexibility of the tongue inside the mouth is also quite distinct.

It could well be that 3000 years ago the difference was similar. It must have been because when our linguist tried to reconstruct what he remembered, he appeared to have some difficulty matching the sounds he remembered and their location on the palm leaves. Also, instead of using strips like the palm leaves, he might have scratched or painted his - what he thought were - corresponding characters on pot shards (ostracons) or on a different kind of writing medium.

⁴ It is accepted that Brāhmī, was originally written sinistrotic (r to l), but when our linguist was in India, Brāhmī may already have been dextrotic (l to r) ⁵. However, as it showed up in the manner the discovery in this study came about, writing was done vertically as well ('from top to bottom' ~ Deyell) and later it turned either clock or counter clock-wise, respectively becoming right-to-left or left-to-right oriented.

In the process of reconstructing what he had learned, and while fitting his own native characters into a grid of columns and rows, he may have turned either version of characters 90 degrees clock or counter clock-wise.

Any which way, the lettering twisted and turned.

⁶How characters are pronounced differently in Indo-European Languages:

PIE	Sanskrit	Hittite	Greek	Latin	Gothic	Armenian
P	P	P	P	P	F, -B	H, -W
B	B	P	B	B	P	P
Bh	Bh	P	PH	F-, B	B	B, -W-
T	T	T	T	T	TH, -D	T
D	D	T	D	D	T	T
Dh	Dh	T	TH	F, D, B	D	D
K	S'	K	K	K	H, -G	S
G	J	K	G	G	K	C
Gh	H	K	KH	H, G	G	J, Z
Kw	C, K	Kw	K, P, T	Kw, K	Hw	K'
Gw	J, G	Kw	B, D, G	Gw, G, W	Kw, K	K
Gwh	H, Gh	Kw	PH, TH, KH	Gw, G, W, F	Gw, G, W	G, J
S	S, S'	S	S, H, ---	S, R	S	S, H, ---
R	R	R	R	R	R	R
L	R, L	L	L	L	L	L
M	M	M	M	M	M	M
N	N	N	N	N	N	N
Y	Y	Z, H, ---	Y, ---	Y	Y	---
W	V, W	W	W, H, ---	W	W	G, V

Table 7

The red characters differ from Proto-Indo-European (PIE)
 PIE is a reconstruction of a hypothetical language from around 3500 BCE.
http://en.wikipedia.org/wiki/Proto-Indo-European_language

After Christopher Gwinn, "Indo European Phonology"
<http://tied.narod.ru/>

Chapter Three Order Restored (Almost, that is!)

Who says there is no order to the Western - Late Roman alphabet?
There is...! (That is, if you don't count some errors on the way...)

0	3	1	2
vowels*	labial	gut/ural	dental
a अ	pa प	ka क	ta त
e ए	pha फ	kha ख	tha थ
i इ	ba ब	ga ग	da द
	bha भ	gha घ	dha ध
u उ	ma म	na न	

	3	1	2
	labial	gut/ural	dental
	pa प	ka क	ta त
	pha फ	kha ख	tha थ
	ba ब	ga ग	da द
	bha भ	gha घ	dha ध
	ma म	na न	na न

Who says there is no order to the Western - Late Roman Alphabet? There is!

A	B	C	D
E	F	G	H
I/J	K/L	M	N
O	P	Q	R/S/T
U	V/W	X/Y	Z

If you don't count the errors on the way...

Table A Table B Lost Table C A later insertion

Compare table C's white Roman characters with table B's Devanagari characters and note that 13 out of 14 white characters have the same grid position (H doesn't match). While accounting for the mistaken cell displacements & varying pronunciations, and while including the vowels of Table A, the character match between tables B (17) and C (20) is: 85.00%
 *Four vowel positions match: a - अ, e - ए, i - इ, and u - उ (It is debatable whether औ is an original vowel sign that matches the O.)

Chart Three

I added the blue vowels column to table A, but it has to be kept in mind that the vowel column was not involved in the row manipulation that accidentally took place and which will be described in the text.
The vowel columns in both Tables A and C will come in when we establish how well both tables match

The Student's Second Error

When one follows the red arrow from the bottom of Table A on Chart Three, one can see how in Table B the bottom row of voiced nasal stops moved up two rows and... one spot sideways... one spot too many in fact.

That was how 'ma - म' and 'na - न' received the position that our linguist used for his equivalents of the Roman M and N, hence the additional irregularity in the Western Late-Roman alphabet.

This way also a spot came free for the K or L, or... both. (The L in those days was probably a semi-vowel, just like the L in the English word 'feel'.)

Also, our linguist probably did not need that extra 'na - न'.

Questions about Table C (the blackboard) in relation to Table B

You may already have been wondering about a few things:

- What about the vowel columns?
- How can V/W be matched up with 'bha - भ' in the purple cell on the bottom left of Table B?
- Why haven't I said anything yet about R/S/T, and what are they doing in Table B's green 'da - द' cell?
- How can Q have anything to do with 'ga - ग'?

Answers

- What about the vowel columns?

There are up to four distinct vowel characters in Sanskrit of which only 'a - अ' and 'i - इ' are used most often, while there are five vowels in the Roman alphabet.

In the earlier days that Brāhmī was written, at least up to around 300 BCE (some time prior to Emperor Ashoka) Brāhmī featured five clear vowels. Later Devanāgarī had them too but only two of them are most regularly used, for the others diacritical marks were used instead.

We can conclude from this, that probably someone else (not our linguist, as the vowels did *not* get wrongly arranged) picked up his vowel information at some other occasion and kept it on a separate palm leaf. This second linguist may even have corrected the sequence of the Brāhmī vowels. (It was not part of my dream.)

- How can V/W be matched up with 'bha - भ' in the purple cell on the bottom left of Table B?

There is a sound and character 'waw' that appears in many Near-Eastern languages. The labials V and W represent that 'waw'.

It is quite common that the V and W get pronounced as either an aspirated 'p' or 'b' or (in Devanāgarī) as 'bha' and 'pha'.

(Incidentally, the modern word 'mobile' (cell-phone) is pronounced as '*mowhile*' in India.)

As I will show in a follow-up, the locations in the purple column (Table B) of the Devanāgarī 'pha' and 'bha' (which respectively became the Roman F and V/W) were filled in with variations of the 'waw' sound. Even the Roman Y came to represent 'waw'.

- Why haven't I said anything yet about R/S/T, and what are they doing in Table B's green 'da - ढ' cell?

As many English speakers know, when they have to learn a language in which the 'rolling r' - the alveolar trill - appears, that to learn that sound, they usually start by 'playing' with the tip of their tongue against or almost against their teeth to get a short 'd' going in the hope to get it to repeat itself so as to end up with a trill. The point is, it starts with the tip of the tongue in the 'd' position.

The rolling 'r' in many ancient languages was not necessarily rolling very much.

Take the word 'Sanskrit' संस्कृत, the ligatured character indicating 'kr' is कृ, it is a क (k) with a little hook at the bottom, that little hook stands for the 'r'. That 'r' is like a short quick 'd' that sounds like an R but just at the beginning of a roll... "sanskḍit".

The r, s, z, t, d, n, etc. in languages like Sanskrit are what you call 'retroflex consonants', meaning they are formed with a concave tongue somewhat against the front of the hard palate. Phonetically the characters' retroflexity is represented by a little hook at their bottom right: ढ, ण, ञ, ण, etc.

In the Western alphabet these retroflex sounds might not be so retroflex, because the Western tongue is 'flatter' so to speak.

Notice that many of these characters were fitted (squeezed almost) into the bottom right of the table: the R, S, and T, and below it the Z and above it the N.

- How can Q have anything to do with 'ga - ग'?

Except for Greek and Latinized Greek loanwords and just like the X and the Y, in West European languages the Q was not a common character used in the pronunciation of native words. Nevertheless when loanwords became 'as good as' naturalized (e.g. like our 'question' and 'quarter') a place for the Q had to be found and that bottom right corner being a bit of a refuse container had an open spot (the G was already fitted elsewhere) so the 'ga - ग' spot was just right for the Q and... after all, Q is a guttural sound.

Chapter Four

Conclusion

The Match between the Western Late-Roman Alphabet and the Indian Nāgarī Abugida

By forcing the Western Late-Roman Alphabet character sequence (the ABC or 'abecedary') into a tabular format, starting out by lining up the vowels in one column followed by fitting the consonants sequentially into three adjacent columns, a somewhat orderly and surprising result was obtained.

By comparing the resultant character grid with an early simpler phase of the Sanskrit Devanāgarī character grid, it became possible to eventually discover a link between an early Western alphabet (the Ugarit abecedary) and an early form of the Pre-Ashokan Brāhmī Nāgarī abugida (alpha-syllabary).

I made it a point to show the dependence (if not direct, then at least indirect) of the Western Late-Roman Alphabet on the Devanāgarī Alphabet. This dependent linkage between the Western alphabets and an early Brāhmī Nāgarī abugida is evidenced by their similar if not **almost** identical ordering of characters in grids of comparable phoneme classifications.

In this study the origin of the **dissimilarities** - or, in fact, irregularities - has also been traced: two errors made by an ancient Near Eastern linguist after his study-visit to ancient India.

As the Western Late-Roman Alphabet in this study's tabular arrangement appeared to be irregular in certain places, especially when compared to the highly organized and well ordered Nāgarī abugida grid, this study demonstrated *why*, approximately *when* (before 1200 BCE) and *how* those irregularities came about: the

horizontal displacement of one column containing labial consonants and a subsequent vertical displacement of one row of voiced nasal stops, which additionally included an extra horizontal shift of one spot over to the right.

When the alphabet and abugida formats are superficially compared to each other - before the tracing of errors and before the tabular reconstruction - a percentage of similarity of only 20 % (4 out of 20 characters) is obtained.

However,

- after the error identifications, and
- after taking into account the varying but close pronunciations of a number of comparable characters in side-by-side alphabet and abugida grids (e.g. B-pa, C-ka, D-ta, F-pha, G-kha, P-ba, Q-ga, T-dha, V-bha , X-gha, Z-dha),
- and while focusing on the proper placement of nearly all Western Late-Roman characters in their appropriate vowel, labial, guttural and dental columns,

13 of the 14 white blackboard characters on Chart Three's Table C match grid positions of Table B... only the H does not match at all.

Including Table A's 4 matching vowels: a - अ, e - ए, i - इ, and u - उ, the overall character placement match between Table B (13+4) and Table C (20) produces a 17 out of 20 or a 85 % match between the alphabet and abugida grids.

Significantly, the vowel column did not in any way get re-arranged, suggesting that either two different Near-Eastern linguists were involved or that the original linguist went back to the source to find more information, although, that is doubtful, as in that case the original error would likely have been spotted.

a अ	ka क	ta त	pa प
e ए	kha ख	tha थ	pha फ
i इ	ga ग	da द	ba ब
	gha घ	dha ध	bha भ
u उ	na न	ma म	

Table 8

A	B	C	D
E	F	G	H
I/J	K/L	M	N
O	P	Q	R/S/T
U	V/W	X/Y	Z

Table 9

When we compare Table 8 (the simplified Devanāgarī table) with Table 9 (Western alphabet characters fitted into a grid), at first glance there does not seem to be any similarity - except for the vowel column. Looking closer however, and as demonstrated, Table 9 shows the remnants of an attempt to classify the consonant characters phonetically according to where and with what they are articulated in the mouth: the tongue, the palate, the teeth, the lips, etc.: the first column shows vowels, the second one mainly labials, the third column mainly gutturals and the fourth one shows mainly dental consonants.

Row-wise with the consonants, there seems to be a vague phonetic classification as to plosive, fricative or nasal sounds, but it is not very precise.

It has also been demonstrated that the Ugarit abecedary from Syria, which is dated to be from between 1400 and 1200 BCE, is evidence that even before it was inscribed in cuneiform, that a 'West-of-India' style irregular alphabetic sequence was already in use which, as shown, was based on a very early form of a Pre-Sanskrit Brāhmī abugida.

Closing Remarks

1. Initially it were the Western and Sanskrit Devanāgarī alphabets that led me to the discovery that is described in this study.
2. Subsequently, after more analysis, it became clear that there were transitional phases between the two via one or more Near-Eastern alphabets.
3. It also became clear that the Sanskrit Devanāgarī alphabet must have been based on an earlier Pre-Ashokan Brāhmī alphabet from which:
 - subsequent Near-Eastern alphabets arose, or
 - which showed that these Near-Eastern alphabets were highly influenced by an early Pre-Ashokan alphabet, or
 - that there was an even earlier, possibly pre-New Kingdom Upper-Egyptian alphabet, which gave rise to all other follow-ups,,
 - and lastly that somewhere within this sequence of alphabet developments, many characters can be fitted and matched of which their origin may be found in the Indus Valley Script and which possibly can be traced back to said early Upper Egyptian characters.
4. This analysis was never intended to trace the formation or shape of individual script characters or any formative link between the various scripts' characters. However, it now appears to be possible to establish or confirm some rough dating of the formation of and linkages between distinct script character sets.
5. One, possibly two studies will follow that detail and illustrate the points made in remark 3 and 4.

6. For the purpose of this study, I concentrated mainly on the categories 4, 5, 8, 9 of the consonant list below, while joining 4 and 5 under the heading 'gutturals'.

Phonemic categories of consonants:

1. Laryngeals,
 2. Pharyngeals,
 3. Uvulars,
 4. Velars,
 5. Palatovelars,
 6. Sibilants,
 7. Interdentals,
 8. Dentals,
 9. Labials,
 10. Liquids,
 11. Nasals.
7. If there was a cursive script in use alongside the glyphic script as found on seals in India's Indus Valley Harappa Culture (3300–1300 BCE) - which I hypothesize there was - it would be an early Brahmi '*nāgarī lipi*' (urbane script) used by a more sophisticated segment of the Indus Valley population, possibly the elite who next to the more common Prakrit, spoke an early form of Sanskrit or Pali.

Bibliography

- Bett, Steve T., 1996
The Origin of the Alphabet.
- Coulmas, Florian, 1991
The writing systems of the world.
- Das, Prasad, 2007
www.hindu.com/2007/12/20/stories/2007122054820600.htm.
http://en.wikipedia.org/wiki/History_of_the_alphabet - cite_ref-
Himelfarb.2C_Elizabeth_J_2000_1-0
- Goldwasser, Orly, Mar/Apr 2010
How the Alphabet Was Born from Hieroglyphs. Biblical Archaeology Review
(Washington, DC: Biblical Archaeology Society) 36 (1). ISSN 0098-9444.
- Himelfarb Elizabeth J., 2000
First Alphabet Found in Egypt. Archaeology 53, Issue 1 (Jan./Feb. 2000) page 21.
- Lo, Lawrence,
<http://www.ancientscripts.com/alphabet.html>
- Salomon, Richard, 1995
On The Origin Of The Early Indian Scripts: A Review Article, Journal of the
American Oriental Society 115.2 (1995), 271-279 1995.
- Salomon, Richard, 1996
Brāhmī and Kharoshthi in The World's Writing Systems.
- Schniedewind, William and Hunt, Joel, 2007
A primer on Ugaritic.
- Subramanian, T.S., 2004
Skeletons, Script found at ancient burial site in Tamil Nadu.
<http://www.hindu.com/2004/05/26/stories/2004052602871200.htm>
- Taylor, Isaac, 2003
History of the Alphabet: Aryan Alphabets, Part 2. Kessinger Publishing,
ISBN 9780766158474.
"... In the Kutila this develops into a short horizontal bar, which, in the
Devanagari, becomes a continuous horizontal line ... three cardinal inscriptions
of this epoch, namely, the Kutila or Bareli inscription of 992, the Chalukya or
Kistna inscription of 945, and a Kawi inscription of 919 ... the Kutila inscription
is of great importance in Indian epigraphy, not only from its precise date, but
from its offering a definite early form of the standard Indian alphabet, the
Devanagari ..."
- Woodard, Roger D., 2008
The Ancient Languages of Syria-Palestine and Arabia.
- Zuckerman, Bruce and Swartz-Dodd, Lynn, 2003
Pots and Alphabets: Refractions of Reflections on Typological Method (p. 89),
MAARAV (2003) - A Journal for the Study of the Northwest Semitic Languages
and Literatures.

List of Illustrations

All illustrations are public domain except Figs 2 and 9.

Pg. 9 http://en.wikipedia.org/wiki/Ugaritic_alphabet

Fig. 1 <http://www.columbia.edu/itc/mealac/pritchett/00urduhindilinks/mydevscript1.jpg?>

Fig. 2 www.schoyencollection.com/firstalpha_files/ms108.jpg

Fig. 3 http://en.wikipedia.org/wiki/File:Wadi_el-Hol_inscriptions_drawing.jpg

Fig. 4 http://en.wikipedia.org/wiki/Old_Italic_alphabet

Fig. 5 http://en.wikipedia.org/wiki/International_Phonetic_Alphabet

Fig. 6 The author's

Fig. 7 http://lila.sns.it/mnamon/assets/img/etrusco/1.Alfab_Marsiliana_%20daMnamon.jpg

Fig. 7a <http://www.facebook.com/photo.php?fbid=1228608247406&set=a.1277598152123.2033559.1595089703&type=1&ref=nf>

Fig. 8 <http://nautarch.tamu.edu/class/354/Pyrgi%20tablets.jpg>

Fig. 9 http://www.themysticcorner.com/images/ABRACADABRA_Amulet.jpg

Fig. 10 http://en.wikipedia.org/wiki/Br%C4%81hm%C4%AB_script

Fig. 11 http://en.wikipedia.org/wiki/Phoenician_alphabet

Fig. 12 <http://a1.ecimages.myspacecdn.com/images02/61/1f382afd1dc74ac8bf1fc0d7552147a4>

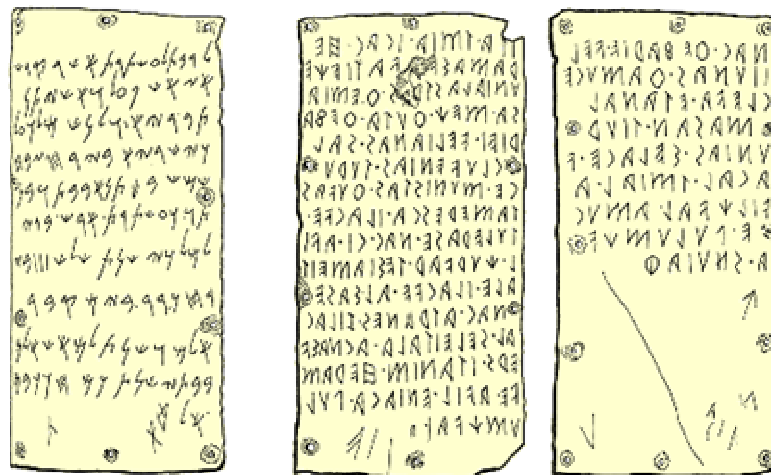


Figure 12

Pyrgi (Italy) Astarte Sanctuary, ca 500 BCE.

Etruscan and Phoenician inscriptions on three gold leaves.

Left - Phoenician , middle and right - Etruscan

Reviews

"...the Alphabet paper is simply brilliant stuff, serendipity at its finest. The tabulation similarity of ABCD [abecedary] with Panini's abugida is totally new and totally brilliant... on par with a description of Fleming's discovery of Penicillin

~ Shiv

"...a booklet created by my friend, original thinker along the lines of Vartak, Einstein, Newton and Kepler. So expect flight of fancy, joy of speculation and wonderful research."

~ Nilesh Oak

From the Introduction

“When one looks cursorily at the way the Western alphabet characters are strung together, one hardly ever wonders why they are in the sequence in which they are.

From the age of being a preschooler we have become so familiar with the alphabet's sequence of sounds that to most of us when we recite or sing the alphabet, it might even feel like we are reciting or singing an age-old rhyme.

Could it be though, that there is actually 'rhyme *and* reason' to the fact that ABCD is followed by EFG?

Actually, as we shall see, in spite of looking quite disorderly, hidden within that disorder we will find order.

To discover that order though we need to do some sleuthing, but with the help of linguistics - specifically epigraphy and phonetics - we will make some surprising discoveries.

We will eventually be able to establish, using as evidence the 1400-1200 BCE Ugarit abecedary from Syria (page 9) and the historical presence of early Pre-Ashokan Brāhmī script, that phonetics must have begun to be studied centuries before 1700 BCE.”



Alphabet or Abracadabra ?

GHIJKLMNOPQRSTUVWXYZ

Did the Western alphabet sequence, in spite of it looking quite disorderly at first glance, follow a pattern invented perhaps more than 3700 years ago... a Pre-Sanskrit, early Brāhmī alphabet from India?

A	B	C	D	a अ	ka क	ta त	pa प
E	F	G	H	e ए	kha ख	tha थ	pha फ
I/J	K/L	M	N	i इ	ga ग	da द	ba ब
O	P	Q	R/S/T		gha घ	dha ध	bha भ
U	V/W	X/Y	Z	u उ	na ङ	na न	ma म

Western
Abracadabra ?

Western
Abracadabra ?

Sanskrit
Devanāgarī

Luckily, in the dawn of time, something happened script wise - a blunder really - which gives us a chance to find out how the Western alphabet originally took its shape, but also - unfortunately - how it at some point lost it again.



Triple Gem Press

Why is there no order to the Western – Late Roman Alphabet? Or is there....?

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

Why is there no order to the Western - Late Roman Alphabet? Or is there....?

A	B	C	D
E	F	G	H
I/J	K/L	M	N
O	P	Q	R/S/T
U	V/W	X/Y	Z

On a lurch, forcing the alphabet characters into a grid, fixing the vowels into the first column.

vowels	labial	guttural	dental	velar
A	B	C	D	
E	F	G/H		
I/J	M	K	N	L
O	P	Q	R/S/T	
U	V/W	X	Z	Y

Analyzing and categorizing...
Why capital characters?
(many lowercase letters)

labial	guttural	dental		
A	B	C	D	
E	F	G/H		
I/J	M	K	N	L
O	P	Q	R/S/T	
U	V/W	X	Z	Y

Separating 2 columns. What do I have in mind?

labial	guttural	dental		
क	ख	ग	घ	ङ
च	छ	ज	झ	ञ
ट	ठ	ड	ड	ण
त	थ	द	ध	न

I had a lurch...

Transition from an early Devanagari grid to Pāṇini's expanded Devanagari grid.

Note: Vowels, dia-critical marks, etc. are not included.

1	2	3
guttural	dental	labial
ka क	ta त	pa प
ga ग	da द	ba ब
na ण	na न	ma म

Nagan - Original

Step 1

1	2	3
guttural	dental	labial
ka---dha	ta---da	pa
kha---dha	tha---dha	pha
ga---ja	da---da	ba
gha---jha	dha---dha	bha
na---na	na---na	ma

Step 2

1ab	2ab	3
guttural	guttural	labial
palatal	dental	
ka क	ta त	pa प
kha ख	cha च	pha फ
ga ग	ja ज	ba ब
gha घ	jha झ	bha ब
na ण	na न	ma म

Step 3

1a	1b	2a	2b	3
guttural	palatal	coronal	dental	labial
ka क	dha ङ	ta ट	ta त	pa प
kha ख	chha छ	tha ठ	tha थ	pha फ
ga ग	ja ज	da ढ	da द	ba ब
gha घ	jha झ	dha ढ	dha ध	bha ब
na ण	na न	na ण	na न	ma म

Devanagari - Expanded (Pāṇini)

Chart One

Quite a while ago, someone must have displaced a column and a row...

guttural	ka	ta	pa	ya
dental	ka	ta	pa	ya
labial	ka	ta	pa	ya

labial	B	C	D
guttural	F	G/H	
dental	M	K	N
labial	P	Q	R/S/T
labial	V/W	X	Z

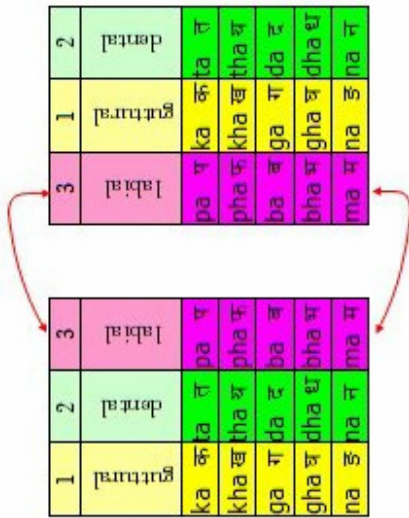
guttural	ka	ta	pa	ya
dental	ka	ta	pa	ya
labial	ka	ta	pa	ya

labial	B	C	D
guttural	F	G/H	
dental	M	K	N
labial	P	Q	R/S/T
labial	V/W	X	Z

labial	प	फ	ब	भ	म
guttural	क	ख	ग	घ	ङ
dental	त	थ	द	ध	न

OOPS !!!

guttural	ka	ta	pa	D
dental	ka	ta	pa	C
labial	B	C	D	



OOPS !!!

pa	B
pha	F
ba	M
bha	P
ma	V/W

labial	B	C	D
guttural	F	G/H	
dental	M	K	N
labial	P	Q	R/S/T
labial	V/W	X	Z

Chart Two

Chart Three

Who says there is no order to the Western - Late Roman alphabet?

There is...! (That is, if you don't count some errors on the way...)

K/L Remember?

0	3	1	2
*gllawoV	labial	guttural	dental
ā	pa	ka	ka ra
e	pha	kha	tha va
i	pa	ga	da ra
u	bha	gha	dha va
	na	na	na ra

3	1	2
labial	guttural	dental
pa	ka	ka ra
pha	kha	tha va
K/L	na	na ra
ba	ga	ra sid
bha	gha	dha va

Table A

Table B

Lost

Who says there is no order to the Western - Late Roman Alphabet? There is! way...

If you don't count the errors on the way...

A	B	C	D
E	F	G	H
I/J	K/L	M	N
O	P	Q	R/S/T
U	V/W	X/Y	Z

Table C A later insertion

Y

Compare table C's white Roman characters with table B's Devanagari characters and note that 13 out of 14 white characters have the same grid position (H doesn't match). While accounting for the mistaken cell displacements & varying pronunciations, and while including the vowels of Table A, the character match between tables B (17) and C (20) is: 85.00%

*Four vowel positions match: a - अ, e - ए, i - इ, and u - उ (It is debatable whether ऋ is an original vowel sign that matches the O.)

