

**‘Lexical self –dating’ evidence for a common agro-pastoral origin of Sanskrit ‘gopati’, ‘gospati’ and Slavic ‘gospod’, ‘gospodin’ meaning lord/master/gentleman more than 8,000 years ago.**

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**Abstract:**

Cattle have had a central role in the evolution of human cultures and they are the economically most important of domesticated animal species. All modern domesticated *Bos taurus* cattle breeds are believed to be derived from the now extinct wild ox or aurochs. The most widely accepted view holds that, the taurine cattle were domesticated 8000-10000 years ago. Fossils indicating the presence of taurine cattle have been found at Mohenjo Daro and Harappan sites of the Indus valley from 4500 years ago. Goats and sheep domesticated in the Middle East, began to spread, sometime after 7000 B.C. The agro-pastoral terminology relating to animal husbandry shows many similarities between Slavic languages and Sanskrit, except in horsebreeding, despite the evidence that horse had been domesticated about 6000 years ago. This is also an indication that the ancestors of the present-day Slavs and Indo-Aryans diverged more than 6000 years ago, in agreement with archaeological, climatic, linguistic and other evidence. In Sanskrit '**gopati**', '**gospati**' means *the lord of cowherds, leader, chief*. This is a compound word; the bases being the Rig Vedic 'go' meaning *m. an ox, f. cow, pl. cattle, herd, kine, herd of cattle* and 'pati' meaning *a master, owner, possessor, lord, ruler, sovereign*; which in turn is derived from 'pat', 'patyate' meaning *to be master, rule, control*. The Slovenian '**gospod**' and Russian '**gospodin**' preserve 'gos', the genitive form of 'go'. The Sanskrit and Slavic agro-pastoral terminologies appear to have a common, more than 8000 year old, source. Furthermore, there is also a significant genetic correlation between Slavs and the peoples on the Indian sub-continent.

**Introduction:**

M. Snoj's *Slovenski Etimološki Slovar* (Slovenian Etymological Dictionary) is not certain about the origin of **gospod**. It attempts to derive the Slovenian, Croatian and Serbian **gospod**, Russian **gospod**' and Czech **hospodin** meaning lord, master from Latin hospes initially meaning host, but later guest and stranger. It also offers alternative possibility, that the origin may relate to food and the first element of the compound **gos-** relates to food and thus **gospod** could have meant originally, master of the meal or feast, or perhaps, master of the guests. A. G. Preobrazhensky's *Etymological Dictionary of the Russian Language* proffers a similar explanation. However, a closer examination and a comparison to Sanskrit **gopati/gospati/goshpati** reveals that, the origin is more likely in the terminology of agro-pastoral society, as revealed by numerous Slavic lexical similarities with the Sanskrit language, not with the Latin, where these resemblances are considerably less frequent nor with the food, since Sanskrit **ghas, ghasati** to consume, eat is cognate with Slovenian **kositi** to eat. In addition, the archaeological data on domesticated animals provide datable referents for *lexical dating* of agro-pastoral terminology. Furthermore,

the results of Y chromosome DNA comparisons between Slavs and the Indo-European speakers on the Indian sub-continent provide additional support to this hypothesis of a common origin.

Alinei cites Herodotus, the Greek historian, who wrote ~2400 years ago that Indians were more numerous than any other nation that he was acquainted with and Thracians as the most numerous people after the Indians. Alinei has advanced a hypothesis, based on the historical and linguistic evidence, that Thracians was the name that Herodotus gave to the Slavs, owing to the fact the Thracians were one of the most powerful and representative elites of Slavic speaking Eastern Europe (Alinei 2003). The modern day populations are the reflection of the ancient populations; the population on the Indian sub-continent is still the largest in the world and the Slavic speakers form the most numerous language group in Europe and occupy more than half of the land mass of Europe (Rand McNally 1980).

The study of Sanskrit—the most important religious and literary language of India—by the Europeans, contributed to the study of Indo-European languages and thus eventually the whole science of modern linguistics came into being. The term *Samskrta* means *civilized, polished, cultivated, correct* (according to the rules of grammar). Undoubtedly the earliest document in the linguistics is Rig Veda, but there is no consensus regarding the age when it was composed. T. Burrow, by a rough guess-work places its origin at 1000 B.C., whereas A.A. Macdonell cites Sanskrit scholar Hermann Jacobi who dates the oldest Vedic hymns to 3000 B.C., but another scholar, Bal Gangadhar Tilak puts them as far back as 6000 B.C.; G. Feuerstein mentions that both hypotheses are based on different astronomical phenomena mentioned in the Rig Veda. Jacobi also hypothesized that Indians and Iranians separated before 4500 B.C. In addition, Burrow also provides examples of linguistic similarities between Avesta and Sanskrit and notes that the resemblance between ancient Iranian and the language of the Veda is very striking in the field of culture and religion. However, when it comes to pastoral terminology, he presents fewer similarities (Burrow 1995, Feuerstein 1995, Macdonell 1917).

Feuerstein et al note that the Indian historian Romila Thapar observed that, for the Vedic Aryans the cow was a measure of value and a very precious commodity. The archaic Sanskrit word for both cow and bull is 'go'. 'Go' also denotes human speech, particularly the inspired speech of the Vedic seers (Feuerstein 1995). It should also be noted that in Slavic languages the root 'go-' is used similarly in compounds relating both to cattle and to speech. In addition the Sanskrit word 'veda' meaning *knowledge* has also the same meaning in some Slavic languages including Slovenian.

Alinei posits that, vocabulary offers possibilities for fairly reliable dating, in spite of the complexities and problems that are frequently involved. Vocabulary is representative of the entire history of a community, since it contains vestiges of innumerable stages of cultural-historical renewal of a community of speakers. Accordingly, we can see the history of a language through its vocabulary as an aggregate of innumerable stratigraphies, each corresponding to a lexeme, the ordered sequences of which may be compared with one another for the identification of common periods e.g. modern, Renaissance, mediaeval, Christian, Roman and various prehistoric periods (Alinei 2004).

In this paper, the origin of words such as ‘gopati’, ‘gospod’ meaning *lord, master* and also ‘gost’, meaning *guest* in the Indo-European languages will be examined from the point of reference to their probable agro-pastoral beginnings. The present Slovenian colloquial meaning of the word ‘gospod’ is analogous to *mister/gentleman*, but *Lord* in a religious context. However, historically it was used in the sense of *lord, master* which indicated that the person had a dominion over others and that the person exercised this authority on the basis of property or religious rights. The Sanskrit ‘gopati’ ‘gospati’ and ‘goshpati’ are analogous to the Slavic ‘gospod’ or ‘gospodin’. In Apte’s *The Practical Sanskrit-English Dictionary (PSED)* we can see that, Sanskrit ‘gopati’ can mean *an owner of cows, a leader, chief, king* and in Vedic language *a herdsman, protector, guardian, cowherd, a king*; ‘goshpati’ means *a chief herdsman*. This indicates that the origin was in an age, when the cattle were already domesticated and there had been an accumulation of wealth to a point, where some owners had other people looking after their livestock.

In the search of the meaning for the Slovenian words ‘gospod’ meaning *lord/master/gentleman*, ‘gost’ meaning *guest* and ‘govedina’ *beef*, the answer is found in the Vedic Sanskrit, particularly in the cattle herding terminology.

### **Historical Information:**

Fire, along with other elements, enabled the human society to have a significant control over the environment. Fire has been used in the hunting process to drive animals into traps to make them easier to catch which in turn provided a better diet for the omnivorous humans. The warmth and illumination it provided, allowed people to survive in colder regions and to live in caves which provided protection from the hostile environment. Later, fire was used to clear land for agriculture, to make pottery and to forge metal. Although dependable techniques for making fire were not available until ~7000 B.C., the remains of simple hearths provide evidence that controlled fire was in use at least 500,000 years ago (Barnouw 1982).

Beekeeping is one of the oldest forms of food production. Some of the earliest evidence of beekeeping is recorded in rock paintings dating to 13,000 B.C.(NationMaster.com)

Another development, which followed the controlled use of fire and beekeeping, was the taming and controlled breeding of the major animal domesticates, which in turn was part of a suite of transformations of human society which formed the Neolithic revolution. There are two alternative hypotheses about the origins of the domestication of a wild progenitor population. The first hypothesis holds that the domestication was carried out only in one region for each species of cattle, sheep and pigs and that the primary domestication centre was in the Fertile Crescent and that large scale cattle population movements took place, together with human migration in the Neolithic age, from the Near East into Europe across the Balkans (Medjugorac 1994). The second view of history of domestication holds that, the capture and the controlled breeding of several of the key livestock species may have taken place in more than one separate region. These multiple domestications may have been independent of each other, or could perhaps consist of one primary and other secondary events (Bradley 2000).

From the skeletal evidence, dogs have often been recognized as the first domesticates of all, their short-snouted skulls distinguish them from their wolf ancestors. Many argue that this

domestication occurred some 30,000 years ago. 15,000 years ago is the latest that this would have occurred (Jones 2002).

Carbon-14 tests provide evidence which indicates that, following the domestication of the dog, sheep were next in the process of domestication which occurred in northern Iraq about 11,000 years ago; cattle were first tamed somewhat later in northeastern Iran and horses some 6500 years ago in Ukraine.

It is cattle that have had a central role in the evolution of human cultures and are now economically the most important of domesticated animal species. The cattle are of two major types, zebu, the humped species and taurine without humps, which are named *Bos indicus* and *Bos taurus*. All modern domesticated taurine cattle breeds are believed to be derived from the now extinct wild ox—aurochs; the last auroch is reputed to have been killed in Poland around 1627 AD....The most widely accepted view holds that taurine cattle were domesticated in the civilizations of the Near East 8,000-10,000 years ago....Fossils indicating the presence of both zebu and taurine cattle have been found at Mohenjo Daro and Harappan sites of the Indus valley dating from 2,500 B.C.(Loftus 1994).

The genetic evidence shows that, the domestication of cattle is dispersed through three continents. The separation of Asian humped zebu cattle from the European and North African taurine cattle is estimated to have occurred some 200,000 years ago. There was a second split within the taurine group 25,000 years ago, suggesting the independent domestication in Europe and North Africa (Jones 2002).

Between 9,000 and 8,500 B.C., the inhabitants of the southeastern portion of what is today Sahara, began to tend native cattle, herding them in regions too dry for the animals to live without human assistance in obtaining water. Sometime after 7,000 BC, goats and sheep, domesticated in the separate Middle Eastern centre of agricultural invention, spread southward to these already food producing peoples (Ehret 2002). In the semi-arid sites of the Syro-Arabian desert, goats became part of the economy by 8,000 to 7,500 BC. Pigs were probably the last major domestic animal to be incorporated into the Levantine household (Bar-Yosef 2002).

The site of Mehrgarh in Pakistan has yielded evidence of cattle herding, probably zebu, from 7,000 B.C. at the latest, and may also represent a potential Eastern domestication site. (Loftus 1994).

The genetic evidence has also revealed cattle mobility. Cattle have also been associated with the rapid spread of farming from the Hungarian Plain to Alsace in the 6<sup>th</sup> millennium B.C., from Levant to the northwestern Pakistan in the 8<sup>th</sup> millennium B.C. and from the East African Lakes to South Africa in the 1<sup>st</sup> millennium B.C. (Jones 2002).

The domestication of the horse has profoundly affected the course of civilization. Horse has played an important part in human survival and began appearing in cave art as early as 25,000 years ago (Valladas 2001). Wild horses were widely distributed throughout the Eurasian steppe during the Upper Paleolithic 35,000 to 10,000 years ago, but in many regions, they disappeared from the fossil record about 10,000 years ago. Horse remains became increasingly frequent in

archaeological sites of southern Ukraine and Kazakhstan, starting about 6,000 years ago, where limited evidence of bit wear on the horse teeth suggests that some of the horses could have been ridden. Initially, horses were hunted for meat; after domestication, in addition to meat, horses also provided milk and enhanced transportation and warfare capabilities that led to the spread of languages and culture and the collapse of ancient societies. There are a number of theories regarding the domestication of the horse. Before the common use of DNA in research (pre-1999), anthropologists and biologists hypothesized that horses were domesticated in one small area, perhaps 6,000 years ago on the grassland steppes of Eurasia. Now the mtDNA analyses show that the domestication of the horse occurred in many areas, unlike the other domestic animals (Vila 2001, Lindgren 2004).

From a military perspective, horses played a crucial role in many military operations. By means of warriors with superior horsemanship, the Hungarian language, a member of the Uralic family, entered the general area of present-day Hungary towards the end of the ninth century A.D. From various sources, including not only direct records but also the legacy of place-names, we can tell that the area they entered, then called Pannonia, was largely Slavonic-speaking. Yet a thousand years later, the area is overwhelmingly Hungarian-speaking, though its traditional mode of subsistence remained sedentary agriculture. It was the language of the newcomers that prevailed. In terms of mode of existence, it was that of the earlier agricultural population. We can now add genetics to the picture: genetically Hungarians do not stand out markedly from the neighboring populations... We thus have an incoming population speaking a language that ultimately predominated, but with the overall continuation of the pre-existing population (defined biologically) and its mode of subsistence... This is thus a classic example of 'elite dominance', i.e. a language that is brought in by a small elite but which, because of the dominance of this elite, ultimately comes to prevail in the community over which they exercise this dominance (Comrie 2002).

The spread of Turkic languages to Europe and its periphery must have involved a similar overall scenario, with the establishment of elites speaking Turkic languages and the gradual linguistic assimilation of speakers of other languages, though without any substantial change of the agricultural mode of subsistence or, necessarily, the biological composition of the population... In the case of Turkic-speaking Bulgarians, they were influential enough to give the people their name, but in this case, it was the original Slavonic language that prevailed (Comrie 2002).

The mtDNA analysis showed that the modern horses had almost as much genetic variation as samples of fossil horses. By contrast, similar mtDNA analyses have shown that modern cattle, sheep and pig breeds are much less genetically diverse than their ancestors. This would suggest that horses, unlike the other domestic animals had ancestors in many places and had perhaps two or three separate domestications. The Central Asian sites, yielding the earliest archaeological evidence for intensive horse management, go back 5,000 years at most (Jones 2002).

### **Linguistic comparisons and 'lexical self-dating':**

Comparing Indo-European languages can give us some indication as to how and when the specific terminologies were developed. Comparing Latin and Slavic languages with Sanskrit, it is quite apparent that linguistic similarities exist between the three language groups, but are more apparent between Sanskrit and the Slavic languages—these affinities are particularly noticeable

with the Vedic Sanskrit. Linguistic similarities are very pronounced in the sheep and cattle herding, but not in horse rearing. This may be taken as an indication that the horse was domesticated after the separation of the ancestors of Slavs and the Indo-Aryans.

Alinei (2004) states: "...lexicalization has never been used by historical linguists for the purpose of dating, although its study is extremely rewarding. Actually, unlike the other linguistic aspects, lexicalization, as interface between language and culture, directly reflects (pre)historical-cultural events, and is therefore directly datable to the extent the events themselves are datable. At this point, in fact, it is necessary to return to the already mentioned distinction between *historically traceable* and historically *untraceable* referents. Many referents are not historically traceable, but only in the sense that they belong to nature, and as such precede man, or life itself. But even the referents which are historically traceable because they belong to human culture are not easily datable: for example, emotions, many abstract concepts...As opposed to all that, all the products of human labor and many social institutions, the names of which make up the greatest part of the vocabulary, generally have an origin precisely defined in time and are therefore datable."

Alinei goes further: "Having established the difference between basically datable and non-datable referents, we can now proceed to the formulation of a fundamental principle: the lexicalization of datable referents tends to have the same date as the referents themselves... (T)he date of the word tends to coincide with the date of the event or the concept it denotes"... He defines: "the method based on this principle, *lexical self-dating*, in order to indicate that the dating is inherent in the lexeme itself".

(Modern day examples of this process of datable referents are words, in the vocabularies of many languages around the world, such as: 'auto', 'radio', 'television', 'atom-bomb', etc. These words became part of the lexicons when the technological innovations were introduced. The referents, in this case the various technical products and their names in the vocabulary, are of the similar age.)

Applying *lexical self-dating* to animal domestication which is an archaeologically traceable referent which occurred 8,000-11,000 years ago, it is very likely that the words associated with domestic cattle also come from that historical period. Since cattle have been associated with the rapid spread of farming from the Pannonian plain in the 6<sup>th</sup> millennium B.C., the terminology must have been in existence prior to this spread of farming and prior to division of Slavs and Indo-Aryans. Therefore, the terminology is very likely ~8, 000 years old.

Alinei (2003) also presents a hypothesis based on the conspicuous series of Turkic loanwords, which implies that Turkic people were the first to have mastered horse domestication and to have it passed to the neighboring people. Archaeologists date this to be 6,000 years ago. Indications are that this horse domestication occurred after the Indian-Slav split, since the 'Turkic' words associated with the horse and horse equipment in Slavic are not found in Sanskrit.

Note: In the comparison only the words with similar sound and meaning were used.

### Pastoral terminology relating to sheep:

English	Sanskrit	Slovenian	Russian
sheep	avika	ovce	ovci
ram 1	avi	oven	
ram 2	mesha	moški (male)	muščina (man)
ram 3	urana		baran
ewe	avikā	ovca, beka	ovca
sheep m.	avika	oven	
lamb(offspring)	vatsaka-m. vatsakā-f.	bacek backa	barašek
flock	pāśava	paša	pastva
herdsman	avi-pāla, paśupāla	ovčar, ovnar, pastir	ovčar, pastuh, pastir
encirclet	mandala	mandrga	
wool	urna, aviloma	volna, runa	runo
from sheep	avya	ovčja	ovčja
mutton	avimānsa	ovčje meso	
sheep-pen	avisthala	ovčja štala	

### Pastoral terminology relating to cattle:

English	Sanskrit	Slovenian	Russian
cattle, oxen	gāva	govo, goved	
cow	go, gau, gava	krava	korova
ox	vrisha	vol	vol
ox	go, gau	govo, govedo (cattle)	
beef	gomānsa	goveje meso	govedina
killing of cow	govadha	govedina (beef)	govedina (beef)
as beef	gāvaya	goveja	govjažie
from a cow	gavya	kravja	korovie
thickened milk	kshīra	sir (cheese)	sir (cheese)
watch, protect	pā, pāti, pāsati	paziti	
bind	pas, pasati	pasati, pašem	
snare, trap	paśa	past	past'
fasten, bind	paś, pāśayati	opasati, (opašem)	
herd	paśu (any tethered animal)	paša	pastva (relig.)
herdsman	paśupāla (herd guard)	pašnikar	prasol
herdsman	govādicāraka	govedar	
pasture	paśuvya	paša, pašnja	pastbiščje
herdsman	gopā	pastir	pastuh, pastir

cow-keeper	govinda	govedar	
lord of cowherds	gopati	gospod (lord)	gospodin (lord)
chief herdsman	goshpati	gospod (lord)	gospod' (Lord)
control, master	pat, patyate	paziti, pasti	pasti
yoke	yuga	igo, jarem	igo, jarmo
carrier, carriage	vāha, vāhika	voz	voz
go	i, eti	iti	iti
move (to)	pal/palla-ti	peljati(move w/cart)	polzti (crawl)
convey (to)	vah, vahati	voziti	vozt'
lead (to), guide	vah, voḍham (Ved.)	voditi, vesti	voditi, vesti

### Probable pre-agro-pastoral terminology:

English	Sanskrit	Slovenian	Russian
fire	agni	ogenj	ogon'
fire-pan	agnishtha	ognjišče	
heat, burning	palita	paliti (scorch)	palit'
heat	tapana	toplina	teplota
smoke	dhūma	dim	dim
burn (to)	ghri, gharnote	goreti	goret'
illumined	ghrita	ogret (heated)	
winter	hima	zima	zima
earth (soil)	prithivī	prst	
water	uda	voda	voda
drink (to)	pā, pāti, pibati	piti	pit'
quaff (to)	pā, papīyāt	popijati/popivati	pit'
rain (to)	vrish, varshati	pršiti (rain lightly)	
rain	varshā	prša (light rain)	
cloud	megha	megla	
cloud (to)	megh, meghāyate	megliti	
sky	nabhas	nebesa, nebo	nebo
moon	māsa	mesec (luna)	mesjac (luna)
month	mās	mesec	mesjac
darkness	tama	tema	t'ma
night	niś, nakta	noč	noč'
day	dina	dan	den'
light	ruć, ruk	luč	
light (in colour)	śveta	svetel, svetla	svjet
light (not heavy)	laghu	lahek	
mountain	giri	gora	gora
tree	dru	drevo	derevo
wood	dāru	drva	drova

living being	jīvina	živina (livestock)	životnoje
wolf	vrika	volk	volk
otter	udra	vidra	vidra
spear	śūla, śalākā	sulica	
sharp pin	śūla	šilo (awl)	šilo (awl)
thorn	tarunakha	trn	tjern
skin, body-cover (deha)kosha		koža (skin)	koža (skin)
meat	mās/māns	meso	mjaso
roast (to), bake	pać, paćati	peči	pječ'
roasting	pāka	peka	
baking	paćana	pečenje	
observe	spaś/ paśyati	paziti	
seeing	paśyan	pažnja	
behold!	paśu	pazi!	
bind (to), fetter	pas, pasati	pasati (to gird)	opojasat'
fasten (to)	paś, paśayati	pasati (to gird)	opojasat'
pelt, hide	driti	dreti (to flay)	drat' (to flay)
urinary duct	mehana, vasti	mehur (bladder)	mehi (bellows)
flock	yūtha	jata	
honey	mada, madhu	med	mjed
mead	madhu, madishtha	medica	

### Transliteration:

Sanskrit—Monier-Williams's A Sanskrit-English Dictionary (SED) English transliteration was generally followed: **č** is pronounced as **ch**; **ś** as **sh** and in some cases as **s**; cerebials such as **ḍ**, **—**, **ṣ** are relatively rare in Vedic words.

Slovenian—Latin pronunciation is generally used, with some exceptions: **c** is pronounced as **ts** in English; **č** as **ch**; **ś** as **sh**; **ž** as **zh**; (or **j** in French); and **j** as **y**.

Russian—Slovenian transliteration was used.

### Discussion of linguistic comparisons:

The origin and the development of agro-pastoral technology can be traced through Sanskrit agro-pastoral terminology. Its beginnings can be seen in the words such as **pāśa** meaning snare, trap, noose and in the verbs **pas**, **pasati** to bind, **paś**, **pāśayati** to fasten, bind in addition to **paśyati** to look at, observe. This process is an integral part of domestication, which started with trapping of the young animals and keeping them tethered under watchful eyes so that they will not run away as they grew older. This is the initial terminology in the steady progress of taming and domestication of wild animals, to the point where animals became part of human culture and food cycle. The domestication of animals commenced with the keeping of the animals singly close to human habitation. This is reflected in the word **paśu** which originally meant-any tethered animal singly or collectively, a herd, a domestic animal as against **mriga**-game or wild

animal (SED p. 611, 828), but **paśu** can also mean cattle and in the Vedic language any animal or beast along with **jīvita** and **jīvina** meaning any living being.

As the pastoral society progressed, the cattle began to represent wealth and this required some specialization to take care of the herd, to protect it and to find it a good pasture. This was done by **gopā** a herdsman, guardian. The ownership/control of the cattle and the cowherds was in the hands of **gopati** the lord of cowherds, leader, chief (SED p.365). The cattle were also the means of trade, **goshā** meaning acquiring or bestowing cows (PSED p.414). The word **gosht** means to assemble and collect. During milking, the cattle were assembled and kept at a station for cattle or cow-pen **gosthāna**, which was usually attached to the house; similarly **goshtha** was an abode for cattle, cow-house, cow-pen; **goshthāna** a place where cows are kept and these places also served for purposes of meetings, assembly and fellowship/**goshthi**. The **goshthin** is also the chief person or president of assembly (SED p. 367). It should be noted that this is primarily Vedic terminology.

Parallel pastoral terminology is found in Slavic languages such as Slovenian and Russian as listed under Pastoral terminology relating to cattle: **past**, **past'** trap or snare; **pasati** to fasten; **paziti** to watch; **paša** herd or pasture; **pašnja**, **pastbišče** pasture; **pastir**, **pastuh** herdsman.

In the search for the origin and the original meaning of the Slovenian and Russian words **gospod** and **gospodin** meaning *lord, master*; and **gost** meaning *guest*; the answer is best found in the Vedic Sanskrit, particularly in the cattle herding terminology.

Slo&Ru **gospod**, **gospodin** (lord, master, gentleman):

Skt. **gopati**—compound word meaning *the lord of cowherds, leader, chief*— (SED p.365)

**gopati**—genitive compound meaning *the lord of cowherds, leader, chief*—

Macdonell's A Vedic Grammar for Students (VGS p.273)

**goshpati**—due to sandhi 's' can change to 'sh' without changing the meaning

go, gau—genitive is 'gos'—m.-*an ox*, f.-*a cow*, -pl. *cattle*—(SED p.363)

pati—m.—*husband, master, owner, possessor*—(SED p.582)

pat (patyate)—*to be master, control, own, possess*—(SED p.580)

pat—nominative of pati—(SED p. 580)

pā (pāti) -to watch, keep; protect; rule, govern—(SED p. 613)

Slo. paziti--to watch, guard, protect

pasti--to graze, to pasture

govo=govedo-- cattle

In Sanskrit, the frequent combination of declinable stems with one another to form compounds which then are treated as if simple, in respect to accent, inflection and construction, is a conspicuous feature of the language, from its earliest period, according to Whitney's *Sanskrit Grammar* (SG) p. 480. The two characteristic features of a compound are unity of accent and employment of the uninflected stem in the first member or members; but there are exceptions present in the Vedic language. To form the compound, in the classical Sanskrit

‘go’ has to be used. However, in the Vedic Sanskrit compounds, genitive case is very common before ‘pati’; for example ‘gnās-pati’—meaning husband of a divine woman; where ‘gnās’ is gen. of ‘gnā’—meaning a divine female, ‘jās-pati’—meaning the head of the family where ‘jās’ is gen. of ‘jā’—meaning born, produced (VGS pp 271-273), (SED p.416). In this particular case, **gos-pati** is the Vedic version of ‘gopati’ where the genitive ‘**gos**’ instead of the root ‘**go**’ is used to form the compound. This is also analogous to ‘dam-pati’ meaning lord of the house, derived from ‘dams-pati’ (VGS p.273). Gospod/ gospodin are analogous compounds, and in this case, both the Slovenian and Russian preserve the genitive case ‘**gos**’ in the compounded word.

For example in Sanskrit:

-pat-(patati, patate); to fall, fall down, to fly, soar; to fall off, descend; fall or sink; lose caste or rank  
 -patat; flying, falling  
 -paat (adj.); guarding, falling; sin, wickedness  
 -paata; flying, flight; fall, downfall  
 -pad-(padyate; imperative ‘patsva’, RV infinitive ‘pattave’); (classical : to attain, to earn, to acquire, to learn), to fall, fall down or out, perish

In Hindi:

-patan hona; to fall  
 -patit hona; to fall  
 -patan; fall, downfall, decline, degeneration  
 -patit (adj.); fallen, depraved

In Slovenian:

-pad; the fall, falling, downfall  
 -padati (padam); to fall, to drop, to decrease, to decline, to go down  
 -padeč; the fall, drop, decline, descent, downfall  
 There is also perfect tense infinitive:  
 -pasti (padem); to fall, to drop, to decline, to go down, to fail, to be killed

From the above, it can be seen that both roots ‘pat’- and ‘pad’- can be associated with falling in Sanskrit; in Hindi only ‘pat’ (the verb ‘pad’ of Classical Sanskrit, becomes ‘padh’ and means to learn, to earn knowledge, to acquire a skill), - and in Slovenian ‘pad’- and ‘pas’-. Sanskrit ‘paat’ (adjective. or m. noun) meaning fall, downfall, Hindi ‘patan’ and Slovenian ‘pad’ with the same meaning, but with the sound change ‘t’ > ‘d’, appear to be cognates. (note, with Sanskrit sandhi rules, if a word ending in ‘t’ is followed by any word beginning with any vowel or consonant d, dh, b, bh, y, v, h, the ‘t’ changes to ‘d,’ and then in that case the ‘pat’ becomes ‘pad’). Similarly, the Sanskrit words ‘taru’, ‘druma’, ‘dru’; ‘dāru’ for tree; wood, timber; in Hindi ‘taru’, ‘drum’ and ‘darakht’. Slovenian has ‘drevo’, ‘drva’ and ‘drevje’ for tree, wood and timber. From the examples, it can be seen that Sanskrit ‘t’ and ‘d’ (see the note above) > ‘d’ in Slovenian.

When comparing, Skt. ‘gospati’ and Slo. & Ru. ‘gospod’ & ‘gospodin’, there is also an evidence of a sound change of ‘t’ > ‘d’ similar to Skt. ‘pat, patati’ and Slo. & Ru. ‘padati & padat’ all words meaning *to fall*. Elsewhere, the Skt. words for tree, wood and timber are ‘taru’, ‘dru’, ‘dāru’; in Hindi ‘taru’, ‘drum’, ‘darakh’ and Slo. ‘drevo’, ‘drva’, ‘drevje’ are other examples of similar sound changes. Here again, Skt. dental ‘t’ and ‘d’ and Hindi dental ‘t’ > ‘d’ in Slo.

It is evident that **gospod/gospodin** are analogous to Vedic ‘**gospati**’ and Classical ‘**gopati**’, which appear to be rooted in the agro-pastoral society and era, when the wealth and prestige was based on the number of cattle owned and described the person as the *owner of the herd* and an employer of other people, as the *lord of the cowherds* and as *chief* of the people who were guarding and tending his cattle.

Slo **gospodar** (master, landlord, head of household—including hired hands)  
 Skt **gopa**—the lord of cowherds, leader (SED p.365)  
**gos-pā**—guardian of cattle (Vedic version, VGS p.273)  
**dhara**—having, holding, possessing (SED p. 510)

The intrinsic meaning of **gospodar** can be deduced from ‘**gos-pā-dhara**’ meaning *possessing guardians of cattle*; this would signify a person of some importance and power, since the herdsmen would be working for him.

Slo. **gostija** (a feast, treat, banquet):  
 Skt. ghasa—m.—*flesh, meat; devourer* (SED p.377)  
**ghāsa**—m.—*food, meadow, grass*  
 da—mf(ā)n.—*giving, granting, offering; a gift* (SED p.464)  
 dā, dāti-RV—*to give, bestow, grant* (SED p. 473)  
**dāti**-RV—*liking to give >tti* (SED p.474)  
 ti—a primary suffix added directly to the root (root = verb); feminine nouns ktin suffix (VGS p.257)  
 ya—a secondary suffix added to words already ending in a suffix (VGS p.254-265 In the

Vedic nominal stem formations, the declinable stems are chiefly formed by means of suffixes added to the roots. These suffixes are of two kinds: primary or those added directly to the roots (which may at the same time be compounded with verbal prefixes); and secondary, or those added to the stems already ending in a suffix and to pronominal roots (VGS p. 254). The suffix <-ti> denotes chiefly verbs (action nouns). The compounded word ‘**dā-ti**’ (dā+ti = dāti = he, she, it gives = verb; dā + ktin = dāti = f. a gift) means gift. However, when this word ‘**dāti**’ is the final number of a compound, it is reduced by syncope to <**tti**>:’ bhaga-tti’—f.—gift of fortune, ‘magha-tti’—f.—receipt of bounty (VGS p.257)]. The second suffix <ya> forms adjectives of relation and abstract nouns, for example ‘paśav-ya’—meaning relating to cattle. It thus follows that:

Thus **gostija** can be derived from compounded **ghasa-tti-ya** meaning *relating to receiving meat* or **ghāsa-tti-ya** meaning *relating to gift of food* with the intrinsic implication of giving and receiving hospitality which in most cases would involve food. The meaning being *relating to the offering/ giving meat/food*, and a banquet is really an occasion where food is provided for the guests by the host.

Slo&Ru **gost** (a guest, visitor)

Sk **ghasa**—*flesh, meat; devourer* (SED p.377)

**ghasi**—food (SED p. 377)

**ghāsa**—food, grass

**goshtha**—*abode for cattle, stable* (SED p.263)

**goshthī**—*an assembly, meeting, society, association* (PSED p.414)

**goshthya**—mfn—*being in a cow stable* (SED p. 367)

**dāti**>tti-see **gostija**

In India it was a custom that, person looking for an overnight stay, would be allowed to sleep in a stable where the grooms and the herdsmen slept.

**Gost** can be derived from **ghāsa-tti**—meaning one who received a *gift of food* which could be the origin for the **gost** and guest. The other possibility is that it refers to a temporary visitor or traveler just receiving shelter as **goshthya**—meaning *being in a cow stable* would also indicate. However, the word **gost** does not differentiate between one receiving food from the one receiving lodging.

Slo **goveje**—adj-(beef), Ru **govjažie**

Skt **gavaya**—mfn—*as beef* (SED-p.354)

**gavyaya**—mf(ii)n—belonging to or coming from cattle

Slo&Ru **govedina, govjadina**—noun—(beef coming from killed cattle)

Skt. **go-vadha**—m.—*the killing of a cow* (SED p.366)

-īna—secondary nominal suffix expressive of direction (VGS p.261)

In the Vedic nominal stem formations, secondary nominal suffixes form adjectives with the general sense of relating to or connected with. In the case of secondary suffix <iina> (primary suffix is ‘in’) is chiefly expressive of relation. AV example of the usage: ‘viśvajan-īna’ meaning containing all kinds of people.

Thus **govedina** can be derived from **go-vadha-īna**— meaning *related to or connected with a killed cow*; this describes well the source of beef.

Slo. **župan**—(mayor-the chief executive official of a city, town or village)

Skt. **jā**—race, tribe; mother (PSED p. 450)

**pā**—protecting, guarding (PSED p.607)

**nī**—a leader or guide (SED p. 565)

pāna –protecting, keeping; protection, defense (SED p.613)

Historically, the term '**župan**' was used to describe the doyen of a village or villages and is first mentioned in 777 AD and written as '**jopan**'. Later they became officials of the feudal lords (Štih 1996 p.143). **Župan** can be derived from **jā-pāna**—meaning *protecting the tribe*. This would indicate that the function of the 'župan' was to protect or to lead the tribe. In this compound the stem **jā** and not the genitive form is used for the first member of the compound.

There is also a word in Persian that is similar in sound '**šuban**' or '**šoban**' meaning *a shepherd*. However, Alinei questions the usual explanation that it came to the Balkans via Turkic language. In his opinion, such loanwords would be more easily understandable, if connected to the introduction of specialized stock raising in the Balkans, by the *kurgan* culture of the IV millennium B.C. or by their latter successors (Alinei 2003).

Slo. **župnik**—(pastor, a priest in charge of a church)

Skt. **jap, japati**—to pray in a low voice (SED p. 411)

**ni**—suffix for action or agent nouns (VGS p. 258)

**nī**—a leader or guide (SED p. 565)

**ka, aka**—a Taddhita affix used in forming adjectives; it may be added to nouns to express similarity (SED p. 240).

**Župnik** can be derived from **jap-nī-ka**—meaning *leader in prayer* which would indicate a leadership position, but in this case in a religious function.

How can we be sure that the terminology is original and not an innovation? Alinei (2004) offers some guidelines to test these possibilities. He cautions: "Lexical self-dating has, one major drawback, which limits its application, the original names of datable referents may change, as they frequently do, after the original lexicalization. This drawback is of particular importance in case of prehistoric referents." In the examples shown, it is evident that the meanings of the lexemes associated with cattle have not changed over the millennia. However, the original appellation of the cattle owner, who exercised authority over shepherds has now evolved to denote a person who has control over others and employs others to work for him, not only in cattle herding but also other endeavors. It also includes a person who does not do manual work for a living. This is still close to the original meaning. The fact that these words, similar in sound and meaning, have been used so far apart geographically and historically would indicate that they were not innovations, but original lexemes. In this case we have two witnesses to attest that the terminology is original not an innovation.

### **Inferences from genetic comparisons:**

India has served as a major corridor for the dispersal of modern humans. The date of entry of modern humans into India remains uncertain. By the middle of Paleolithic period 50,000-20,000 years ago, humans appear to have spread to many parts of India. The migration of routes of modern humans into India remain enigmatic. Nevertheless, contemporary ethnic India has become a land of enormous genetic, cultural and linguistic diversity. The people of India are culturally stratified as tribals, who

constitute ~8% of the population and nontribals. Most contemporary nontribal populations of India belong to the Hindu religious fold and are hierarchically arranged in four main classes, namely, Brahmin (priestly class), Kshatriya (warrior class), Vysya (business class) and Sudra (menial labor class) (Basu 2003).

**DNA** testing is now a powerful tool to prove or disprove research in various fields of anthropology, anthropography, archaeology, prehistory and linguistics using the clues provided by the genetic markers on the maternally inherited mtDNA and the paternally inherited Y-chromosome. **R-M17 (HG 3)** is a Y-chromosome mutation of **M173** lineage which along with **M170** appears to have been present in Europe since Paleolithic times. There is statistical evidence that, after the Last Glacial Maximum **R-M17** expanded from the refuge in Ukraine and expanded both westward and eastward; it is rare in western Europe, but is widely present in eastern and central Europe, being found at a frequency of 50-60% in Poles, Hungarians, Ukrainians, Belorussians and Russians (Semino 2000, Malyarchuk 2005). The frequency decreases westward; in Slovenians and Czechs-the most westerly Slavic speaking countries to 37% and 38% respectively, followed with a precipitous decreases in Italy and Spain where the frequency is only 2% (Rosser 2000), but in contrast to western Europe, in India **R-M17** is present at 17%-26% (Cordaux 2004, Quintana-Murci 2001)..

Cordaux et al. analyzed a very extensive dataset of Indian caste and tribal Y chromosomes and found that caste and tribal groups differ significantly in their haplogroup frequency distribution; caste groups are homogenous for Y chromosome variation and more closely related to each other and to central Asian groups than to Indian tribals. They conclude that paternal lineages of Indian caste groups are primarily descended from Indo-European speakers who migrated from central Asia, basing this on the high frequency of haplogroup **R-M17 (HG 3)**, which is present in all groups with the average of 21%, but reaches a frequency of 40% in the north caste groups. The frequency is much lower in the tribal groups at 9% (Cordaux 2004). On the other hand, the data of Sengupta et al. do not support models that invoke a pronounced recent genetic input from Central Asia to explain observed genetic variation in South Asia. The highest frequencies of **R-M17 (HG 3)** were found in the upper castes of both Dravidian at 29 % and Indo-European speakers at 45 % (Sengupta 2006). The frequencies are similar to those found in the Slavic populations of Europe, where the frequency varies from 17 % in Yugoslavs to 63 % in Sorbs; this also demonstrates a demographic complexity that is inconsistent with a recent single history (Rosser 2000, Behar 2003).

Quintana-Murci et al., also present genetic evidence derived from their study of Y chromosome lineages in southwestern Asia supporting the occurrence of two major population movements into India; one of farmers from southwestern Iran, where haplogroup **J-M172 (HG 9)** is very frequent; the other of pastoral nomads from western and central Asia, where **R-M17 (HG 3)** is the most frequent haplogroup. Their frequency data supports the idea that Indo-European speakers spread from central Asia into modern Iran via an eastern-Caspian route, as well as into India, bringing the spread of genes and culture (including language) to southwestern Asia (Quintana-Murci 2001).

In the Balkans, **R-M17** frequency follows a similar pattern; Slovenians in the north west at 37 %, Croats at 29 % and Macedonians at 35 %. Then there is a sharp demarcation, between Slavic and non-Slavic populations and the frequency drops appreciably, in Albanians to 10 % and in Greeks to 12 % (Rosser 2000, Semino 2000).

Also other researchers, such Quintana-Murci et al., found that **R-M17** is also frequent in the east of the Caspian Sea and extending to the Indian sub-continent. Iran also shows marked differences between the regions from west to east; the frequency in the west is at 3%, but in the eastern provinces it is at 31%. The frequency in Pakistan is 32% and India 26% (Quintana-Murci 2001). This is similar to the frequency found in the Balkans. However, in absolute terms Indian sub-continent has about five times as many men with this mutation than Europe. Why? Answer to this question would require further study.

Haplogroup **I-M170** which represents another putative Paleolithic mutation **M170**; its age has been estimated to be ~22,000 years old. Geneticists postulate that, it survived in the Balkans during LGM, and then spread after LGM. The mutation is now most frequent in Scandinavia—south Sweden and Norway at 40 % and in the Balkans among the Slavic speakers—Bosnians at 42 %, Slovenians at 38 %, Croats at 38 % and Macedonians in northern Greece at 30 %. The frequency then drops to 24 % in Albanians and to 14 % in Greeks. **I-M170** is present in all Slavic populations. However, it has not been found in India (Semino 2000, Rootsi 2004, Cordaux 2004). This would indicate that the separation, of the Indian branch of the IE language family from the Slavic, had already taken place and before the demic diffusion from the Balkans had occurred, since M170 mutation did not reach India proper. Thus **I-M170** marker can not be associated with the linguistic similarities between Sanskrit and Slavic languages.

However, **Haplogroup 2**, which was used—pre Y Chromosome Consortium (YCC) nomenclature—to identify **I-M170** in Europe, was reported by Qamar et al., to be present in the Burusha population in Pakistan (Qamar 2002). The people speak Burushaski (note the **-ski** ending), which is said to be a language isolate. The Burusho claim descent from the generals of Alexander's army who were exclusively Macedonian (Mansoor 2004).

Generally, it is the **R-M17** marker that best correlates with the linguistic similarities between the Slavic speakers in Europe, Eurasia and the Indo-Aryan speakers on the Indian sub-continent. Although **I-M170** marker is present in Pakistan, indications are that, it took a different route to reach the Indian subcontinent than **R-M17**; very likely the path of the Alexander of Macedon.

### **Separation of ancestors of Slavs and Indo-Aryans:**

The analysis of Sanskrit language, the livestock terminology, the archaeological evidence associated with livestock domestication and other evidence can give us some indication as to when the separation of the ancestors of the Slavs and Indo-Aryans may have occurred in the pre-historical past.

— Kazanas (2002) uses archaeological and astronomical evidence to support his hypothesis that Indo-Aryans entered India about 6,500 years ago. It follows that the separation occurred before that time.

— Genetic evidence based on mtDNA, presented by Kivisild et al. (1999), indicates that separation of Slavs and Indo-Aryans could have taken place any time between 6,300 and 10,300 years ago.

— Genetic evidence based on Y chromosome analyses, published by Quintana-Murci et al. (2001), established that 8,100 B.C. is the upper limit for the time when the population carrying R-M17 mutation started to expand in size in India.

— Gray and Atkinson (2003), based on linguistic evidence presented in their study, conclude that the divergence between Indo-Aryans and other Indo-Europeans took place about 7,000 years ago.

— The climatic study and the data presented by Adams & Otte (1999), namely the occurrence of 'Older Dryas' around 11,000 B.C., of 'Younger Dryas' around '10,800 B.C., and a sudden cooling event about 6,200 B.C. may have been the motivation for migration.

— The linguistic evidence in words for horse and mare—**aspa-** and **aspaa-** in Avesta; **as'va** and **as'vaa** in Sanskrit; **konj** and **kobila** in Slovenian; **loshad**, **kon'** and **kobila** in Russian, can be taken as another indication that the horse was domesticated in different regions, most likely after the separation of the ancestors of Slavs and Indo-Aryans. This can also be taken as an indication that the separation occurred during the period, as noted by Vila et al. (2001), when the horse disappeared from Eurasian steppe about 10,000 years ago and before the horse was domesticated and became more common again, about 6,000 years ago. This is in agreement with the archaeological evidence, which affirms that one of the domestications took place on the Eurasian grassland steppe about 6,000 years ago.

— Based on '*lexical self-dating*' linguistic evidence, the agro-pastoral terminology developed before the split between the ancestors of the Slavs and the Indo-Aryans during the initial stages of the cattle domestication, which occurred 8,000-10,000 years ago, well before the domestication of the horse, which took place much later, about 6,000 years ago.

— Banerji & Marshall found that Mohenjodaro and Harappa in the Indus valley already had a flourishing civilization about 5,000 years ago (Renfrew 1998).

### **Conclusion:**

Most of the agropastoral terminology common to Sanskrit and Slavic languages likely developed during the initial stages of the domestication of cattle more than 8,000 years ago, followed shortly by the **gopati** and **gospod/gospodin** meaning *lord, master*, before the split of the ancestors of Slavs and Indo-Aryans took place.

### **References:**

Adams, J., Otte., 1999. Did Indo-European Languages spread before farming? *Current Anthropology* 40: 73-77.

Alinei, M., 2003. Interdisciplinary and linguistic evidence for Paleolithic continuity of Indo-European, Uralic and Altaic populations in Eurasia, with an excursus on Slavic ethnogenesis. *Paper read at the Conference Ancient Settlers in Europe*, Kobarid, [Slovenia] 29-30 May, 2003.

Alinei, M., 2004. The problem of dating in Linguistics. English translation by S. Kostić from Italian. *Origin of European Languages, Vol. 1, The Continuity Theory*, Bologna, Il Mulino, 1996.

Bar-Yosef, O., 2002. The Natufian Culture and the early Early Neolithic: Social and Economic Trends in Southwestern Asia, in *Examining the farming/language dispersal hypothesis*, eds. P. Bellwood & C. Renfrew (McDonald Institute Monographs.) Cambridge: McDonald Institute for Archaeological Research, p.113-126. ISBN: 1-902937-30-1

Barnouw, V., 1982. *An Introduction to Anthropology: Physical Anthropology and Archaeology, Vol. 1*, Homewood, Illinois, The Dorsey Press, p. 143.

Basu, A., Mukherjee, N., Roy, S., Sengupta, S., Banerjee, S., Chakraborty, M., Dey, B., Roy, M., Roy, B., Bhattacharyya, N.P., Roychoudhury, S., Majumder, P., 2003. Ethnic India: A Genomic view, With Special Reference to Peopling and Structure. *Genomic Research* 13:2277-2290.

Bradley, D.G., 2000. Mitochondrial DNA Diversity and Origins of Domestic Livestock, in *Archaeogenetics: DNA and the population prehistory of Europe*, eds. C. Renfrew & C. Boyle (McDonald Institute Monographs.) Cambridge: McDonald Institute for Archaeological Research, p.315-320. ISBN: 1-902937-30-1

Burrow, T. 1995, *The Sanskrit Language*, 2nd.ed. Motilal Banarsidass, Delhi, 2001, p.3 ISBN: 81-208-1767-2

Cordaux, R., Aunger, R., Bentley, G., Nasidze, I., Sirajuddin, S.M., Stoneking, M., 2004. Independent Origins of Indian Caste and Tribal Paternal Lineages. *Current Biology* 14:231-235

Comrie, B., 2002. Farming Dispersals in Europe and the Spread of the Indo-European Language Family, in *Examining the farming/language dispersal hypothesis*, eds. P. Bellwood & C. Renfrew (McDonald Institute Monographs.) Cambridge: McDonald Institute for Archaeological Research, p.409-419. ISBN: 1-902937-30-1

Ehret, C., 2002. Language Family Expansions: Broadening our Understandings of Cause from an African Perspective, in *Examining the farming/language dispersal hypothesis*, eds. P. Bellwood & C. Renfrew (McDonald Institute Monographs) Cambridge: McDonald Institute for Archaeological Research, 369-377. ISBN: 1-902937-30-1

Feuerstein, G., Kak, S., Frawley, D. (1995). *In search of the Cradle of Civilization*. Wheaton, IL, USA/ Adyar, Madras, India, Quest Books, p. 107,148-149. ISBN: 0-8356-0720-8

Gray, D. R., Atkinson, Q.D., 2003. Language-tree divergence times support the Anatolian theory of Indo-European origin. *Nature* 426: 435-438.

Jones, M., 2002. Issues of Scale and Symbiosis: Unpicking the Agricultural 'Package', in *Examining the farming/language dispersal hypothesis*, eds. P. Bellwood & C. Renfrew (McDonald Institute Monographs.) Cambridge: McDonald Institute for Archaeological Research, p.369-377. ISBN: 902937-30-1

Kazanas, N., 2002. Indigenous Indo-Aryans and the Rig-Veda. *J. Indo-European Studies* 30: 275-334.

Kivisild, T., Bamshad, M. J., Kaldma, K., et al., 1999. Deep common ancestry of Indian and western Eurasian mitochondrial DNA lineages. *Current Biology* 9:1331-1334.

Lindgren, G., Backstrom, N., Swinburne, J., Hellborg, L., Einarson, A., Sandberg, K., Cothran, G., Vila, C., Binns, M., Ellegren, H., 2004. Limited number of patrilineages in horse domestication. *Nature Genetics* 36:335-336.

Loftus, R.T., Mc Hugh, D.E., Bradley, D.G., Sharp, P.M., 1994. Evidence of two independent domestications of cattle. *Proceedings of the National Academy of Science USA* Vol.91, pp 2757-2761

Macdonell, A.A. 1917, *A Vedic Reader for Students*, 2nd. ed. Delhi, Low Price Publications, 1995, p. xi. ISBN: 81-86142-68-1

Mansoor, A., Mazhar, K., Khaliq, S., Hameed, A., Rehman, S., Siddiqi, S., Papaioannou, M., Cavalli-Sforza, L.L., Mehdi, S.Q., Ayub, Q., 2004. Investigation of the Greek ancestry of populations from northern Pakistan. *Human Genetics* 114: 484-490.

Marjanovic, D., Fornarino, S., Montagna, S., Primorac, D., Hadziselimovic, R., Vidovic, S., Pojskic, N., Battaglia, V., Achilli, A., Drobic, K., Andjelinovic S., Torroni, A., 2005. The peopling of Modern Bosnia-Herzegovina: Y-chromosome Haplogroups in the Three Main Ethnic Groups. *Annals of Human Genetics* 69:1-7.

Medjugorac, I., Kustermann, W., Lazar, P., Russ, I., Pirchner, F., 1994. Marker-derived phylogeny of European cattle supports demic expansion of agriculture. *Animal Genetics* 25: 19-27.

Qamar, R., Ayub, Q., Mohyuddin, A., Helgason, A., Mazhar, K., Mansoor, A., Zerjal, T., Tyler-Smith, C., Mehdi, S.C., 2002. Y-Chromosomal Variation in Pakistan. *Am. J. Hum. Genet.* 70: 1107-1124.

Quintana-Murci, L., Krausz, C., Zerjal, T., Sayar, S. H., Hammer, F., Mehdi, S. Q., Ayub, Q., Qamar, R., Mohyuddin, A., Radhakrishna, U., Jobling, M. A., Tyler-Smith, C., McElreavey, K., 2001. Y-Chromosome Lineages Trace Diffusion of People and Languages in Southwestern Asia. *Am. J. Hum. Genet.* 68:537-542.

Rand McNally, 1980. *Cosmopolitan World Atlas*. Rand McNally & Company, Chicago/New York p.136-152.

Renfrew, C., 1998. *Archaeology & Language: The Puzzle of Indo-European Origins* Pimlico edition, Random house, London, p.163-176, 183. ISBN 0-7126-6612-5

Rootsi, S., Magri, C., Kivisild, T., and 42 others, 2004. Phylogeography of Y-Chromosome Haplogroup I Reveals Distinct Domains of Prehistoric Gene Flow in Europe. *Am. J. Hum. Genet.* 75:128-137.

Rosser, Z.H., Zerjal, T., Hurles, M.E., Adojaan, M., Alavantic, D., and 60 others, 2000. Y-Chromosomal Diversity in Europe is Clinal and Influenced Primarily by Geography, Rather than by Language. *Am. J. Hum. Genet.* 67:1526-1543.

Semino, O., Passarino, G., Oefner, P.J., Lin, A., and 13 others 2000. The Genetic Legacy of Paleolithic *Homo sapiens* in Extant Europeans: A Y Chromosome Perspective. *Science* 290:1155-1159.

Sengupta, S., Zhivovotsky, L.A., King, R., Mehdi, S. Q., and 7 others 2006. Polarity and Temporality of High-Resolution Y-Chromosome Distributions in India Identify both Indigenous and Exogenous Expansions and Reveal Minor Genetic Influence of Central Asian Pastoralists. *The American Journal of Human Genetics* Vol. 78: 202-221.

Štih, P. & Simoniti, V., 1996. *Slovenska Zgodovina do Razsvetljenstva*. Korotan, Ljubljana p. 143  
ISBN 3-85013-3125.

Valladas, H., Clottes, J., Geneste, J.-M., Garcia, M.A., Arnold, M., Cachier, H., Tisnerat-Laborde, N.,  
2001. Evolution of prehistoric cave art. *Nature* 413: 478.

Vila, C., Leonar, J.A., Gotherstro, A., Marklund, S., Sandberg, K., Liden, K., Wayne, R.K., Elegren H.,  
2001. Widespread origins of domestic horse lineages. *Science* 291:474-477.

#### Dictionaries and Grammar Books:

Apte V. S., The Practical Sanskrit-English Dictionary. Motilal Banarsidass, Delhi 1978

Awasthi S., Chambers English Hindi Dictionary. Allied Publishers, New Delhi 1995

Betteridge H. T., Cassell's German & English Dictionary. Cassell, London 1966

Chaturvedi M., Tiwari B. N., A Practical Hindi-English Dictionary. National Publishing House, Delhi  
1994

Grad A., Škerlj R., Vitorovič N., Veliki angleško slovenski slovar. DZS d.d., Ljubljana 1998

Monier-Williams M., A Sanskrit-English Dictionary. Motilal Banarsidass, Delhi 1993 (SED)

O'Brien M. A., Russian-English and English-Russian Dictionary. Dover publication, London 1954

Pleteršnik M., Slovensko-nemški slovar. Knezoskofijstvo, Ljubljana 1894

Preobrazhensky A. G., Etymological Dictionary of the Russian Language. Columbia U. Press, New  
York 1964

Snoj M., Slovenski etimološki slovar. Mladinska knjiga, Ljubljana 1997

Stein J., The Random House College Dictionary. Random House, New York 1980

Thomas M. I., Cassell's Compact Latin-English English-Latin Dictionary. Cassell, London 1937

Williams M., A Dictionary English & Sanskrit. Motilal Banarsidass, Delhi 1982

Macdonell A.A., A Vedic Grammar for Students. Motilal Banarsidass, Delhi 1995 (VGS)

Narale R., Hindi for English Speaking People. Prabhat Prakashan, New Delhi 2005

Narale R., Sanskrit for English Speaking People. Prabhat Prakashan, New Delhi 2004

Whitney W.D., Sanskrit Grammar. Motilal Banarsidass, Delhi 1997