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NOSTRATIC, QUO VADIS?

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Abstract

In attempting to ascertain where Nostratic is heading and how it is regarded by both the general community and by professional linguists, this paper surveys various categories of criticism of the hypothesis. While the literature provides detailed technical analyses, the views presented here are of a general nature by the writer- a "practical linguist" with a long-term interest in the Indo-European language family. It is hoped that a perspective from outside of academic linguistics might throw some light on how Nostratic is regarded by the interested public at large.

Criticism is grouped under five categories designated arbitrarily as A, B, C, D and E ranging from acceptance with minor qualifications to outright rejection. These categories are outlined as follows:

Category A criticism, internal to the so-called "Moscow School", is a refining process based on the works of V. Illich-Svitych, A. Dolgopolsky and others to which corrections, additions and/or deletions have been made in keeping with on-going research. V. Shevoroshkin, V. Dubo and S. Starostin are some of the leading scholars in this category.

Category B criticism, both internal and external comes from American scholars such as Allan Bomhard, the best known, who have developed an alternative reconstruction of Nostratic.

Category C Criticism comes generally from specialists in one or more of the daughter language families. This group, finding the hypothesis interesting, has mixed feelings and suspends judgement pending further evidence. Sometimes referred to as the "Agnostics".

Category D criticism is generated from cladistic/lexicostatistic/computer based techniques yielding correlation figures on language comparisons from a group who appear to be more statisticians than linguists. These critics tend to be generally negative in their assessments. There is some overlap between groups C and D.

Category E criticism totally reject the hypothesis.

To assist in the wider acceptance of Nostratic, the paper emphasises the great need for increased interdisciplinary teamwork. Few fields of human endeavour, either in the sciences or humanities, can succeed in isolation. To this end, strategies outside of palaeolinguistics are discussed to support the evidence for Nostratic and thus help inspire

wider interest by the educated public. These include: Genetics/DNA findings, striking methodological parallels from Australian languages and a proposed think-tank.

Preamble

Coming from a professional background outside of academic linguistics, I believe it is in order to offer a brief explanation as to why I have contributed to this Conference which contains papers by some of the world's leading palaeolinguists. Some might accuse me of arrogance and/or ignorance and they are entitled to their opinion. After all, my professional colleagues might react in the same way if a Nostraticist appeared out of the blue to present a geotechnical paper at a conference in my areas of expertise.

So what has motivated me to proceed? The answer can be found in the very nature of Nostratic which links a vast number of different peoples and cultures, making it one of the most exciting intellectual ideas of the twentieth century. This hypothesis, having implications well beyond linguistics and involving pre-history, archaeology, palaeo-demography and genetics, is vital to anybody who is interested in the early history of the human race.

As it is not necessary to be a specialist neurosurgeon to insist that the local hospital acquires a CT scanner, it is equally not necessary to be a palaeolinguist to offer some general observations on Nostratic.

Introduction

The term *Nostratic* was coined by the Danish linguist Holger Pedersen from the Latin adjective *nostras* (genitive *nostratis*) meaning *of our country, native*.

As defined by Illich-Svitych and by Dolgopolsky, the Nostratic macrofamily includes the following six language families:

- Indo-European
- Afroasiatic aka Hamito-Semitic (N. Africa and the Middle East)
- Kartvelian (South Caucasian)
- Uralic-Yukaghir (N. Europe extending into Siberia)
- Altaic- (Turkic, Mongolian and Tungusic)
- Dravidian (South Indian)

Renfrew (1999), in his introduction to the conference - *Nostratic: Examining a Linguistic Macrofamily*, however, remarks on the problematic nature of this list in which even Altaic is regarded as controversial by some linguists. Conversely, he notes that Dolgopolsky would today expand Altaic to include also Japanese and Korean. Some scholars such as Mudrak, Bomhard and Greenberg also include Eskimo-Aleut in the macrofamily. Further, some of the members of the Moscow school, notably Starostin, (1999:137) would set the Afroasiatic family adjacent to, rather than within the Nostratic macrofamily.

Renfrew further adds that the position of Dravidian within Nostratic is also considered marginal by some scholars with Dolgopolsky even having his doubts. The

picture is further complicated by Greenberg (2000), who besides Eskimo-Aleut, also added Chukchi-Kamchatkan, Japanese, Korean, Ainu and Gilyak to the original Illich-Svitych list but excluded Afroasiatic, Kartvelian and Dravidian.

Aims

There are three main aims of this paper.

1. The first is to attempt to address the question why Nostratic is still neither widely known by the public nor accepted by the majority of linguists, given the tremendous advances made in research over the last century.
2. The second is to look at the types of criticism levelled at Nostratic and to analyse them in five categories. These are illustrated by citations from the critical literature, of which there is no shortage.
3. The third aim is to propose non-linguistic strategies to support the evidence for Nostratic and thus help inspire interest and wider acceptance by the general educated public.

Nostratic ? Nostradamus ? Cosa nostra?

These are typical replies when Nostratic is mentioned to my friends and colleagues of diverse professional backgrounds, many of whom have at least a nodding acquaintance with Proto-Indo-European (PIE). In addition, an informal survey I carried out revealed that the Nostratic hypothesis is almost completely unknown, even among academic linguists in our four universities in Sydney. Additionally, a database search of four leading east coast Australian universities, each with good linguistic departments and well stocked libraries turned up the grand total of four texts on the subject.

And what of a curious person consulting the *Oxford Concise Dictionary of Linguistics* by Matthews (1997:247) for enlightenment? The entry reads:

“Nostratic”: (note Matthew’s sarcastic quotation marks)
 Conjectural family of languages whose branches are usually said to include at least *IE, *AA etc (the Illich-Svitych list). *Divers others are added by divers enthusiasts.....* An old conjecture, but despite continuing attempts to give substance to it, *still the kind of hypothesis one believes to the extent that one believes in that kind of hypothesis.*” (My italics).

One might ask if our curious person would bother to proceed any further after this putdown. After all, the learned author is Professor of Linguistics at Cambridge University, no less. Nostratic does suffer from a severe image problem!

And try convincing somebody that English, Arabic, Hungarian and even possibly Japanese are all distantly related via Nostratic. Well, it is all against "common sense", isn't it?

In spite of the extraordinary volume of existing scholarship on Nostratic, this hundred year old hypothesis has still not been accepted widely by the linguistic fraternity and the general public. Why is this the case?

Some cultural and political reasons are suggested below.

The cultural, philosophical, artistic and linguistic differences between the "Anglo World" - USA, the UK, Australia, Canada, NZ - and Continental Europe are very marked indicating two quite distinct *Weltanschauungen*. Significant differences are evident during the first half of the 20th century between the main philosophical thrust of the Oxford School - Bertrand Russell, for example - obsessed with abstruse mathematical logic, and the French socially engaged schools of existentialism of Camus and Sartre and, later, Derrida's deconstructionism. Or a comparison could be made earlier in the century on the great European experiments in art - impressionism, cubism and dadaism and the conservative art of the Anglo World.

Over this period Anglo linguistics, especially in the USA, was heading into the directions of Chomsky's Transformational/Generative Grammar and his School, leaving historical linguistics as an "old-fashioned" discipline to the Europeans, in particular the Moscow School.

Analysing the situation more technically from a linguistic perspective, linguistics in the Anglo-world grew out of anthropology, while in Europe it grew out of philology in which Nostratic and PIE were practiced as philological arts/sciences. On the other hand, the theory of Anglo descriptive linguistics, based on De Saussure's structuralism, separated language into synchronic/diachronic and denied the possibility of historical work without written ancient texts.

On the political level, the deep enduring mistrust of all things Russian has also been a significant factor in the slow acceptance of Nostratic. Additionally, the problem was exacerbated by the fact that all of the 1960s seminal works were in Russian, rather than the far more accessible English, French or German languages.

A critique of the critics

Criticism is grouped under five main categories designated A to E, ranging from "in school" debates to outright rejection.

Category A criticism, internal to the Moscow School, is a refining process based on the works of Illich-Svitych, Dolgopolsky and others to which corrections, additions and deletions are made in keeping with on-going research. Shevoroshkin, Ivanov, Dybo and Starostin are also among the best known scholars but this list is by no means complete. An excellent cross section of the writings of this School is presented in *Typology, Relationship and Time* edited by Shevoroshkin and Markey (1986).

The substantial foreword by the Editors includes, among other topics, an informative and succinct history of comparative linguistics, methods of comparison,

Dravidian, Indo-European, Kartvelian, the development of Nostratic and the disagreements between the Moscow and American Schools.

As for the essays in the volume, Ivanov(1980:1-26) clarifies the difference between a proto-language and a mere system of correspondences. By the same author (Ivanov, 1972:51-56 & 1977:57-65), there are two reviews on Vol I and II of Illich-Svitych's *Dictionary of the Nostratic Languages*. Dolgopolsky(1964:27-50) discusses a probabilistic hypothesis on the oldest relationships among the language families in Northern Eurasia, including an interesting list of the frequency of replacement of 250 semantic values over time.

Gamkrelidze and Ivanov (1980:87-108) discuss the reconstruction of the PIE stops and glottalised stops from the traditional reconstructions to modern interpretations. There is also a dissident paper by Serebrennikov (1983:66-86) entitled *On the So-called "Nostratic" Languages*, the title speaking for itself.

Leaving the technical arguments in the above text to the specialists, I offer the following observations on their overall presentation. Clear, user-friendly, persuasive presentation of complex data and results is an area in which I am well qualified from my professional life embracing consulting, teaching, technical report writing and design/delivery of seminars.

Many of the above papers and Nostratic literature in general leave much to be desired in their readability. Four such problems are:

1. Clutter on the page: too many comparative etyma being jammed haphazardly together, mixed with citations of sources, authorities, journals and quotations.
2. Inconsistent and/or non-standard use of phonetic symbols from author to author often without an explanatory key.
3. Omission of sketch maps in papers discussing obscure language families of say, the Americas or Africa, on the assumption that all readers would be familiar with these specialist areas.
4. Launching directly into detailed lexical comparisons without a short general introduction on the historical/cultural background of the families.

An example of some of these problems is illustrated by Dolgopolsky (2002) in the *Three Entries from the 'Nostratic Dictionary'* in which a wealth of valuable scholarship is buried in a swamp of poor graphic page design.

However, these comment could apply to much of the output from the Moscow School and to European linguists in general.

Category B criticism, both internal and external comes from outside of the Moscow group with an alternate reconstruction of Nostratic: the most prominent scholar is the American, Allan Bomhard. *The Nostratic Macrofamily- A Study in Distant Linguistic Relations* by Bomhard and Kerns (1994) systematically surveys the Nostratic

languages, their comparative phonology, morphology and syntax and includes a 60 page dictionary of English meanings with their Proto-Nostratic roots. At the 2003 Centennial Conference, the author generously presented all delegates with a CD of his recently updated book which goes into considerable more detail than the earlier text cited above.

In this CD text, Bomhard (2003:22) presents a family tree showing the relationship between the following Nostratic languages:

- Indo-European
- Kartvelian
- Afrasian
- Uralic-Yukaghir
- Elamo-Dravidian
- Altaic
- Chukchi-Kamchatkan
- Gilyak
- Eskimo-Aleut

Further in the same text on p. 35, Sumerian is also included and discussed, a language that is generally not included by other authors. Chapter 2 - *A Survey of the Nostratic Languages* (p.27-36) does not discuss Etruscan (from the 1994 list) although Etruscan roots are cited sporadically later throughout the body of the text.

In contrast to my Category A criticisms on layout, presentation and general readability, Bomhard's book is lucidly presented overall including phonological correspondences and the like in clear tabular format. In addition, it has around a dozen maps (p.245 et seq) covering the homelands, distribution and dispersal of IE, Nostratic and agriculture.

The technical differences between the two Schools, *Critique of Muscovite Views on Nostratic*, are outlined by on page 18.

Category C criticism comes generally from specialists in one or more of the daughter language families who, finding the Nostratic hypothesis interesting, have mixed feelings and suspend judgement pending additional evidence. Their reviews, at best, are generally lukewarm and when they agree, it can be a case of "damning with faint praise". Unfortunately, this category is probably the majority position.

Some typical opinions follow:

"With respect to the validity of the (Nostratic) reconstruction, I suggest that a number of characteristics of the reconstruction makes it less than optimally testable, in particular unexplained irregular developments, the use of unspecified segments, the size of the reconstructed phoneme inventory and the positing of synonyms. I suggest a criterion of 'openness' to make such problems explicit, thus facilitating the dialogue between scholars advocating and rejecting the Nostratic hypothesis Comrie (1999:243)

" I am essentially a 'splitter' who is perhaps (if rather somewhat romantically) attracted by the ideas of the 'lumpers' but who is not convinced and doubts the methodological integrity of 'lumping'. Appleyard (1999:289)

(Note: 'Lumpers' are quick to see the genetic connections between large linguistic units while 'Splitters' identify and quantify smaller units such as language families or branches.)-

" Nostratic can be viewed, in many ways as a religion: either you believe or you do not" Kaye (1999:327)

"The enormous potential of Nostratic studies to contribute to our understanding of human linguistic history" Vine (1998:85)

"The eventual success any such serious investigation may find will be proportional to the precision and depth of its analyses, which would very likely be enhanced by structured programs of cooperative and collaborative research" Vine (1998:103)

"..... give support to the possibility that we will soon develop a reconstruction of Nostratic, consistent with what we know of the attested daughter languages, and plausible as a real language once spoken by real people." Manaster- Ramer et al (1998:79)

The Category D critics are the cladistic/lexicostatistic/computer group who calculate correlation figures on language comparisons, treating Nostratic as an exact science. Their results are often inconclusive or negative. My own gut feeling, having had a fair bit to do with computers, is one of scepticism that computers can achieve what a learned specialist in any field cannot.

Their great advantage lies, however, in the skills of the cyber- priesthood in conning the often computer semi- illiterate humanity specialists into thinking that their programs are infallible.

Some of the published papers in this area appear to be naive. They simply list two lexical sets and program the computer to find matches between consonants to produce correlation coefficients allegedly showing the degree of relationship between the two languages.

An example of this genre is *An Algorithm to Align Words for Historical Comparison* by Covington (1997:1-17) of the Artificial Intelligence Centre of the University of Georgia, USA. In this method, arbitrary penalty scores are allocated to consonant alignment mismatches. Some human, rather than artificial intelligence would have been far more productive.

Kondrak (2000:288-295) presents a method of identifying cognates in the vocabularies of related languages based on multivalued features, keyword selection and the Program WordNet. Using this sophisticated mathematical approach applied to four Algonquian languages, he found that the method is capable of discovering on average

nearly 75% of cognates at 50% precision. (my emphasis). This is the same probability from a tossed coin!

Ringe(1998:187) concludes that:

“Indo-Uralic is probably the part of the Nostratic hypothesis that is most likely to be correct; yet **sober statistical testing** of the relationship can barely establish it even probabilistically” (my emphasis)

This conclusion might be a good argument against probabilistic methods and/or sobriety. It contradicts the not insignificant evidence that Uralic and IE are related as demonstrated, for example, by Hyllested (2003) in his convincing reconstruction of a sizable Proto Indo-Uralic vocabulary from PIE and Proto-Uralic roots.

Finally, an example from Ringe, Tandy and Taylor (2002:59). I was unsure if this is meant to be a joke, at their own expense: if so, it's good to see computer people with a sense of humour. Using a set of 329 characters all within the IE family, a phylogenetic tree was computer generated showing Old English located solidly within the Satem core, on adjacent branches to Avestan, Vedic, Lithuanian and Old Church Slavonic. The tree also could not place Albanian anywhere: possibly the Albanian word got lost among the trees! (Note: the Editor assured me that the authors were not joking. Sad!)

It is fortunate that computers were not around when the great early comparative historical linguists demonstrated that Armenian belonged to the IE family. Computer analysis would have rejected any correlation between the numbers *erk'u* (2) and *erek* (3) of Classical Armenian and the IE forms of **duwo* and **treyes* respectively. It would appear that by the time intelligent lists of cognates have been drawn up by competent linguists for the software to process, 99% of the work has already been done.

Finally, McMahon and Mc Mahon (2002:3) make some very thoughtful points in their *Lies, Damned Lies, and Cladistics: Linguistic Classification and Genetic Correlations*. They quote a comment from Michael Cysouw who responded electronically to a computer generated phylogenetic tree confirming a highly congruent relationship between Austronesian genes, language and migrations (Gray and Jordan, 2000:1052).

Cysouw states:

“As far as I can see, nothing new results from their analyses. ... So it seems possible to publish an article in *Nature* just by using the right computer program and forget that many years of research have been performed in linguistics to be able to perform these analyses.”

Category E critics totally reject Nostratic. Three of the harshest critics include Don Ringe, Larry Trask and Lyle Campbell. The paper has presented a number of comments by Ringe in the previous section so just one final quote is included here.

“In any discipline that deals with real world phenomena, empirical proof is basic to everything else. If after 10 millennia (or 12, or whatever the

threshold is exactly) the similarities between diverging languages of common origin become indistinguishable from similarities that could easily have arisen by random chance, language relationships at that and greater time depths simply cannot be posited by scientific linguists; no other conclusion can be accepted. Ringe (1995:72)

However, other interpretations and conclusions can indeed be accepted, as illustrated by the following remarks by Baxter (1998:234):

“It is clear and quite uncontroversial, that probabilistic methods can help us decide whether apparent resemblances between languages could be due to chance. But probability theory has its own standards of caution and rigour, and the techniques of hypothesis testing are subtle and notoriously subject to misinterpretation. In particular, a significance test tests only one hypothesis at a time; the results are relevant to that one hypothesis, and only if the test is well constructed and carefully interpreted. As much as we might wish for an empirical test to determine whether a language relationship could ever be demonstrated, probabilistic tests simply do not have this power.”

Trask (1999:157) appears to have very deep seated objections to macrofamilies in general:

“The real question, in my view, is not why isolates exist, but why families exist – and above all large families. Why should there be large families like Indo-European and Austronesian? Why should Nostratic exist? How could it exist? And furthermore, even if it somehow does exist, how can it have the properties ascribed to it?”

It is hard to know if he is being serious, or just stirring, but yes, Trask is after all an expert on the Basque isolate. If Basque is unrelated to any other known language on the planet, why should language families exist?

I just find it hard to visualise our Palaeolithic ancestor, **Ug?walo*, sitting on a rock when suddenly a wild Przewalski gallops by to the startled exclamation of **Ekwo*, **Ekwo*!, the name having just materialised out of thin air.

Lyle Campbell (1998:145) does not beat about the bush:

“I personally reject the Nostratic hypothesis”

Campbell (1999:179), commenting on Dolgopolsky's *The Nostratic Macrofamily and Linguistic Palaeontology*, states:

“Nearly all of Dolgopolsky's 124 Nostratic lexical sets exhibit serious problems from the point of view of methodology”.

This contrasts sharply with the assessment of Starostin (1999:137) who asserts that:

“Most of the lexical material that he (Dolgopolsky) presents is valid and reflects, in my opinion, a deep genetic unity of the languages included – I E, Kartvelian, Altaic, Uralic, Dravidian and Hamito-Semitic.”

Nostratic, quo vadis ?

As discussed previously, two of the most damaging objections levelled against Nostratic are the existence of substantial disagreement among scholars on the macrofamily membership, typified by Matthews (1997:247) and the argument regarding random chance at great time depth typified by Ringe (1995:72 and 1998:187).

Strategies to provide auxiliary evidence to at least partially address these problems are:

- Archaeogenetics (DNA) methods to clarify or perhaps even confirm family membership.
- Parallels from Australian languages illustrating that similarities in phonology, grammar and vocabulary do persist at great time depths contrary to the claims of glottochronology.
- To conclude: a think tank is proposed to plot future directions for Nostratic.

The evidence from archaeology is not discussed here as the significant contributions from this field are well known and acknowledged.

Archaeogenetics

Personal discussions with some delegates at the Conference and elsewhere indicated scepticism towards the genetic/ DNA approach. The reason usually cited is that genes do not determine the language spoken, a statement with which I fully concur. Another unspoken factor appeared to be that some scholars, exclusively occupied with the minutiae of their own specialist area, were reluctant to spend the extra effort on time-consuming interdisciplinary teamwork. Others were not even keen to work with archaeologists, stating that the latter think differently from linguists (this could be a distinct advantage !)

However, there is a good case for archaeogenetics to be used not as primary determinants of family/phylum membership, but rather as auxiliary supporting evidence to confirm or clarify the linguistic evidence. Some examples are presented here.

Cavalli-Sforza (2001:150), one of the great founding fathers of archaeogenetics, states:

“Let me start by emphasizing that there is no reason to think that genes influence the ability to speak one language over another”.

However, he continues:

“Linguistic evolution is a special type of cultural evolution..... How is it possible for these two different systems to follow parallel evolutionary trajectories, or to coevolve? The explanation is quite simple. Two isolated populations differentiate both genetically and linguistically. Isolation, which could result from geographic, ecological or social barriers, reduces the likelihood of marriage between populations, and as a result, reciprocally isolated populations will evolve independently and gradually become different. Genetic differentiation of reciprocally isolated populations occurs slowly but regularly over time. We can expect the same thing to happen with languages: isolation diminishes cultural exchange, and the two languages will drift apart. In principle, therefore, the linguistic tree and the genetic tree of populations should agree, since they reflect the same history of populations splitting and evolving independently.”

While qualifying the above by the obvious disruptive effects of military and cultural conquests on isolated populations- citing the Hungarians, Finns, Lapps, Ethiopians, Tibetans and others- he is confident that it is still a powerful principle. His genetic/linguistic trees covering most of the world's language families, including Nostratic as a Superphylum together with a “calibration” tree for the IE family are shown on the following pages, identified as Figures 12 and 13 respectively.

Spencer Wells (2003) relies on more recent genetic techniques involving DNA mutations on the male transmitted Y-chromosome. This method is far more sensitive in determining minor differences in populations than the earlier technology involving female mitochondrial DNA (mtDNA) used by Cavalli-Sforza for much of his research.

In addition to copious research findings from Europe and the Middle East, Wells presents genetic evidence in support of Greenberg's proposition that the Amerind family was introduced by the earliest migration into the Americas because it is the most widespread and is the only one spoken in South America. Wells (2003:143) states:

“The genetic data bear this out, with Amerind speakers in both North and South America sharing high frequencies of the mutations M₂₄₂ and M₃ – marking them members of the Siberian clan. The mtDNA data obtained by Torroni and Wallace also supports an early Amerind settlement of the Americas. It seems likely that our Beringian hunters were speaking a language that was ancestral to modern Amerind languages, and that 12,000 years of divergence has produced the extraordinary linguistic variety we see today.”

Three examples relating to questions posed by papers from the Centennial Conference are discussed where DNA research might be able to confirm/clarify tentative conclusions.

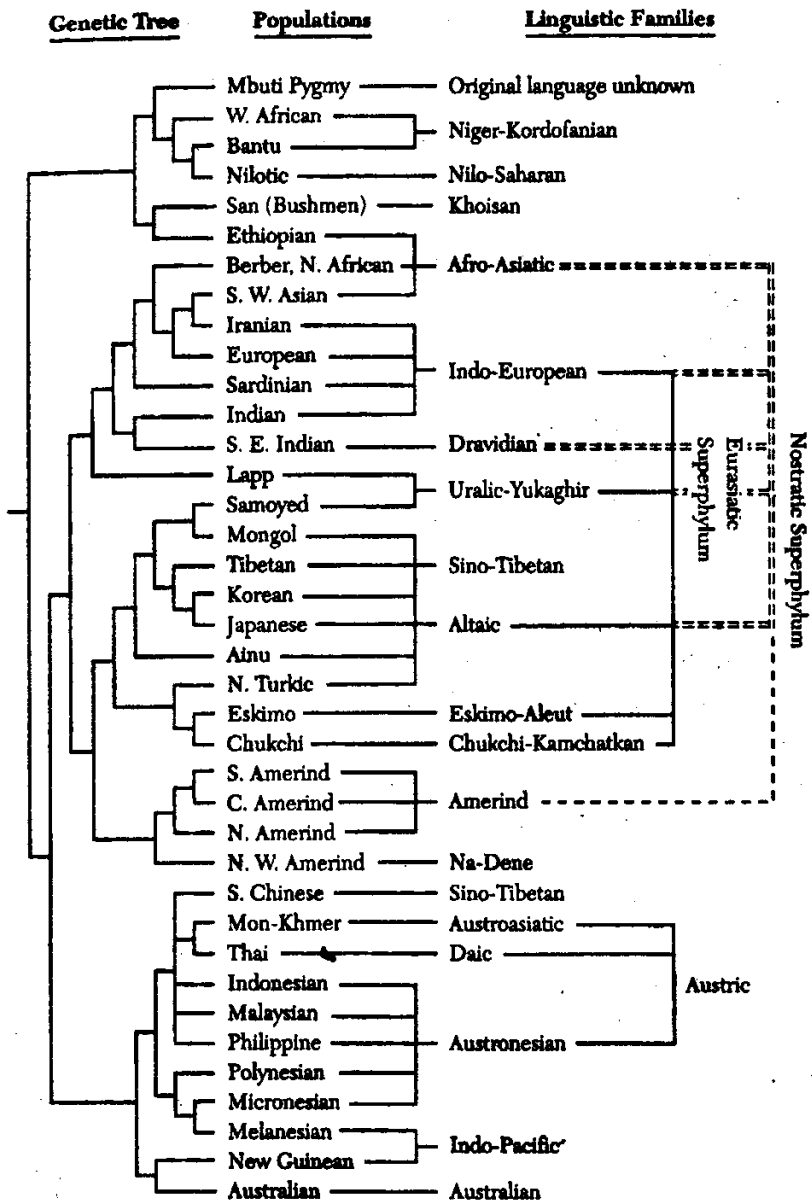


Figure 12. The comparison of genetic and linguistic trees (Cavalli-Sforza et al. 1988, pp. 6002-6).

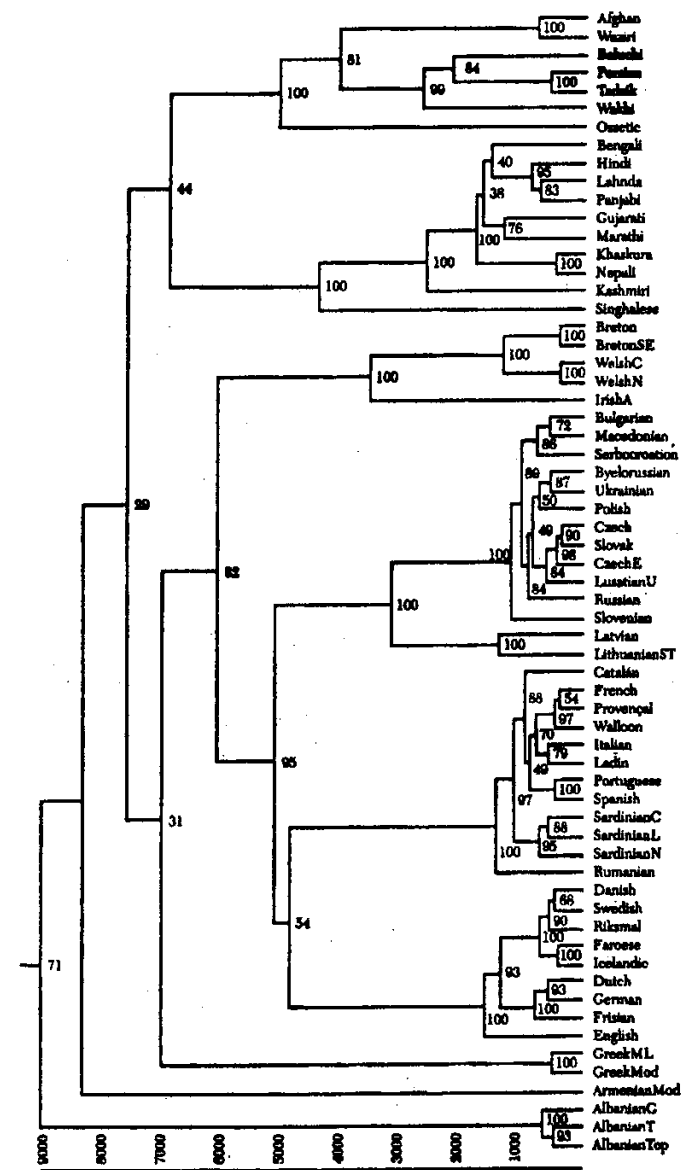


Figure 13. Tree of 63 Indo-European languages. Numbers near branches indicate the reliability in percent of the specific branch, calculated by the method of the bootstrap. The scale on the bottom indicates years. (From an unpublished manuscript by Piazza, Minch, and Cavalli-Sforza, based on data from Dyen, Kruskal, and Black 1992)

Shevoroskin (2003:24) concludes:

"It seems, the Sa-Wk (Salish-Wakashan) languages are closer to NC (North Caucasian) than Yenisean and Sino-Tibetan languages are. This may mean that the Sa-Wk languages represent a late wave of the speakers of proto-NC which broke away from the majority of the speakers and drifted to the North-East." (my emphases)

Genetic data on the populations mentioned might be able to more positively confirm the tentative conclusions.

Another case is that presented by King (2003:15) on conflicting theories of the origin of Yiddish. One theory indicates that Eastern and Central European Jewry (Ashkenazic) is not genetically Semitic at all, rather a Slavo-Turkic people in search of Jewish identity. Genetics appears to have been used successfully here and perhaps further light could be shed on other aspects of this problem by DNA methods. (my emphasis)

Lastly, Bomhard (2003:268) in discussing his inclusion of Sumerian loosely under Nostratic concludes:

"It does not appear to be a Nostratic daughter language in its own right either. Rather, the evidence seems to indicate that Sumerian is descended from a language that was in some way related to Nostratic. However, there are also many problems that must still be solved regarding the exact nature of that relationship."

Wells (2003:170) might offer some clues to the Sumerian question:

"The generally close genetic similarity between Caucasian populations and those from the Middle East suggests that there was a substantial influx of people during the Neolithic, who may have introduced languages related to Sumerian to the region."

Parallels from Australian (Aboriginal) languages

As stated by the archaeologists Mulvaney & Kamminga (1999:74):

"Possibly the Australian language family is the world's oldest and offers a useful model of Pleistocene language development in other continents."

Given the great time depth involved, I believe that if it is possible to reconstruct Proto-Australian, then useful supporting evidence for a similar process in Nostratic is provided.

However, as an offshoot of anthropology, the coherent academic discipline of Australian language studies began only around three decades ago. Some background facts and problems are discussed below.

Unfortunately, of the estimated 250 languages spoken by at least 300,000 Aboriginal people at the time of the first European settlement in 1788, less than ten

thousand people today are speakers of Aboriginal languages as their first tongue. This figure is problematic and varies from author to author; for example Mulvaney & Kamminga (1999:69) estimate that:

"Only a few thousand people today are speakers of the 30 or so extant Aboriginal languages as their first tongue."

For example, Elder Charles Moran (2004), of the Bundjalung tribe of the North Coast of NSW, told me of the sad state of his language today. As his first language up till the age of ten, Charles estimates that some 64 years later there are probably less than a dozen speakers of Bundjalung as their first language.

Amid considerable debate and controversy, there is an emerging consensus that there was once a Proto-Australian language from which the large Pama-Nyungan family broke away and spread widely throughout the continent. The name derives respectively from the word for *person* in a Cape York language and *one* in the southwest. Pama-Nyungan is a typological clustering of about 20 internally homogeneous language groups comprising around 190 different languages. Non-Pama-Nyungan is a group of languages located in Arnhem Land and the Kimberley region of tropical northern Australia and comprises 60 languages in about nine families.

Ongoing reconstructions of Proto-Australian and Proto-Pama-Nyungan illustrate that similarities in grammar and vocabulary can persist over great time depths, well exceeding that of Nostratic. The original Australians started arriving at least 50,000 to 60,000 thousand years ago and the picture is complicated by probable successive migration waves, making the exact age of the proto-language that eventually dominated difficult to pin down.

The systematic scientific study of Australian prehistory is very recent, many fundamental questions remaining unanswered, and experts either disagree or avoid the question of the actual age of Proto-Australian (PA). But from what archaeological evidence is known, it can be reasonably inferred that PA is at least 7,000 years old but less than 50,000 years. The 7,000 figure is the upper limit for the estimated age of Proto-Pama-Nyungan. By comparison, the estimated time depth of 12,000-15,000 years for Nostratic is rather modest compared with the probable age of PA of somewhere between 7,000 and 50,000 years. These estimates of course contradict predictions of the glottochronological/ lexicostatistical School that a maximum of 6,000 – 7,000 years for maintenance of recognition between languages is possible. But this too is a point of view that has not been scientifically proven.

A summary of the striking number of common attributes of Australian languages, in spite of the great time depth and separation distances of up to 5,000 Km, is given below:

(This section is based on the Introduction in Thieberger & McGregor (1994) and various other standard texts.)

Phonology:

The majority of languages have:

- up to six stops and six corresponding nasals
- two rhotics and four laterals

- neither sibilants [s], [z], [ʒ] nor fricatives [f] and [v]
- two semi-vowels [y] and [w]
- only three vowels [i], [a], [u] but a few have four or more.

Vocabulary:

There are about 50 common roots. E.g. bu- = to hit., ka- = to carry, mala/mara = hand, jina = foot, nya- = to see. Na- as in nata, naya or nayu = I.

Semantics:

A semantic homogeneity relating to a hunter/gatherer lifestyle.

Wide semantic fields and the use of metaphor are distinguishing features of many languages. For example, the same word often refers to an item and its source, the material from which it comes as in fire/ firewood, milk/breast or activity/result such as sink/ drown, hear/ listen and hit/kill. Metaphors include the use of body parts to extend meanings to geographical or abstract ideas such as back/ridge and chest/front ness.

Grammar:

Complex grammar with many inflected forms of the noun which can include some or all of the cases: nominative, instrumental, locative, allative, ablative, dative, comitative and especially ergative. Similar ergative case endings are found spread throughout the continent: -lu for personal names and -ngku for common nouns.

There is still some disagreement among Australianists on the validity of reconstructing proto-languages using the family tree model in a climate where a dominant diffusionist model once prevailed. However, there appears to be a quiet revolution in progress over the last few years as summed up succinctly by Bower (2002:1):

“Diffusionist models such as ‘punctuated equilibrium’ of Dixon are based on the assumption that linguistic genetic relationships should be able to be modelled on a family tree, and conversely that if one cannot model the relationship between given languages on a family tree, the relationship cannot be a genetic one. Indeed, punctuated equilibrium was invented in part to account for the lack of obvious binary- branching trees within the Pama-Nyungan family.”

Australianists are increasingly turning to the classical comparative method with promising results. Reference is made to; O’Grady (1998), Alpher (2002), Koch (2003), McConvell (2003), Miceli (2003) and Bower & Koch (2004), to name but a few. From these works a consensus is emerging that Australian languages do not require special theories to explain their genesis and development, but are subject to the same comparative laws applied to language families world wide.

To summarise, a case has been presented that if a language family as old as Proto-Australian can be reasonably established with a time depth somewhere in the range 7,000 –50,000 years, what are the objections to the posulated time depth of Nostratic?

A Think-Tank

Nostratic will lose momentum if it tries to advance without becoming multi-disciplinary. By analogy, in my speciality of Geotechnical Engineering, as in ancient language reconstructions, one often works with scanty, fragmented pieces of data, evidence and inferences. This necessitates drawing on any fields of expertise which might further the understanding of complex occurrences such as major landslides. In large potentially dangerous projects this might involve the combined expertise of a multi-disciplinary team comprising: structural geologists, surveyors, groundwater hydrologists, seismic physicists, chemists, meteorologists, mining engineers, human resource managers, lawyers and economists in addition to geotechnical engineers.

A similar approach is necessary in order to fill in many of the gaps and missing links in the evidence for Nostratic.

My proposal is to convene a multi-disciplinary think-tank of experts in Nostratic, associated ancient languages and their descendents, archaeology, prehistory, palaeo- genetics, anthropology, cultural geography and possibly palaeo-climatology. However, this list is flexible and might include other disciplines deemed necessary.

Personal skills of the selected panel members would include good teamwork ability, tolerance, good verbal communication and listening skills and constructive lateral thinking. The members should be preferably broad-brush thinkers, referred to earlier as “lumpers”, rather than “splitters”.

A high priority item on the agenda would be to reach an agreement on the characteristics of the language families in Nostratic and hence try to resolve what this list actually is. Additionally, as it is essential to deal with the objections of random chance of the Category D group, the team would need to include at least one representative chosen for his/her expertise in both lexicostatistics and linguistics.

Finally, as agreed at the Pécs Conference, a book of popular appeal on Nostratic directed at the general reader needs to be produced. As an excellent model, I would strongly suggest *The Atlas of Languages* edited by Comrie, Matthews and Polinsky (2003).

This superbly presented Australian hardcover book, selling for around US \$35, contains 224 glossy pages of coloured maps, photographs, charts, family trees, language examples and descriptive text. It is very readable for non-linguists but contains useful data for linguists as well as it covers virtually all the languages in the world, chapter by chapter. It even devotes a page to Nostratic which is given a very positive review.

Conclusion

Nostratic, one of the truly significant intellectual ideas of the twentieth century is now one hundred years old. Despite prodigious scholarship and research on two continents, much of it during the last 40 years, the idea is yet to win majority acceptance among the linguistic community at large. This paper has attempted to pinpoint the problems, to analyse and appraise the types of criticism and propose future strategies to enable Nostratic to gain wider acceptance both within the linguistic community and with the public.

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