

Sociolinguistic typology and the uniformitarian hypothesis

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One of the fundamental bases of modern historical linguistics is the *uniformitarian principle*.¹ This principle states that *knowledge of processes that operated in the past can be inferred by observing ongoing processes in the present*.

The notion of uniformitarianism can be credited to British scientists, beginning with the work of the Scottish geologist James Hutton, who lived from 1726 – 1797. This was extended in the thinking of another Scot, John Playfair (b. 1748). And it became widely known as a result of the work of yet another Scot, Charles Lyell, in his 1830 work, *Principles of Geology*. The actual term *uniformitarianism* itself, however, was coined by his English contemporary William Whewell. The extension of the concept into linguistics has been chronicled by Thomas Craig Christy in his 1983 book *Uniformitarianism in linguistics*. But the attention that many linguists have paid to the term is due to Labov's book *Sociolinguistic patterns*, from 1972.

The way Labov expresses it, the uniformitarian principle implies that language structures in the past must have been subject to exactly the same constraints as language structures in the present; and that the mechanisms of linguistic change that operate around us today are the precisely the same as those which operated even in the remote past. According to Labov, this leads us to the methodological principle of *using the present to explain the past*: we cannot try to explain past changes in language by

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resorting to explanations that would not work for modern linguistic systems. For example, we cannot happily reconstruct a proto-Indo-European consonantal system which would be typologically bizarre and unexpected from a 21st century point of view.

In this paper I present a sociolinguistic-typological perspective on this issue, where by “sociolinguistic typology” I mean a form of linguistic typology which is sociolinguistically informed and which investigates the extent to which it is possible to produce sociolinguistic explanations for why a particular language variety is like it is. This work is based on the assumption that there is a possibility that certain aspects of social structure may be capable of having an influence on certain aspects of language structure (Trudgill, 2011a). I argue that, insofar as the characteristics of individual human languages are due to the nature of the human language faculty, there cannot be any questioning of the uniformitarian principle. We have to assume that the nature of the human language faculty is the same the world over, and that it has been like that ever since humans became fully human.

But what about if some of the characteristics of individual human languages are due to social factors? My suggestion is that this is in fact the case, and that these social factors, as I have argued at length (Trudgill, 2011a), include:

- degree of language contact;
- type of language contact;
- degree of social stability;
- community size;
- density of social networks; and
- amount of communally shared information

If such social factors can have an influence on language structure, then the common faculty of the human mind will produce different types of language structure in different societies, in different places, at different moments in human history. And that will mean that the linguistic present might not altogether be like the linguistic past; which would in turn mean that the methodology of using the present to explain the past could be less useful as a principle and a technique the further back in time we go.

We do not know for certain how old human language, as we understand it, is. Dixon (1997: 2) mentions 100,000 years as a possibility. Evans (2010:14) suggests that language dates back to “long before” 150,000 years ago. And Foley (1997: 73) says that “language, as we know it, then, was born about 200,000 years ago”. But, whether we are talking about 100 millennia or 200 millennia, this still means that nearly all of the linguistic past took place in palaeolithic societies; and that nearly all the rest of the linguistic past took place in neolithic societies. If the earliest date for the beginning of the Neolithic anywhere in the world was around 10,000 BC, then human languages were spoken during the Middle Palaeolithic, Upper Palaeolithic and Mesolithic periods for 90%-95% of their history. And if the earliest date for the end of the Neolithic anywhere in the world was around 4000 BC, then human languages were spoken in neolithic and pre-neolithic communities combined for 96%-98% of their history. Labov himself, in his discussion of the uniformitarian principle, warns us that we must be “wary of extrapolating backward in time to neolithic pre-urban societies” (Labov 1994: 23). And clearly this admonition becomes even more forceful in any consideration of palaeolithic societies.

There are many obvious respects in which the structure of palaeolithic, mesolithic and neolithic societies was very different from the structure of contemporary societies. In particular, the demography

was very different. Communities were small: Mailhammer (2011: 672) suggests that people lived in groups of 25 to 100 during the final stages of the European Palaeolithic. Because of that, social network structures were dense, and there were large amounts of communally shared information.

There were also many fewer communities. Hassan (1981), as quoted by Nettle (1999: 102), reckons that the human population of the entire world 70,000 years ago was 1,200,00 – about the same as modern Prague or Adelaide.² Such estimates are obviously subject to large margins of error, but in any case the average density of population in the inhabited parts of the globe at that time were very low indeed compared to today. It would of course be an error to imagine a scenario in which the population of Prague was spread out evenly across the entire globe, because obviously there would have been empty areas as well as particular concentrations in different areas. But this thought experiment does make the point that in the Middle Palaeolithic there would have been a much lower degree of intergroup contact than today, and therefore a much lower degree of language contact. And even by the Mesolithic, population density was still astonishingly low by modern standards: Mallory (2013) reports research indicating that the population of Ireland in the Mesolithic³ was about 3,000 or about 0.04 people per square kilometre i.e. 25 square kilometres (c.10 square miles) per person, with comparable figures for elsewhere in the British Isles e.g. a possible total population of 800 for Wales.

Palaeolithic and neolithic societies can be characterised as face-to-face societies, as opposed to the at-a-distance societies which most modern humans inhabit today. Hymes (1974: 50) writes of “cheek-by-jowl communities”. And Givón (1979: 287) uses the term “societies of

² Biraben (1979) suggests a lower figure of 500,00 for 40,000 BP.

³ In Ireland from c. 8000 BC to c. 4000 BC

intimates”. Until the domestication of plants and animals, our ancestors were all hunter-gatherers. They belonged to societies which were very different from “societies of strangers” (Givón, 1984: 249) – the large, complex human groups which began to develop around 10,000 BC and which most of us live in today. According to Givón, for nearly all of human history, human beings lived in societies which were: stable; small in size; culturally uniform; had restricted territorial distribution (with a radius of no more than 20 miles/30kms); and dense social networks. My thesis is that such societies provided a social matrix which allowed linguistic phenomena to develop which are most unlikely to arise today in our own modern at-a-distance societies – a fact which we should take into consideration when extrapolating from the linguistic present to the linguistic past.

In modern times, population size and geographical mobility have increased very dramatically, so that we have had larger and larger language communities, and more and more language contact. It has become much less common to find languages and dialects spoken in low-contact, isolated communities with tightly-knit social networks. So my sociolinguistic-typological perspective leads me to ask: to what extent can we really suppose that what is true of human languages today was also true of human languages in the remote past? And to the extent that it isn't, where does that leave the uniformitarian principle?

I suggest that it leaves us needing to be somewhat cautious about extrapolating from the present to the past as far as certain features of language structure are concerned.⁴ I now therefore proceed to an examination of a number of such caution-inducing features.

⁴ And perhaps even more so about predicting what human languages will be like in the future - if we wanted to do that.

1. Linguistic Features due to Arbitrary Human Invention

One phenomenon of this type is a category of linguistic changes which we can characterise, following Blust (2012), as being the result of “arbitrary human invention”. The sort of phenomenon Blust is referring to is illustrated in his account of vowel metathesis in Hawu, an Austronesian language from the Indonesian Lesser Sunda Islands. Blust calls it “the first case of regular vowel metathesis ever reported”. In Hawu, vowels in adjacent syllables have metathesised according to a regular pattern. The metathesis did not occur unless the original first vowel of the pair was closer or fronter than the second, and the two vowels were separated by a consonant. But if those conditions were fulfilled, it happened without exception. Then, once the metathesis had occurred, the vowel which was now in first position was centralised to schwa. Examples include:

uma	>	əmu	‘house’
iru	>	əri	‘to pull’
pira	>	pəri	‘how much?’

Blust writes:

...if Hawu vowel metathesis is a product of universal phonetic predispositions, there is no obvious reason why phenomena similar to it have not been reported in other languages. By accepting the premise that the optimal explanation for a linguistic or cultural trait is inescapably tied to its geographical distribution, we are clearly forced to seriously consider some cases [of sound change] as products of arbitrary human invention. (2012: 230)

As Blust said in an earlier discussion of “bizarre” sound changes in Austronesian languages, “speakers may sometimes engage in a conscious,

arbitrary manipulations of linguistic symbols” (2005: 264). In other words, the only way he can think of explaining some phonological changes in Austronesian languages is to suppose that speakers produced these sound changes deliberately – they did it consciously and on purpose. One such change is the Proto-Manus prenasalised alveolar trill /^hdr/ which, extraordinarily, become an aspirated voiceless velar plosive /k^h/ in Drehet, one of the languages spoken on the Admiralty Island of Manus in Papua New Guinea (2005: 226).

In case we feel a bit sceptical about linguistic change being indulged in by speakers deliberately, Blust refers us to Laycock’s description of a change in the Uisai dialect of Buin on Bougainville: all masculine nouns have become feminine, and all feminines have become masculine. Laycock says “there is no accepted mechanism for linguistic change which can cause a flip-flop of this kind and magnitude”, so we have to assume that

at some stage in the past, some influential speaker of the Uisai dialect announced that from now on his people were not to speak like the rest of the Buin. Once the change was adopted, it would become the natural speech of the community within one or two generations” (Laycock 1982: 36).

A similar arbitrary switch in a nominal classification system is described by Schadeberg (1981) for the Kordofanian language Laro/Laru. He reports Stevenson (1956: 99) as saying that “the Laro story is that this was done deliberately to confuse their neighbours”. And Nettle (1995) has written about the possible role of individuals: “if a group consists of just a few hundred people, the idiosyncrasies of one very influential individual can spread through it very easily” (1999: 138).

The moral would seem to be that, as we look further back into the linguistic past, the more we should be on the alert for such features.

Arbitrarily invented sound changes and gender switches are not the sort of developments which are likely to succeed as linguistic changes in most contemporary societies of strangers. But in the remote linguistic past they could well have been more common than they are now. Historical linguistic reconstructions involving unlikely-seeming phonological or grammatical developments should perhaps not necessarily always be rejected out of hand if there can be an possibility of their having been introduced intentionally.

2. Linguistic Features due to Non-Anonymity

A second example of a linguistic phenomenon that could only have developed in a face-to-face society comes from the work of Uri Tadmor (2013). Tadmor is the first linguist to have worked on Onya Darat, a West Malayo-Polynesian (Austronesian) language which is spoken in the interior of southwestern Indonesian Borneo. According to Tadmor, the Onya Darat personal pronoun system distinguishes between singular, dual and plural; and it also has an exclusive vs. inclusive distinction in the 1st-person dual and plural. But, remarkably, it also has another very unusual grammatical category: generational affiliation.

The way it works is that the singular pronouns indicate the generational affiliation of the referent vis-à-vis the speaker, with the two-way distinction of forms being between pronouns for members of the same or a younger generation, on the one hand, and pronouns for members of an older generation, on the other. The dual and plural pronouns work differently. They indicate generational relationships, with the distinction being between pronouns for members of the same generation and those for a different generation – except that the 1st-person dual and plural inclusive pronouns don't do this.

As an example, the 3rd-person forms are as follows:

singular \leq	<i>iyo</i>	(s)he [same or younger generation than speaker]
singular $>$	<i>idoh</i>	(s)he [older generation than speaker]
dual =	<i>doduh</i>	they two [same generations as each other]
dual \neq	<i>damaaq</i>	they two [different generation from each other]
plural =	<i>diyen</i>	they [same generation as each other]
plural \neq	<i>denaq</i>	they [different generations from each other]

So if a woman was talking about her granddaughter and her great-granddaughter, she would have to say *damaaq* 'they (dual)', but if she was talking about her two granddaughters she would have say *doduh* 'they (dual)'.

Obviously, a system like this can only work in a society where everybody knows everybody else: generation does not necessarily match with age – your nephew might perfectly well be older than you. A speaker actually has to know the generational affiliation of absolutely everybody in the community to be able to use the correct pronoun.

This system, Tadmor says, always used to work very well, because every village consisted of a single longhouse. A newly established village would have maybe six families, an older village perhaps sixty – but "crucially all the inhabitants of the village lived in the same house and knew each other intimately" (Tadmor, 2013). Sadly, destructive logging of the forest habitat has now more or less destroyed this traditional way of life; the longhouses are disappearing – and the pronoun system is disappearing with them.

This feature is quite possibly unique amongst the languages of the modern world. But it is worth considering the possibility that perhaps, in the remote past, it was not.

3. Linguistics Features due to Non-Optimality

Nettle (1999) points to a further interesting possibility concerning small language communities. He considers the issue of word order in the typology of the world's languages. He points out that languages with canonical object-initial constituent order are exceedingly rare. Until relatively recently, in fact, this order was widely believed to be non-existent, in spite of the fact that it had been reported e.g. Beauvoir, (1915).⁵ Most linguists became aware of the possibility only with the publication of Derbyshire's paper (1977) on OVS order in the Amazonian language Hixkaryana.

Nettle also points out that all OVS and OSV languages are spoken by small or very small numbers of speakers. His suggestion is that this is not a coincidence. And he has an explanation for this. He accounts for both the rarity of object-initial order, and for the small numbers of speakers in communities speaking languages which have it, by using an argument from statistics. In population genetics, the effects of random change are known to be greater when the population is small. "This is because the probability of a slightly deleterious variant becoming fixed in a population is inversely related to the population size. The smaller the community, the greater the stochastic chance of changes in gene frequency" (Nettle 1999: 139). Nettle hypothesises that the same is true of linguistic communities, and of linguistic features. Then, importantly, he suggests that non-optimal word orders are "more likely to be found in small communities than in large ones, since these would be more vulnerable to drift away from optimal states" (1999: 139).

As to what might be non-optimal about object-initial order, Givón (1984: §7.3) argues that SOV is in some sense the basic order – and indeed the earliest pattern to be found in human language – and is

⁵ As pointed out to me by Harald Hammarström

favoured by factors to do with the role of the position of agent/topic and goal/object in the origins of human communication; he also argues that diachronic development to SVO, VSO or VOS, where this has occurred, has been favoured for reasons of a discourse-pragmatic nature (1984: §7.11). OVS and OSV, however, are not favoured in either way. And there is in fact a considerable body of more recent work indicating that there is a strong default tendency for listeners to perceive the first noun phrase in a construction as being the agent, something which disfavours object-initial order (Primus, 1999; Bornkessel, 2002; Demiral et al, 2008; Wang et al, 2009; Hawkins, 2012).

At earlier periods of human history, there were a higher proportion of small communities than there are today, and it is therefore not entirely unreasonable to suppose that there might have been more object-initial languages in the world. This is at least a possibility we should be alert to when considering the remote linguistic past.

4. Linguistic Features dues to Dense Social Networks

Wohlgemuth (2010: 271) writes that, although “one cannot establish direct correlations other than the rather vague implication that rare characteristics can be found with clearly more than chance frequency in languages which have a small speaker community”, it is still true that “there are significant differences between the rarity index distributions of small languages versus the huge sample of WALS languages”.

Andersen (1988) has made what I would like to argue is a related observation. He has proposed a sociolinguistic correlate of the development of marked as opposed to unmarked sound changes. He points to unusual sound changes in dialects which “are located in peripheral dialect areas, away from major avenues of interdialectal communication”, and his hypothesis is that “there is a connection

between the limited socio-spatial function of a dialect, its relative closeness, and its ability to sustain *exorbitant phonetic developments*" (1988: 70, my italics). Andersen argues that "dialects that serve predominantly local functions are more prone to elaborate phonetic detail rules than dialects with a wider sphere of use".

Andersen cites, as an example of a sound change which would seem to fall into the category of "unusual", an "unprovoked fortition" which strikes many historical linguists as odd. This is a – significantly – historically unconnected series of developments of parasitic velar consonants out of high or mid vowels, in several isolated areas of Europe. This has occurred in dialects of a number of languages, including Romansch, Provençal, Danish, German and Flemish – changes which are absent from metropolitan varieties and less isolated varieties of the same languages. The Danish dialects Andersen cites are spoken in out of the way places including "the extreme western, most isolated parts of Funen and Jutland" (1988: 70). Examples include *bi* [bik] 'bee'; *missil* [misigl] 'missile', *hel* [hekl] 'whole' (Nissen 1945; Nielsen 1947; Søndergård 1970).

These unprovoked fortitions do seem to be confined to small communities in geographically remote and/or peripheral areas. In Romansch, for instance, parasitic consonants occur in three separate and non-contiguous dialects – suggesting independent development – in the upper reaches of three separate river basins, namely the Inn, the Albula, and the Oberhalbstein branch of the Rhine. And this appears to be true elsewhere in the world also (Mortensen, 2012).

How can we account for Wohlgenuth's observations about unusual features; and Andersen's observations about unusual changes?⁶ One line of reasoning might be as follows. Grace (1990: 126) writes:

A language exists in the people who speak it, but people do not live very long, and the language goes on much longer. This continuity is achieved by the recruitment of new speakers, but it is not a perfect continuity. Children (or adults) learning a language learn it from people who already speak it, but these teachers exercise considerably less than total control over the learning process.

We can accept that no 'teachers' exercise total control over inter-generational transmission, but Grace's perspective also allows us to suppose that 'teachers' in some societies may have more control than in others. This will be due to differences in social network structure. Small stable societies are much more likely than larger societies to have dense social networks with strong social ties.

There is therefore the possibility that small tightly-knit communities are better able to encourage the preservation of norms, and the continued adherence to norms from one generation to another, with concomitant relatively slow rates of linguistic change (Trudgill, 2011a). But, though linguistic change will tend to be slower, when changes do occur there is a greater chance that they will be of a marked type. Not only are small communities more able to have a decelerating effect on the rate of change. They are also more able, because of their network structures, to push through, enforce and sustain linguistic changes which would have a much smaller chance of success in larger, more fluid communities – namely changes of a relatively marked, complex type. (There is no suggestion

⁶ It does not follow of course that unusual changes will necessarily give rise to unusual features.

that this is done overtly, however: the mechanism responsible will be the frequency and density of face-to-face interaction.)

If this is correct, then it may well be that *innovations* of a marked type occur with roughly equal frequency in all types of community, but that it is simply the case that these innovations are more likely, perhaps much more likely, to succeed and become established as linguistic *changes*, i.e. innovations which are accepted and become permanent, in communities with tighter networks.

If we accept that this type of social structure was more common in prehistory than today, then there might have been more linguistically marked rarissima, of the type discussed in Wohlgemuth & Cysouw (2010), and more marked changes, in prehistory also. We should be prepared, as we go back in time, to discover more changes which are exorbitant, and more features which are marked, rare, or very rare.

5. Linguistic Features due to Communally Shared Information

Another characteristic of face-to-face societies is that they have large amounts of communally shared information. Givón calls it ‘informational homogeneity’ (Givón 1979: 297).

Kay (1976: 18) argues that this factor has linguistic consequences. He says that:

in small, homogeneous speech communities there is a maximum of shared background between speakers, which is the stuff on which deixis depends. As society evolves toward complexity and the speech community becomes less homogeneous, speakers share less background information, and so one would need to build more of the message into what was actually said.

Keenan (1976), too, suggests that deictic systems are better developed in smaller than in larger communities. And Perkins (1995) has demonstrated that there is indeed a correlation between community complexity and the

number of deictic markers in a community's language.

One example of extensive development of deixis is provided by large personal pronoun systems. These are clearly “cross-linguistically dispensable phenomena” (Dahl, 2004 – see below): Finnish makes do with six personal pronouns while !Ora has 31. Siewierska (2004: 111) says that !Ora has the fullest pronoun paradigm she has ever seen. !Ora is a Khoekhoe language which *Ethnologue* showed to have 50 speakers in 1972 and which is now extinct. The 31-pronoun system distinguished between male, female and common gender in the first and second as well as third persons; it had dual number; and contrasted exclusive and inclusive in the dual and plural. Perhaps, we can hypothesise, such systems were more common in pre-history than they are today.

The same can also be hypothesised for large systems of grammatical evidentiality. Aikhenvald's work has indicated that “complex evidential systems, in their vast majority, are confined to languages with smallish numbers of speakers, spoken in small, traditional societies” (Aikhenvald 2004: 355). She also provides an excellent explanatory insight:

being specific in one's information source appears to correlate with the size of a community. In a small community everyone keeps an eye on everyone else, and the more precise one is in indicating how information was acquired, the less the danger of gossip, accusation, and so on. No wonder that most languages with highly complex evidential systems are spoken by small communities. (2004: 359)

There is good reason, then, to believe that highly developed evidential systems may be a linguistic feature particularly strongly associated with small face-to-face societies. And it may very well be, therefore, that they were commonplace in prehistoric languages.

In general, we can suppose that elaborate deictic systems, and extensive evidential systems, were more fully developed in prehistory than is usually the case with contemporary languages.

6. Linguistic Features due to Long-Term Maturation

In Trudgill (2011a) I argued that small, stable communities with dense social networks and low levels of adult language contact tend to be typified, other things being equal (which they often are not), by a higher degree of linguistic complexity than languages spoken in other types of community. I am not alone in arguing this. Braunmüller (1984) has argued that morphological opacity is a typical characteristic of “small languages”. Hymes says that “the surface structures of languages spoken in small cheek-by-jowl communities so often are markedly complex” (1974: 50). And Sinnemäki (2009: 139) has concluded that “language complexity is not necessarily independent of sociolinguistic properties such as speech community size”.

One explanatory factor here, which I suggest we need to be somewhat thoughtful about when extrapolating backwards in time, has to do with *mature linguistic phenomena*. This is Östen Dahl’s (2004) insightful term for linguistic features which need a lengthy period of diachronic development to come into being. According to Dahl, linguistic phenomena “pass through a number of successive stages, during which they ‘mature’, that is, acquire properties that would not otherwise be possible”. Mature phenomena “presuppose a non-trivial prehistory” (2004: 2). They also have the effect of adding complexity to the language in question, notably in terms of increased grammatical agreement and other forms of syntagmatic redundancy; increased irregularity; additional allomorphy and other forms of opacity; and additional morphological categories (Trudgill, 2011a).

My suggestion is that, the further back in time we go, the more we should expect to find a greater proliferation in human languages of mature phenomena, and so of linguistic complexity. Why might this be? Consider Latin. As a highly fusional, inflectional language, it demonstrates plenty of mature phenomena. Dahl discusses the role of fusion in producing mature phenomena, and points to phonological change as crucial in the development of opacity in fusional languages. “Structural condensation”, he says, depends “on phonological condensation – the fusion of two words into one is conditioned by their having been phonologically integrated” (2004: 179). So it is no surprise when he says that in “reviewing the candidates for inclusion in the class of mature linguistic phenomena, we find that the most obvious one is inflectional morphology” (2004: 111). The presence of different inflectional classes and of plentiful irregularity in languages like Latin is also part of the picture. “Lexical idiosyncrasy”, as Dahl calls it, where rules apply to lexical items in an unpredictable way (2004:112), is in itself a mature phenomenon.

But why do the fusional structures and irregularity of inflectional languages require a non-trivial pre-history? And how long a pre-history is “non-trivial”? What do we know about the timing of the morphological-typological changes that lead to the development of inflecting/fusional languages? Fusional inflections develop out of the (originally phonological) fusing of earlier, more analytic structures: “fusional structures depend diachronically upon agglutinating ones” (Dahl 2004: 184). Agglutinating morphology may in turn develop out of clitics, which have in turn developed out of independent lexemes through grammaticalisation processes. As Dixon says, “present-day agglutinative languages may have had an ancestor of more isolating profile, with what were distinct words having developed into grammatical affixes (e.g.

postpositions into cases). The Dravidian family is roughly of this type, and here one can successfully recover a good deal of the proto-language” (1997: 42).

How long might all that take? The theory of the *morphological cycle* (Hodge 1970; Bynon 1977: 265; Dixon 1997) might be helpful here, though I do not actually believe that languages normally go through an entire morphological cycle.⁷ The typological changes which are supposed to characterise the cycle are often portrayed by presenting them graphically in the form of a clock-face, with purely isolating languages like Classical Chinese at, say, 4 o'clock, agglutinating languages at 8, and fusional languages at 12. According to Dixon, Proto-Finno-Ugric was at about 9 o'clock, while the modern languages in the family have moved to 10 or 11 o'clock, with Estonian having moved further than Finnish. If this is right, then we can make an estimate of what sort of chronology we are talking about. According to Campbell (1997), Proto-Finno-Ugric dates back to about 4000 BC i.e. 6000 years ago. Even if modern Finnish has been at 11 o'clock for 1,000 years, this would mean it took as long as 5,000 years to “travel” from 9 to 11; and a little bit of arithmetic indicates that for a language to transform from fully isolating to fully fusional (i.e. from 4 o'clock to 12 o'clock), *if* the same speed was maintained, would take 20,000 years.

This is not actually a serious claim on my part. One of the things sociolinguistic typology focusses on is the extent to which languages change at different speeds under different social conditions at different times. So I claim absolutely no reality at all for this figure. I am merely observing that it does suggest that the development of at least certain

⁷ I do agree, however, that this could happen if the sociolinguistic conditions just happened to be correct at the right times.

mature phenomena may well require millennia to go to completion. A “non-trivial prehistory” may consist of very many centuries.

Crucially, in my view, these must also be centuries with relatively little interruption or “punctuation”, to use Dixon’s term (1997). Periods of serious social instability and large-scale geographical mobility tend to lead to breaks in transmission across generations, and large scale adult language contact. This in turn leads to imperfect language learning, simplification, and loss of mature phenomena and other complexities. Processes which lead to an increase in fusional structures must be allowed to run for a long time, uninterrupted by periods of significant adult language contact. They require the kind of social matrix provided by relatively stable, low-contact communities. I therefore suppose that they, too, may well have been significantly more common in prehistory.

Long uneventful periods of time probably also make for an increased possibility of the development of “junk”: “language families often take on the appearance of old burial grounds, littered with disarticulated fragments of once coherent systems” (Lass, 1997). We can therefore expect to find, as we go back in time, more features like the “many relics of former systems seemingly lying about at random in the inflectional morphology” of Germanic (Lass, 1997: 307). And it is also probable that in pre-history there would have been more of what Dahl (2004) refers to as “cross-linguistically dispensable phenomena” i.e. features which languages can readily do without, such as grammatical gender. As Bybee et al (1994: 297) write, “we do not subscribe to the notion that languages develop grammatical categories because they NEED them”. And if categories are not needed, adult language learning will often lead to their disappearance.

Rice (1999: 392) writes that “the Navajo verb is legendary for its complexity”; and Aronoff (1994: 89) says of the noun class systems of

Yimas and Arapesh that “the complexity of these systems is startling”. If we were to go further back into the remote linguistic past, we might have to be prepared to find a lot more to startle us.

Conclusion

Historical linguistic research does not typically probe too far back into the prehistoric linguistic past, not least because of the constraints which are seen as being imposed by the comparative method. But increasingly scholars are thinking back into the Neolithic (Wichmann, *forthc.*), Mesolithic and Palaeolithic. Some of the papers on the American-Siberian Dene-Yenisean connection in Kari and Potter (2011), for instance, discuss dates as far back as 14,000 BC. And Fortescue (1998) similarly discusses remote linguistic scenarios. Foley, too, goes back many millennia in his discussion of a possible genetic relationship between Australian languages and the Eastern Highlands languages of New Guinea (1986: 269ff).

In considering languages and language relationships in prehistory then, it is as well to consider the sociolinguistics as well as the linguistics, as Nichols (2007: 176) has done, suggesting for example that language contact “may well have been rare in prehistory”. Given that the development of large, fluid high-contact communities is mainly a post-neolithic phenomenon, then a sociolinguistic-typological perspective suggests that the dominant standard modern languages in the world today are not likely to be very typical of how languages have been for most of human history.

This poses an interesting problem for typology. Lots of attention has been paid to the sampling of the world’s languages for typological purposes. It is agreed that we have to avoid *areal* bias in constructing samples, so that languages in one part of the world are not

overrepresented; and that it is also vital to avoid *genetic* bias, so that certain language families are not overrepresented (Dryer 1989; Song 2001: 1.5.3.-4). But there would also now seem to be a problem of *chronological* bias. This problem is insuperable. There is obviously no way we can make a genuine sample of all the languages that have ever existed. And if modern languages are not, as a whole and on average, typical of how languages have been for most of human existence, then a representative modern sample will not in fact be representative.

But it might help if we simply bear in mind that, while we have to assume that the uniformitarian hypothesis is basically correct, it is nevertheless – if there actually are social determinants of linguistic structure – not entirely unproblematical.

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