# Scope, Methodology

## Summary

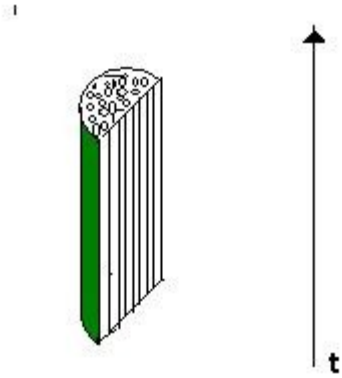
Internal and external linguistic history; Synchrony and diachrony; Reconstruction techniques; Source and reflex; Change vs. alternation; Area and isogloss, Comparative vs. contrastive approaches; Research tradition

## Homework

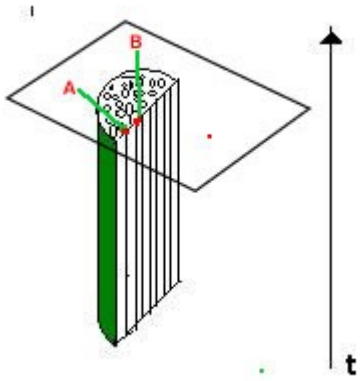
HW # 1 (due end of Week 1): Go to the Oxford English Dictionary and download the entry treating the body part assigned to you in class. If you have problems with that, e-mail me at Danko.Sipka@asu.edu and I will e-mail you the entry back. Map the network of semantic extensions and their timeline;

## Synchrony vs. Diachrony

In order to demonstrate the difference between the diachronic and the synchronic linguistic analysis, Ferdinand de Saussure used the metaphor of a plant. If we take a stem of a plant like this:

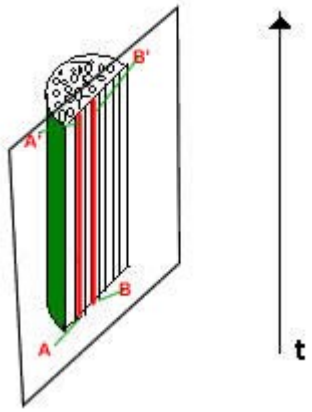



we can create a horizontal section as in:

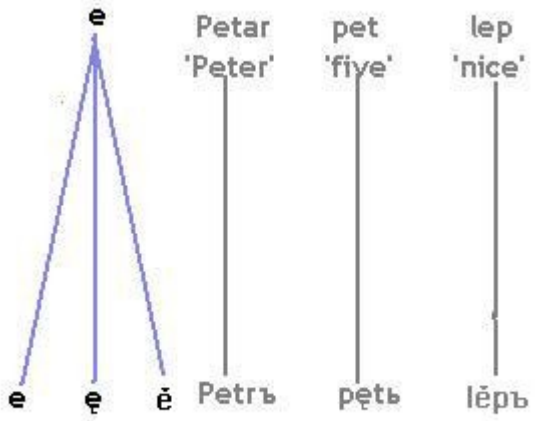



and watch how one nerve relates to another, i.e. the relations between A and B on the drawing above. This is equivalent to the synchronic approach, where we are "freezing" our target langauge and observe how its elements relate to one another. We can, for example, observe the relation between the Serbo-Croatian *o* (A on the picture) or *e* (B on the picture) and, in this approach, we would focus on their mutual relation, namely the fact that they share several articulatory features yet differing in that *o* is a back vowel and *e* is a front vowel. In this approach we do not see the development of either *o* or *e*

. On the other hand, it is possible to create a vertical section, as in




In which case we would observe how both *o* and *e* have changed in time. Looking from that perspective, we would be able to discern several *e*s even if we take into account only last one thousand years, as can be seen from the following three examples:




Looking from the diachronic perspective, we are observing changes as in **ę** changing into **e** in the example above, where **ę** is a source item which has **e** as it reflex. The proces of the source item changing into the target item (called reflex in historical linguistics) involves the flow of time. The source and its reflex share the same wider context (in this case the context is the word *p_tь*) yet the source exists at one point in time and the reflex in the other. This should be discrened from the alternation, the phenomenon that one word has two different phonetic values in two different forms. It differs from the change in that both forms exist at the same point in time and that the context is not exactly the same. Alternations are typically a consequence of changes which causes their confusion. Take a look at the following Russian example, where the present day alternation is a consequence of two historical changes (a hard semivowel changes into an o in front another semivowel while it changes into zero in all other positions).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## Reconstruction Techniques

Linguists are interested in finding the rules governing our use of language, yet they only have a direct access to the output of these rules (i.e., concrete uterances). They hence face the black box problem on a daily bais. Historical linguists are in an even more precarious position as even the direct output is not available when they reach a particular time depth. When addressing historical periods before the first written record for any language, historical linguists are resorting to

reconstruction. (The forms which are not attested but rather reconstructed are marked by an asterix in front of them, e.g. *сънъ.) The question then arises of how can we posit unattested source forms. Two most commonly mentioned techniques are

- Comparative method

comparing the data from genetically related languages to arrive to the source form

*If, for example, all Slavic languages have initial **p** in words such as Rus. птица 'bird', пять 'five', путь 'path', then there is a high probability that the initial **p** existed in the Common Slavic, i.e., the language from which all Slavic languages have emerged.*, and

- Internal reconstruction

using the data from archaic constructions, dialects, styles, etc. within language.

*The fact that all body parts that come in two have a specific Gen.Plural ending, e.g., ruku 'of hands', nogu 'of legs', očiju 'of eyes', ušiju 'of ears' (as opposed to the regular -a ending, as in glava 'of heads') can be used to determine the dual ending long after the dual has disappeared.*

Taking a more careful look, we can discern the following particular techniques of reconstruction:

- Comparative data

Looking into the same roots and endings in all or several Slavic languages

- Relative chronology

Monophtongization (oi̯ >ě or i) vs. first palatalization (k > č, in front of front vowels) vs. second palatalization (k > c, in front of ě and i) S-Cr NSg. vuk - VSg. vuče - NPl. vuci

Voc. Sg. vl̥k+e > vl̥če - 1st palatalization fires e is a front vowel, condition met

Nom. Pl. vl̥k+oi̯ > vl̥koi̯ - 1st palatalization fails oi is not a front vowel, condition not met

Nom.Pl. vl̥k+oi̯ > vl̥k+i - monophtongization

Nom.Pl. vl̥k+oi̯ > vl̥k+i - 1st palatalization fails, its time has expired

Nom.Pl. vl̥k+oi̯ > vl̥c+i - 2nd palatalization is in effect

Hence: 1st palatalization - monophtongization-2nd palatalization

- Archaic forms, styles etc.

Esp. idioms, biblical style

- Conservative languages and dialects

Esp. Slovenian (e.g., the fact that it preserves the dual number)

- Languages with early written records

Esp. Old Church Slavonic, which is conservative by the nature of the content of its texts (sacred scriptures require conservativism), interference from the living languages, errors made by scriptors, etc.

- Surrounding languages with written culture

Esp. Latin and Greek (e.g., the fact that a Slavic name, the present day form of which is *Mutimir*, can be attested as *Montimeros* in Latin sources confirms the existence of the nasal **ǫ** at that particular time.

- Linguistic Theories

E.g., analogy, vowel harmony, e.g. Finnish Turun Yliopisto vs. Helsingin Yliopisto, dialectal Serbo-Croatian *more* vs. *ne mere*

- Extralinguistic data

Esp. archeological findings, e.g., artifacts of the Slavic peoples in the Balkans can be used to determine when they have acquired the words for indigenous flora and fauna.

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## Mental Categories of Linguistic Development

Most commonly, the following processes are involved in linguistic changes:

- extension

there is a need for a new element in the system, e.g., a new word, as in computer or its new meaning as in printer.

- reduction

an element of the system is no more in use, e.g., the dual number in most Slavic languages

- analogy/assimilation

one element of the system is changed to fit others, i.e., to assimilate to its context, e.g., stone in Polish (kamy - kamene > kamień - kamienia)

- dissimilation

an element of the system is changed to be more prominent, i.e., different from its context, e.g., English marble (from French marbre), Standard Croatian, etc.

- butterfly effect

we simply do not know why, e.g., why Germanic languages have lost their dual before Slavic languages

A change can be **context-free** or **context-bound**. Thus for example, the previously mentioned change of ę > e in Russian, Serbo-Croatian and other Slavic languages as the change took place in all possible contexts (i.e., nearly each ę was replaced by an e). On the other hand, the previously mentioned first palatalization is context-bound as it took place only in the following context [any sound] _ [front vowel], i.e., the rule is as follows
[any sound]{k,g,h}[front vowel] > [any sound]{č,ž,š}[front vowel]

Most changes lead to **divergence**, i.e., forms in various languages and dialects to become distant from one another (e.g., the loss of dual created divergence between Slovene, which did not undergo this change and S-Cr which did). The opposite process is **convergence** which brings languages and dialects closer together (e.g., recent influx of the English words in all Slavic languages).

With regards to the development of linguistic systems, it is imortant to differentiate between a **quantitative** and **qualitative** changes. Quantitative changes only change the frequency of systemic elements (e.g., increased recent usage of *totally* in colloquial English did not change the number of lexemes or their meanings in the English lexicon). In contrast, qualitative changes change systemic inventories (e.g., introduction of all new words related to the use of computers). Qualitative changes can either reduce the number of oppositions in the system (e.g., the mentioned denasalization, which has eliminated the difference between *ę* and *e*) or increase their number (e.g., the first palatalization which created the previously unpresent opposition between k and č, g and ž, h and š.

Three wider linguistic categories, comparing and contrasting, linguistic oppositions and semantic extensions need to be addressed at this point.

## Comparing and Contrasting

In order to compare elements A and B, it is neccessary to identify the third element in the comparison, the *tertium comparationis* needs to be identified. The third element is the ground for comparison. If we are comparing the ending -y in Polish (as in kobiety 'of woman' with the ending -e in S-Cr, as in tete 'of misses', the ground of comparison lays in the fact that both are Genitive Singular endings. We cannot compare the Polish Genitive with the S-Cr Accusative for the *tertium*

*comparationis* would be missing.

There are two established methods of comparing Slavic and any other group of related languages. The so called **comparative linguistics** compares genetically related languages assuming that there exists a protolanguage which gave rise to all related languages. Assuming this approach, we are primarily interested in the development from the protolanguage to the present-day genetically related languages. It is, on the other hand, possible to contrast a feature in two languages regardless of their being related or not. This approach is refered to as **contrastive linguistics**. It is concerened with synchronic rather than diachronic comparison of two features. Slavic languages are compared in both these perspectives. This course looks at the Slavic languages primarily from the comparative perspective. However, contrastive approach will be employed in the last two two-week periods.

## Linguistic Oppositions

As proposed by Roman Jakobson, relation between the elements of any linguistic system can be viewed in terms of **privative binary oppositions** (i.e., such oppostions which alter the meaning of a term from positive to negative). For example, plural is one such opposition, where the English form *wheel* is -plural, while *wheels* is +plural. The privative oppositions of masculine and feminine suffice to describe the three genders in English and most Slavic languages, as in:

| form | oppositions |
|---|---|
| he | +masculine, - feminine |
| she | -masculine, + feminine |
| it | -masculine, - feminine |

These oppositions are visible most clearly in the so called **distinctive features** of the phonemes. The idea here is that each phoneme can be broken into a subset of features used to distinguish one phoneme from one or more others. Thus, for example, the phonemes *p* and *b* differ only in one feature - *p* is -voiced, *b* + voiced. At the same time they share a number of other features. Both are +consonantal, -sonorant, +labial, -nasal. Take a look at the list of articulatory correlates of distinctive featurs as distinguished by Morris Halle and G.N.Clements in their *Problem Book in Phonology*, MIT Press, 1984:

1. syllabic/nonsyllabic +/-syl
2. consonantal/nonconsonantal +/-cons
3. sonorant/obstruent +/-son
4. coronal/noncoronal +/-cor
5. anterior/posterior +/-ant
6. labial/nonlabial +/-lab
7. distributed/nondistributed +/-distr
8. high/nonhigh+/-high
9. back/nonback +/-back
10. low/nonlow +/-low
11. rounded/unrounded +/-round
12. continuant/stop +/-cont
13. lateral/central +/-lat
14. nasal/oral +/-nas
15. advanced/unadvanced tongue root +/-atr
16. tense/lax +/-tense
17. strident/nonstrident +/-strid
18. spread/nonspread glottis +/-spread
19. constricted/nonconstricted glottis +/-constr
20. voiced/voiceless +/-voiced

Not all these distinctive features are needed to describe the phonological systems of any particular language. Between 9 and 12 features will suffice to distinguish all oppositions in any Slavic language.

## Semantic Extensions

Semantic extensions belong to principal mechanism of historical development in the sphere of the lexicon (others being borrowing, word-formation, obsolence, revival, etc.). The pattern of semantic extension involves three elements:

source domain
target domain
link

For example, the English lexeme *neck* has several senses and so:

1. the part of an organism that connects the head to the rest of the body

2. a narrowing at the top of a bottle

3. a narrow elongated projecting strip of land

4. a cut of meat from the neck of an animal

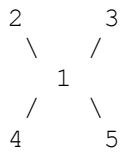
5. opening for the neck; the part of a garment near the neck opening

Drawing upon general human cognitive abilities, we can assume the following extensions:

| Source domain | Target domain | Link |
|---|---|---|
| 1 | 2 | 2 looks like 1 |
| 1 | 3 | 3 looks like 1 |
| 1 | 4 | 4 comes from 1 |
| 1 | 5 | 5 is where 1 goes |

The first two links draw upon a metaphorical relation between the source and the target domain (target domain being visually similar to the source domain), whereas the second two rest on metonimic relation between these two domains.

The lexeme neck offers an example of the so called radial model of semanitic extensions, with one source domain spreading its semantic extensions around, which can be represented as follows




The S-Cr slang lexeme leš below offers an example of two **linear** developments in semantic extensions.

More information about semantic extension can be found in Lakoff and Johnson's Metaphors We Live by, and Langacker's Foundations of Cognitive Linguistics

# Temporal Categories of Linguistic Development

According Preston King (The History of ideas : an introduction to method / edited by Preston King, London : Croom Helm ; Totowa, N.J. : Barnes & Noble Books, 1983), there are the following categories of time: momentary (an elusive moment which divides the past from the future), extended time (period around that moment extended by clock or calendar), unfolding time (subjective time, something that has started and still lasts), neuteric time (subjective time, innovative element in the flow of time, e.g., modernity). Historical linguistics operates with extended and neuteric time.

Tracing the emergence and development of a language we can be interested in linguistic structures per se without taking into consideration the socio-historical context in which the language functions. This approach is interested in the so called **internal history** of the language. It is commonly employed when addressing grammatical structures. When discussing the previously mentioned denasalization we do not take into account any aspects life of the Slavic language speakers. However, when discussing the development of the lexicon, it is impossible not to take into account the socio-historical context. In this case we are interested in the **external history** of the language.

The previously mentioned relation between the source and the reflex is not a simple relation of Stage1.source > Stage2.reflex but the relation rather involves a stage when two forms co-exists, usually as a stylicstic choice. Thus:

| Stage | Attested forms | Example |
|---|---|---|
| 1 | source | ę |
| 2 | source and reflex | e, ę |
| 3 | reflex | e |

For example, the English change of *whom* into *who* is at present in its second stage, with a stylistic distinction of *whom* being used by educated speakers in a careful speech and *who* being used elsewhere.

In tracing historical development, we are distiguishing periods, such as Proto-Indo-European period, Common Slavic period, etc. These periods are segments of the timeline in which the

system remains relatively stable. Each period is marked by a series of changes which re-shape the system. The new period can be distinguished when there are far-reaching changes effecting the system as a whole. Each period has fuzzy edges and the intervening time between two periods can encompas as much as one or two centuries. The idea of stable periods and intensive changes between them is somewhat similar to Kuhn's distinction between normal science and paradigm shifts.

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## Territorial and Social Categories of Linguistic Development

In tracing historical changes we also have to address the distinction between a language and a dialect. Unfortunately, the only plausible mechanism of differentiating between a language and a dialect is the following anegdotal statement attributed to Max Weinreich "A language is a dialect with an army and a navy". In other words, what turns out to be a language and what a dialect is determined by extralinguistic, primarily political factors.

Changes are always territorially limited. Each change has its geographic area, i.e., the area where the change takes place, and the surrounding areas, where the change is not effective. For example the changes which led to dissapearance of the dual in South-Slavic had the area which encompassed all South-Slavic languages with the exception of the Slovenian language. The Slovenian language was the surrounding area of the change. The line dividing the area of change from its surrounding areas is caled isogloss. More isoglosses running together form a bundle. Budles of iisoglosses are typically found on the borders of langauges and dialects. However, it is very common that there exist isoglosses which divide a teritorry of one lanugage or dialects and those which run across different langauges and dialects. In addition to being geographically limited, a change can be restricted socially. Thus, for example, the change of the pronounciation of the word nuclear from -liər to -ilər is associated with lower educational standing.

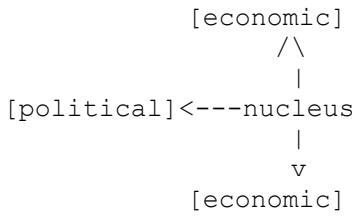
The following geographical and social factors influence the spread of the change:

- nature of the terrain (e.g, vast flatlands vs. mountains)
- economic resources (e.g., water, arid land, etc.)
- existence of a central authority
- political historical events (conquests, wars, etc.)

Examples:

a) Slovene dialectal fragmentation (eight dialectal groups on in a very limited area) vs. Russian lack therof (three dialects covering a vast area)

b) Spread of the Serbo-Croatian East Herzegovinian dialect

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## Research Tradition and Contemporary Theories

- Early Comparativists
- Young Grammarians
- European and American Structuralists

An excellent 19th century historical linguistics reader is here. Also, see the following lecture about these research traditions

- Historical linguistics and contemporary theories
- Linguocentric (Minimalism, HPSG, OT) vs. anthropocentric approaches (Cognitive Linguistics)

See Slavic in HPSG and Slavic Cognitive Linguistic Association.

Also, see the description of Metaphors We Live by. You can order it here if you like it.

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## Historical Linguistic Analysis: Worked examples

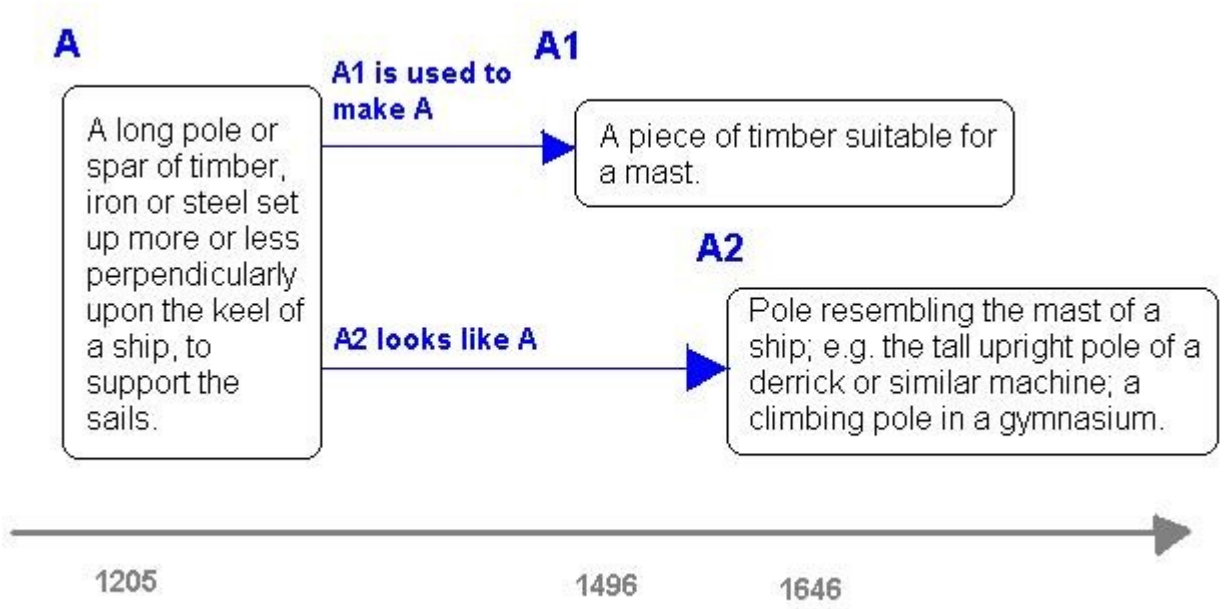
### Semantic extensions with a timeline

The OED entry mast, n1 encompasses the following senses:

| Sense | First attested |
|---|---|

| | |
|---|---|
| **A** A long pole or spar of timber, iron or steel set up more or less perpendicularly upon the keel of a ship, to support the sails. | c1205 |
| **A1** A piece of timber suitable for a mast. | 1496 |
| **A2** Pole resembling the mast of a ship; e.g. the tall upright pole of a derrick or similar machine; a climbing pole in a gymnasium. | 1646 |

The following timeline of semantic extensions can be established

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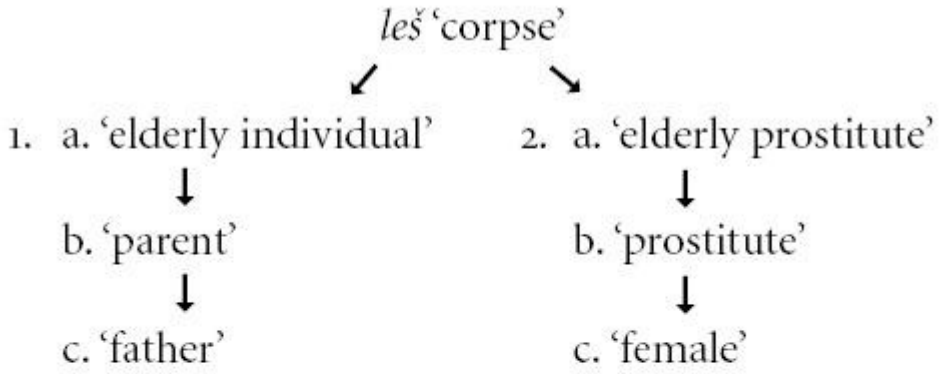
**Semantic extensions without a timeline**

The following example from SerboCroatian-English Colloquial Dictionary demonstrate established network of semantic extensions without a timeline being available:




An elderly individual is already a corpse (0 → 1a)
A parent is an elderly individual (1a → 1b)
A father is a parent (1b → 1c)
An elderly prostitute is as ugly as a corpse (0 → 2a)
An elderly prostitute is a kind of prostitute (2a → 2b)
Females are prostitutes (2b → 2c)