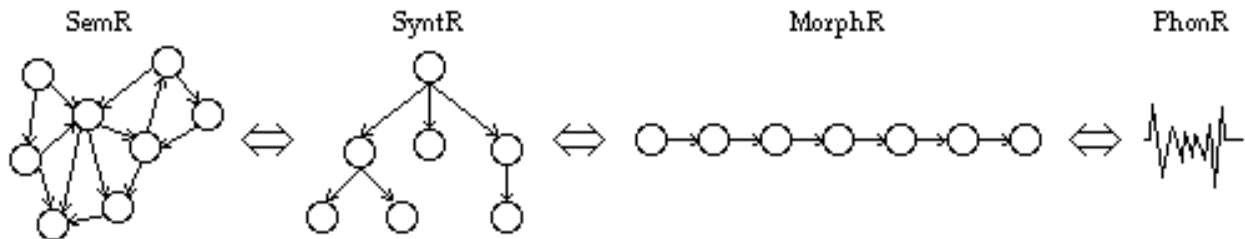# Rheme, Theme, and Communicative Structure, or How to Build Syntax from Semantic Representations in Lushootseed and Bella Coola

**1) Meaning-Text Theory (MTT)**

The MTT, first put forward in Moscow by Zholkovskij & Mel'čuk (1965), operates on the principle that language consists in a mapping from the content or meaning (semantics) of an utterance to its form or text (phonetics). Intermediate between these poles are additional levels of representation, as illustrated in (1):
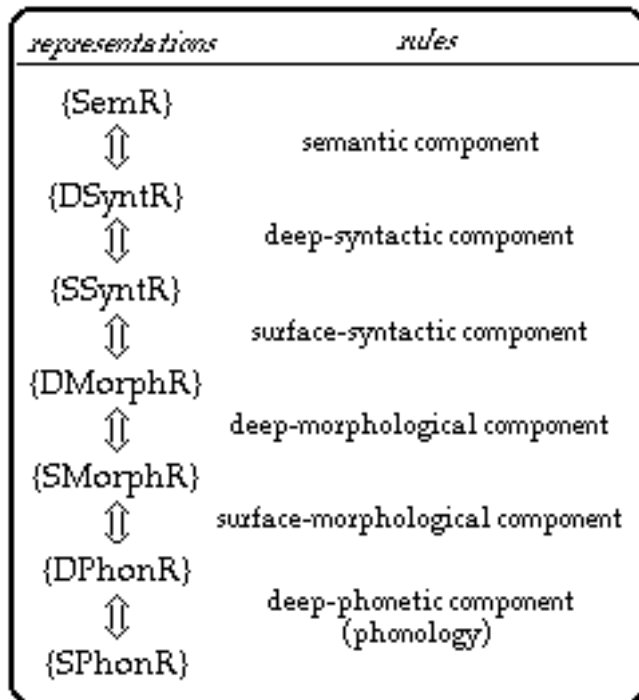
(1) Representations at the Semantic, Syntactic, and Morphological levels



(adapted from Mel'čuk 1988: 49)

Sequential mapping of representations of the various levels passes from the unordered network of the Semantic Representation (SemR) through the tree-structures of the Syntactic Representation (SyntR) to the linear chain of morphemes of the Morphological Representation (MorphR) and, ultimately, the temporally-ordered string of phones of the Phonetic Representation (PhonR). Each of the syntactic, morphological, and phonetic levels has two sub-levels, the deep (D) and surface (S) representations. This gives us a total of seven levels of representation, shown in the left column of the table in (2).

(2) Representations and components



- correspondence between levels is made by a set of rules or components that translate representations at level $n$ into representations at $n+1$; the surface syntactic component, for example, maps between a SSyntR--an unordered dependency tree whose nodes are lexical items—and a DMorphR, an ordered chain of lexemes marked for inflexional values

- rules are written as "$R_n$ $R_n+1$ | C", where "$R_n$" is a structural feature of a given level ($n$), "$R_n+1$" is the corresponding feature at the next level, and "C" sets out the conditions that dictate the rule's application

- rules are intended to apply in either direction, from $n$ to $n+1$ (meaning text) and $n+1$ to n (text meaning)

- rule are not transformations, but interpretive devices establishing equivalencies between the symbolic conventions of one level and those of another

Representations at all levels are multi-faceted. The two SyntRs, for example, consist of Syntactic Structures (SyntS), Anaphoric Structures (Synt-AnaphS), Prosodic Structures (Synt-ProsS), and Communicative Structures (Synt-CommS); the SemR consists of a Semantic Structure (SemS) and a Communicative Structure (SemCommS—or CommS for short).

**2) Clause Structure in the Salishan Languages Bella Coola and Lushootseed**

- clauses are usually predicate-initial and follow VSO word-order (predicates are underlined):

    Lushootseed
(3)  ʔu+ʔey̓+dxʷ  čed    tsi  čačas
     PNT+find+LC    1SG    Dƒ   child
     'I found the girl'

(Hess 1993: 24)

    Bella Coola
(4)  k̓x+is    ti+ʔimlk+tx   ci+xnas+cx
     see+3SG:3SG    D+man+D        Dƒ+woman+Dƒ
     'the man sees the woman'

(Davis & Saunders 1978)

- verbless sentences have no copula and appear with predicates belonging to a wide range of lexical categories including nouns, adverbs, numerals, and PPs
- the most interesting type is a nominal predicate with a complex clausal subject, as (5) – (8):

Lushootseed
(5)  wiw'su    ti      ʔu+čalad      tiʔəʔ    sqʷəbayʔ
     children  D       PNT+chase     D        dog
     'the ones who chase the dog [are] the children'

(Hess 1993: 127)

Bella Coola
(6)  ti+staltmx    ti+nap+is         ti+ƛmsta+tx
     D+chief       D+give+3SG:3SG    D+person+D
     'the one the person gave to is the chief'

(Davis & Saunders 1984)

Lushootseed
(7)  sqʷəbayʔ   tiʔəʔ   s+u+gʷəč+əb+s
     dog        D       NP+PNT+look:for+MD+3PO
     'the one he is looking for [is] the dog'
     (lit. 'his looked for one [is] the dog')

(Hess 1993: 108)

Bella Coola
(8)  p'wi      ti+s+puƛ+aylayx+aw
     halibut   D+NP+(to)fish$_{INTR}$+LC+3PL
     'what they caught is a halibut'
     (lit. 'their fished one [is] a halibut')

(Nater 1984: 102)

- in (5) and (6) the predicate corresponds to a "direct" actant (SUBJ or direct OBJ) of the verb
- the syntactic subject is a relative clause headed by a pronominal deictic (Beck 1995)
- in (7) and (8), the predicate nominal corresponds to an oblique actant of the subject clause
- subject clause is nominalized with the *s-* prefix and appears in a DP headed by a deictic

For Bella Coola, Davis & Saunders (1978) claim that choice of predicate is dependent on what information is rhematic and what is thematic or topical—that is, on the thematic (Halliday 1970) or communicative (Mel'čuk 1996) structure of the sentence. Consider the following question-and-answer frames:

Bella Coola
(9)  ʔalacixw+ø+ʔiks           ci+xnas+cx
     do:what+3SG+INTERROGATIVE   D+woman+D
     'what is the woman doing?'

— sṗ+is          ci+xnas+cx     ti+7imlk+tx
           hit+3SG:3SG    D+woman+D      D+man+D
        'the woman is hitting the man'

(Davis & Saunders 1978: 39)


           Bella Coola
(10) wa+ks                 ti+sṗ+is              ci+xnas+cx
        who+INTERROGATIVE   D+hit+3SG:3SG      D+woman+D
        'who did the woman hit?'

        — ti+ʔimlk+tx  ti+sṗ+is              ci+xnas+cx
           D+man+D        D+hit+3SG:3SG      D+woman+D
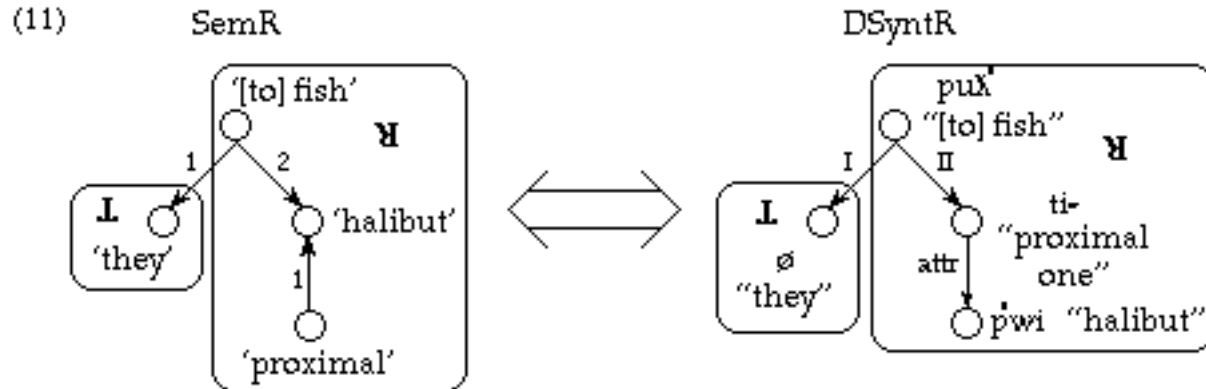           'the one the woman hit [is] the man'

(Davis & Saunders 1978: 39)

- (9) elicits a "narratively focused" sentence—a sentence typical of a narrative sequence focused on the flow of events rather than on introducing a new participant—in which the event is rhematic
- (10) asks for the identity of a particular participant in an event and elicits a response in which that participant is both predicate and rheme; the topical information in the question appears as the subject

The same observations hold for Lushootseed as well (Beck 1996), and this pattern concords with the more general requirement in Salish languages that the subject correspond to a discourse topic (Kinkade 1990).
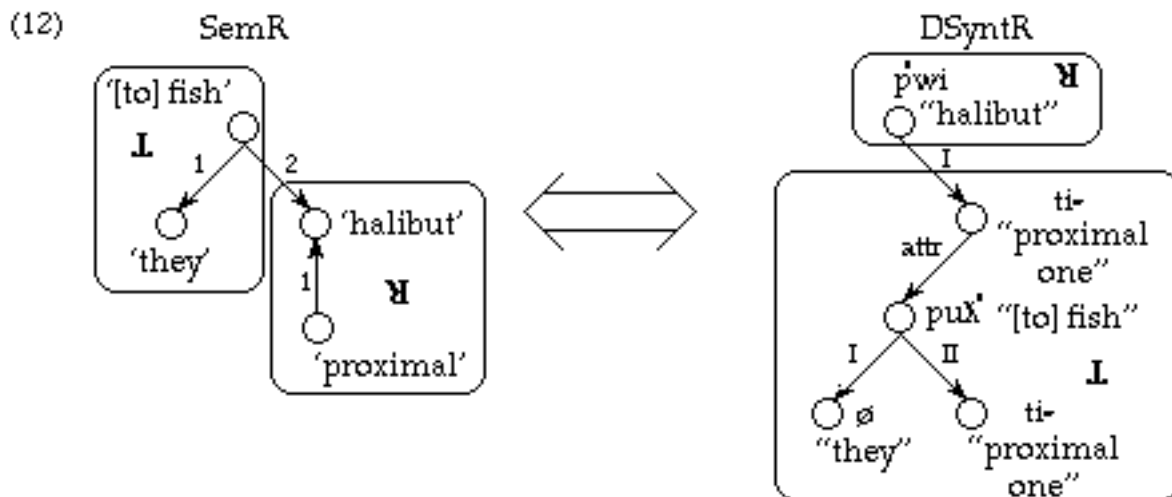
## 3) Syntacticization and the CommS

In Mel'čuk (1996) the CommS is a part of the SemR which specifies values of nine categories or communicative oppositions—Communicative Dominance, Thematicity, Givenness, Fore-grounding, Backgrounding, Emphasis, Presupposedness, Unitariness, and Locutionality. In terms of the Salish data here, the relevant opposition is Thematicity, which divides the SemS into Rheme and Theme. Consider (11), which illustrates a simplified SemR and DSyntR for *puλaylayxaw xtipwi* "they caught a halibut", the narratively-focused counterpart of (8) above. (Note: the verb *puλ* is intransitive and its DSyntActant II requires a prepositional clitic *x-* in the SSyntR; this is inserted by rules in the deep-syntactic component):

(11)    SemR                                         DSyntR

'[to] fish'                                          puX'
                  R                                  "[to] fish"        R
      1      2                                   I          II
  L                                          L                    ti-
  'they'        'halibut'                    ∅           attr      "proximal
                                             "they"                one"
              1
                                                              pwi "halibut"
          'proximal'

The rhematicity of the event "catching a halibut" ensures the realization of the verb as syntactic predicate.

- deictics are syntactic heads in the SyntR and nominals are their modifiers (Beck 1995)

The sentence in (8) has the same SemS, but a different CommS and a very different DSyntR (12):

(12)    SemR                                         DSyntR

'[to] fish'                                          pwi          R
  L                                                  "halibut"
     1      2                                              I
  'they'       'halibut'                                        ti-
                                                     attr       "proximal
              1        R                                        one"
                                                          puX' "[to] fish"
          'proximal'                                 I        II
                                                                     L
                                                     ∅            ti-
                                                     "they"       "proximal
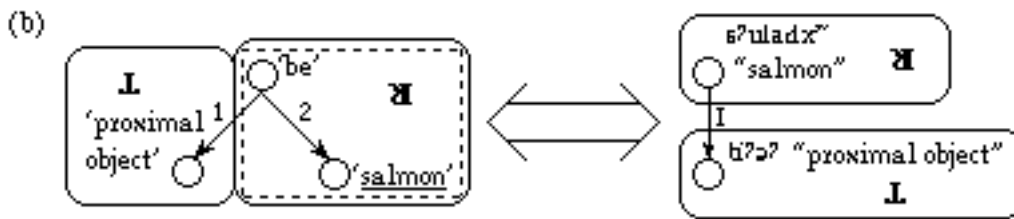                                                                  one"

In this case, the rhematicity of 'halibut' forces its realization by the semantic-component rules as the syntactic predicate, the thematic portion of the SemR surfacing inside a complex predicate clause.

- coreferential NPs (required for agreement in some clauses), are elided in the syntactic component
- the shift of the deictic *ti* from Rheme of the SemR to Theme of the DSyntR, illustrates the non-equivalence of SemCommS and DSyntCommS (Mel'čuk 1996); it may also indicate the syntactic predicate is, in fact, the Rhematic Information Centre (RIC) rather than the Rheme as a whole

## 4) Lexicalization and the Nature of the Verbless Sentence

In Salishan languages, the requirement that the Semantic Rheme be the syntactic predicate creates structures in which the top or "entry" node of the D-tree is lexically a noun; likewise, many sentences rendered in English as copular constructions surface as verbless sentences predicated on nouns, adverbs, numerals, prepositional phrases, and pronouns--as in (13a), a sentence whose syntactic predicate is a noun and whose subject is a demonstrative deictic; its SemR and DSyntR are shown in (13b):

   Lushootseed
(13) (a) sʔuladxʷ  tiʔəʔ
   salmon   D
   'this [is] a salmon'

(b)



The nominal *sʔuladxʷ* is a syntactic predicate, but at the semantic level requires 'be' to encode its meaning as a predicate rather than as a referent. This is handled by the MTT rules of lexicalization:

- the process maps areas of the SemR (delimited by the dashed box) to particular entries in the lexicon
- lexical entries are then used to build syntactic trees, beginning with the entry node
- the entry node is selected by language-specific rules having to do with notions of Communicative Dominance, Rhematic structure, and the predicate-status of a node in the SemR (Iordanskaja 1990)

In languages like English, the lexical entries for nouns can not be mapped onto an area containing the node 'be'--in other words, nouns are not in themselves predicates--and so these languages require the use of a copular verb "BE". On the other hand, Salish languages allow the lexicalization of 'be' as a part of a noun (or any other major lexical category), creating a verbless sentence whose predicate is a noun.

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