Some elements of Valency Grammar and their implementation in the TLS

1. Finding an optimal model for description of Old Chinese

How does it happen, that an unknown string of Chinese characters can be finally understood as an utterance?

Isolating language – lack of formal elements (including the punctuation) which would enable to carry out syntactic analysis prior to semantic analysis

Лев Вл. Щерба:

Глокая куздра штеко будланула бокра и курдячит бокрёнка.

ATTR. SUBJ A.M. PRED.V.1 OBJ1 CON PRED.V.2 OBJ2

O.C. particles are often ambivalent:

之 *zhī*: 1) verb GO TO; 2) genitive particle; 3) object pronoun

乎 *hū*: 1) final modal particle; 2) preposition

者 *zhě*: 1) relative pronoun; 2) marker of a conditional clause IF

也 *yě*: 1) topic marker; 2) final judgmental particle

Relatively reliable formal elements:

所 X; 不 X

The recently reconstructed morphemes within the O.C. syllables are of non-syntactic nature, they do not help the reader to analyse the syntactic constructions

Other specific features of OC:

It is an ancient language – there are no users with linguistic competence in the strict sense of the term

Lack of language redundancy – the information is rarely repeated or doubled (若…则… , coreference)

Elements are often omitted if they can be understood or restored by the perceiver

The reader is invited to participate in the cognitive processes of understanding the text

These features find their utmost expression in *wenyan* or in classical Chinese poetry (床前明月光…)

Conclusion:

The structural and the semantic analysis must be carried out simultaneously: from the semantic features of the “full” words, from their word order and presence/absence of auxiliary words we construe hypotheses about the meaning of the constructions (phrases).

These hypotheses must be often revised and corrected in the process of further close reading.

Close reading 精讀 of the O.C. texts is not only the goal of our effort, but it is also a mean of better understanding and learning of the O.C. itself, since for historical reasons the studies of O.C. syntax are still not at a satisfactory stage.

A small example from the Garden of Stories 說苑 :

水淺者，魚逃之；　　If the water gets shallow, fish are trying to escape from it;

樹高者，鳥宿之；　　as for the highest of the trees, birds stay overnight on them;

德厚者，士趨之。　　as for somebody, who is rich in his charisma, gentlemen hasten to him.

德 *dé* VIRTUE nab.adV:+Npro{SUBJ}@n=inalianable possession

In the 1980’s T. N. Nikitina in her works proposed a model of syntactic description of Chinese (both Classical and Modern) based on Dependency grammar.

Her works were widely inspired by the ideas of G. v. d. Gabelentz, L. Tesnière, Y. Apresjan and A. Kholodovich.

Синтаксический строй древнекитайского языка, 1985.

Грамматика китайского публицистического текста, Карро, 2007.

И. Т. Зограф: Официальный вэньянь. Издательство ЛКИ, 2010.

D. Sehnal: 《孟子》的述語研究, in 漢語史論文集, 武漢, 2002. (M.A.K. Halliday)

D. Sehnal: Analysis of „full“ words in O.C. based on the Book of *Laozi*, in Проблемы китайского языкознания, St.P. 2016.

A. B. Aleksiev, Professor of Sinology at University of Sofia: Word formation in M.C. using half-affixes (可、好、…)

2. Some basic principles and terms

1. Elementary construction

– consists of the core verb (predicate verb, or “predicator”) and elements dependent on it (actants or participants). The number and the meaning of the actants can be directly derived from the lexical meaning (or CONCEPTual meaning in TLS) of the verb

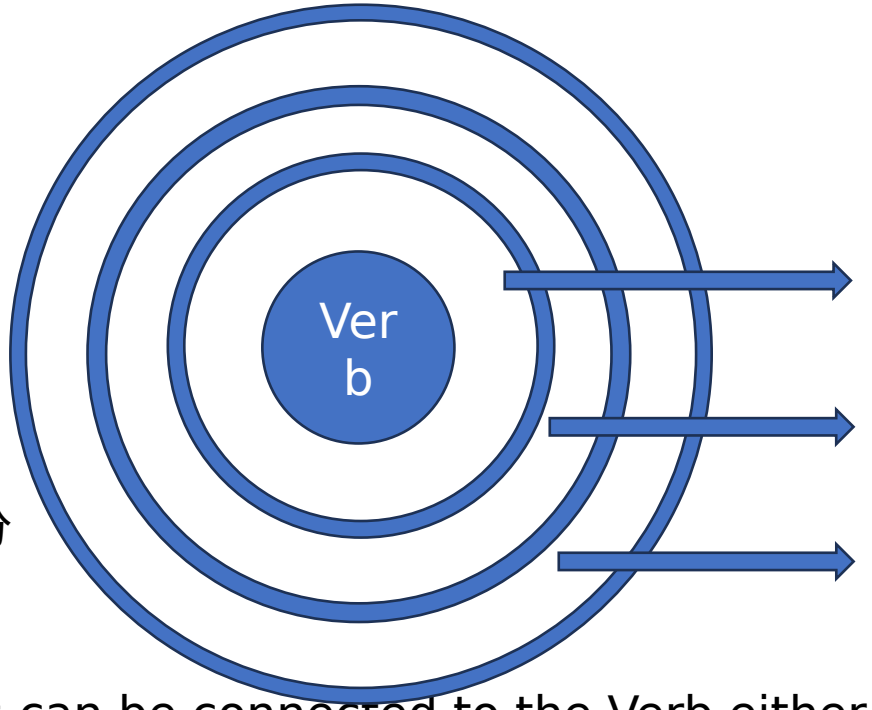
– thus, actants are obligatory elements of the elementary construction, even if they are omitted in the surface structure. We may call them “strongly dependent” elements

– facultative elements are called “circumstants”, they may connect to verbs with different conceptual meanings. Although, e.g. the circumstant ”instrument” is more often found with action verbs. Circumstants may be called “weakly dependent” elements

Actants 參與者

Circumstants 情景成分

Modal elements 語氣成分



Both Actants and Circumstants can be connected to the Verb either directly or with prepositions;

Modal elements can fuse with both actants and circumstants: 之乎 > 諸 etc.

2. Elementary constructions can be described in two simultanious ways

– formal structure: a) SUBJ – PRED

b) SUBJ – PRED – OBJ

c) SUBJ – PRED – 於 – OBJ

… etc.

– semantic contents:

ad a)

PRED = verb of motion: 鳥飛 vi.postN{SUBJ}@act; vi@act

PRED = verb of emotion: 國人皆喜 vi@psych

PRED = stative verb: 其一人美 vi

PRED = numeral: 夫道一而已矣 vi{NUM}

PRED = action verb: 秦必破矣 vtoN@pass; vt.postN{OBJ}@pass

ad b)

PRED = action verb	若勝我 vtoN <-> 若勝於我 vt+prep+N@passive
PRED = verb of emotion	國人哀之 vtoN <-> 智者哀焉 vt+prep+N; 哀親之在外也 vtoNPab{S}
PRED = verb of motion	孔子登東山 vtoN <-> 登於高樓 vt+prep+N
PRED = copula	虎將為狗 vt+N; 斯為美 vt+V[0]

As we can see, there are syntactic restrictions of how the different subclasses of verbs do behave.

vt(oN), vt[oN]

In TLS we, as a rule, mark only the OBLIGATORY (strongly dependent) elements as omitted, an “omitted” circumstant remains mostly unannotated. The praxis is although not consistent, as far as explicit circumstants are concerned:

以刃加己 *jiā* STRIKE vtoN1.post-vtoN2 but: 殺人以梃與刃 *shā* KILL vtoN

ad c)

PRED = stative verb 吾富於子 vt+prep+N@comparative

Other types of valences found in TLS (and also in Nikitina):

– ditransitive verbs: a) SUBJ – PRED – OBJ1 – OBJ2

yù REPORT 公語之故 vttoN1+N2@N1=indirect object

ràng YIELD 讓位季札 vttoN1+N2@N1=direct object

yǔ GIVE 不與 vtt(oN1.)(+N2)

b) SUBJ – 以 – OBJ1 – PRED – OBJ2

yǔ GIVE 以錢與君 vttoN1.post-vtoN2{OBJ}@N1=recipient

yǔ GIVE 以與孫氏 vttoN1.post-vt(oN2)@N1=recipient

c) SUBJ – PRED – OBJ1 – 以 – OBJ2

d) SUBJ – PRED – OBJ1 – 於 – OBJ2

– verbs of joint action: vi2

méng 公及戎盟於唐 vi2post.N1+N2

與鄭人盟 vi2post-.VtoN

– verbs with pivotal element

lì 立其子為太子 vt1oN1.-vt2+N2@N1=pivot

– subjectless verbs: v0

yǔ 雨 vi0

yǒu 邦有道 vt0oN{SUBJ}.postN{TOP}

but: 我有錢 vtoN

3. Transitive (relational) nouns

姊 *zǐ* SISTER nt

娣 *dì* SISTER nt.post-N=Npr 哀姜之娣叔姜

父 *fù* FATHER nt(post-N) 隨父到洛

父 *fù* FATHER nt[post-N] 子弒父

Nouns of inalianable possession: 年、德、性 …

年 *nián* AGE nab.adV:postNpro{SUBJ}@n=inalianable possession 子年少

3. CONCEPT and its relation to Syntactic functions

Georg v. d. Gabelentz: Wortkategorien vs. Redeteile

“Redeteil” refers to the syntactic function of a given word in the given construction. For Redeteile Gabelentz uses Latin terminology, e.g. “Substantivum”, “Adjektivum”, ”Verbum” etc. Syntactic functions in TLS correspond to Gabelentz’s “Redeteile”.

”Wortkategorie” is a semantic class a given word inherently (vom Hause aus) belongs to. Gabelentz names them with German terminology, e.g. Hauptwort, Eigenschaftswort, Zeitwort etc.

Thus, a “Hauptwort” can function as Substantivum, Adjektivum….

If we look at Concepts in TLS, in their characteristics we find a kind of semantic classification which aproximately corresponds to Gabelentz's Wortkategorien:

BIG

- Hypernym
- **SIZE** QUANTITY of a DIMENSION.
  - **QUANTITY** DEGREE of being MANY OR FEW that CAN be MEASURED OR COUNTED.
    - **DEGREE** FEATURE of MORE or LESS.
      - **FEATURE** ABSTRACT OBJECT a THING is SAID to BE OR to HAVE....

BEAUTIFUL

- Hypernym
- **EXCELLENT** FEATURE BECAUSE of which SOMETHING OR SOMEONE IS OR SHOULD BE PREFERRED to OTHERS
  - **FEATURE** ABSTRACT OBJECT a THING is SAID to BE OR to HAVE.
    - **OBJECT** [NO HYPERNYM.] WHAT one CAN NAME:refer to.
      - **PRIME**...

PRECIOUS

- Hypernym
- **APPRECIATE** BELIEVE INTENSELY that something is EXCELLENT, GOOD AND IMPORTANT.
  - **BELIEVE** ATTITUDE IN-RELATION-TO a THINK:thought to the effect that this THOUGHT is TRUE.
    - **ATTITUDE** RELATION between a HUMAN who FEELS and PERCEIVED OBJECTS involving a TENDENDY to REACT.
      - **RELATION** FEATURE of TWO OR MORE THINGS TOGETHER.

ABUNDANT

- Hypernym
- **MANY** BIG in QUANTITY.
  - **BIG** OF INTENSE SIZE OR DEGREE IN-RELATION-TO a STANDARD, OR IN-RELATION-TO the SIZE of a HUMAN.
    - **SIZE** QUANTITY of a DIMENSION.
      - **QUANTITY** DEGREE of being MANY OR FEW that CAN be MEASURED OR COUNTED.

Chaining (係聯法) of the Concepts

A model of a Syntactic paradigm of the Feature-words // Eigenschaftswörter

大 *dà*

BIG 王不待大 nab@feature “being big”
BIG 小事大 v[adN]@N=state “a big state”
BIG 有大蛇 vadN “big”
BIG 大為苑囿 vadV “on a large scale”
BIG 至大至剛 vi@graded “be the greatest”
BIG 罪莫大於不孝 vt+prep+N@comp “be bigger than N”
BIG 王請大之 vtoN@causative “cause N to be big”
IMPORTANT 大天而思之 vtoN@putative “consider N as big > important”
BIG 目小可大 vtoN@passive.causative “be made bigger”
IMPORTANT 不肖任大 vtoN@passive.putative “be considered as big > important”

4. Word identity in TLS

In TLS a Word is defined as a Lexeme representation (graph + pronunciation) in its unique combination with a Concept. In the course of close reading of the texts, each Word has been detected in a number of Syntactic functions (句法功能).

One may assume that Words with similar semantic characteristics (Words belonging to the same Concept and to related Concepts, eg. BIG/SMALL; EXPENSIVE/CHEAP; BEAUTIFUL/UGLY...) share similar sets of Syntactic functions.

Apart of this, each Word has also a number of its own unique Syntactic functions which can be referred to as such on the background of its regular syntactic paradigm.

Problem:

Not every Word has all Syntactic functions which are typical for its class

Reasons: 1. such function does not exist for the given Word

2. such function has not been attested yet

3. in some Words, for one or more Syntactic functions, especially in “活用” cases, a new Word has been established. In such case, the syntactic paradigm bas been split between two or more Words, even if the pronunciation remains unchanged.

In my view, a 活用 usage may be declared as an independent Word, if it has its own paradigm.

貴 *guì* PRECIOUS and APPRECIATE

4. Figurative and derived meanings are also often rendered as independent Words, but sometimes basic and figurative meanings are mixed under one and the same Concept.

高 *gāo* HIGH – EXCELLENT – APPRECIATE – ADMIRE

In the cases 3. and 4. the syntactic paradigmata look often only fragmentaly .

Possible solutions and directions of further research:

– postulate a new Word only if its syntactic paradigm is not in complementary distribution to other related Words, or if the newly discovered lexical meaning cannot be derived naturally by a set of straightforward rules (which must be explicitly formulated, see: Taxonomies).

– compare the syntactic paradigmata of individual Words and try to link them more closely to the Concepts. Avoid splitting the Words when it is not necessary, try to make the paradigmata into a part of the identity of the Words. (cf. my Vocabulary of *Laozi*)

– group the conceptual meanings into categories smaller than the “meta”-classes like object-words, feature-words etc., but into Words expressing tools, social relations, terrain, emotions, sensual perception, moral values, active influence etc. Each of these categories may have its typical set of Syntactic functions and actants involved. Are there any syntactic restrictions which co-define each subclass of Words? (number of elements, transformations of constructions)

– try to define, which Syntactic functions are standard (本用) for the given Word, which are instances of a flexible, but still regular usage (活用) and which are just irregular *ad hoc* exceptions. Learn more about the predictability of the functions. (Gabelentz: Möglichkeit, Regel, Gesetz)

5. Meaning of the Actants (Circumstants)

In TLS, there are 2 ways of making the meaning of an actant explicit:

– in “curly” brackets: N{SUBJ}, N{OBJ}, NPab{S}

– in Semantic features: N1=time, N1=giver, N1=pivot,…

As we have seen already, Semantic features can distinguish constructions with the same formal structure but with different semantic contents – they are part of the syntactic paradigm of a Word

6. Conclusions

– In TLS, as it is now, most of the important principles of valency grammar are explicitly or implicitly present and applied.

– The Concepts are categories which, together with the Lexeme representation, define the Word. The conceptual meaning enables us to anticipate the Syntactic functions within the Word.

– Our ultimate goal is to get a better understanding of the O.C. texts, of the O.C. language and, at last not at least, of our own languages – Gabelentz: “mein Bild”. TLS serves as a microscope which enhances the students’ sensitivity to these phenomena.

– Failure to make the proper distinctions is not a failure of carrying out a specialised linguistic research. In fact, these distinctions are crucial for the very understanding of what has been said in the texts.

– More explicitly articulated relation between the Lexeme Representation, Concepts, Syntactic functions and Semantic features is desirable. After 30 years of collecting and analysing (經) the language material, one could think of writing the „Chinesische Grammatik II“, where the knowledge found in TLS would be presented in a synthetic (緯) way.

7. Some remarks on the TLS-satelite

1. it must be working instantly
2. it should not be two different layouts/systems
3. virtually unlimited number of users, enable repeated annotations and translations of the same text
4. “serious” contributions should be made on-line
5. as for the analysed ”model” texts: I have analysed ca. 40 of 120 texts in a Reader of O.C. textes by Nikitina, I am ready to do the rest of them
6. danger of artifitial examples: 人食於馬…