Syntactic variation and parametric theory

C.-T. James Huang
2014.04.18

Part I: Foundational and general issues

1. **The Principles-and-Parameters theory**

- Plato's Problem and knowledge of language (Aka: The "poverty of stimulus problem", logical problem of language acquisition)
- The biological model of grammar: Grammar = nature + nurture
- The P&P Model
  - genotype (born) → nurture (experience) → phenotype (grown)
  - UG → Primary Linguistic Data (PLD) → PG [I-grammar]
  - UG (the initial state of the child's mind) = Principles + parameters
  - Language acquisition = fixing the parameter values
- What does the P&P model do:
  - Solves Plato's Problem, poverty of stimulus, etc.
  - Explains language uniformity, diversity, change
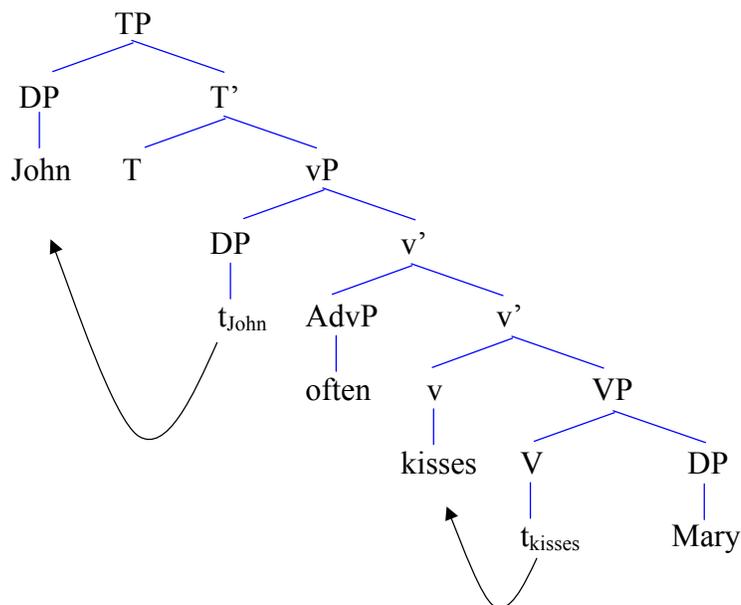
2. **Principles and parameters in GB**

- Some notable examples
  - Head parameter: [head initial] or [head final] (Stowell 1981, Huang 1982)
  - Null subject parameter (Rizzi 1982, and many others): [yes] or [no]
  - Null topic parameter (Huang 1984): [yes] or [no]
  - Wh-movement parameter (Huang 1982, etc.): [overt] or [covert]
  - Non-configurationality parameter (Hale 1983): the Projection Principle [yes] or [no] → Jelinek 1984 →
  - The Polysynthesis parameter (Baker 1996): ±agr, ±NI [yes] or [no]

- **Macro-parameters**: Most of the parameters proposed have the character of being *macro-parameters*, in that their effects are observed across the board (e.g. the head parameter) and that they usually capture the fact that observed variations often *cluster* together. Examples:

  - Head parameter: V-final, N-final, P-final, A-final, etc.
  - Null subject parameter: null subject, free inversion, apparent long subject-extraction [Rizzi 1982]; differences between French and Italian long clitic-climbing and infinitival V-movement [Kayne 1989, 2012], etc.
  - Nominal mapping parameter [Chierchia 1998a,b]: bare argument, classifier, no plural marking, no determiners, etc.

- Non-configurationality parameter: free word order, rich inflection, radical argument drop, etc. [Warlpiri, etc.]

→ The explanatory value of macro-parameters
  ▫ Among others: also captures traditional *typological* generalizations
  ▫ Plato's problem explained

→ Problems encountered by macro-parameters
- Empirical:
  ▫ Certain macro-parametric predictions are often not borne out
  ▫ The parameters are unable to make finer distinctions that occur among languages (e.g. French vs. English word order)
  ▫ The existence of *micro-parameters* without wide-ranging effects.
    Good enough, *enough good, sufficiently good
    John is likely to go, *John is probable to go, etc.
    'Pre-classifier *one*-drop' (+ or -) in Mandarin, Cantonese, TSM, etc.
- Theoretical:
  ▫ Extra burden on linguistic theory
  ▫ Arbitrariness in where variation may or may not occur.

3. **Principles and parameters in Minimalism**

- **The MP** as a "Great Leap Forward"
- **Two goals** of the Minimalist Program: 'beyond explanatory adequacy'—beyond explaining the 'poverty of stimulus' problem:
  a. Theoretical: in pursuit of the beauty of scientific theory
    ▫ Galileo's belief that there is a very simple explanation for Nature
    ▫ Cf. Chen-Ning Yang (1982): three levels of beauty in science   Zhang 2010
  b. Empirical: to explain the 'brevity of evolution' problem

- **The MP's** proposed answer to these goals: Reduce the size and options of UG
  a. Three factors of language design (Chomsky 2005):
    ▫ Genetic endowment: UG
    ▫ Experience: PLD
    ▫ Other independent systems that are recruited in language use, such as other cognitive abilities (logical reasoning, memory), computational efficiency, minimality, and general laws of nature
  b. Many 'principles of grammar' are ascribed to the 3rd factor, thus radically reducing the size of UG
  c. All parameters are stated as **micro-parameters**, arising from the difference in the nature of some grammatical features of some functional heads. There are no macro-parameters.

- **Some mechanisms of the probe-goal system in MP**:

- Agree and Move are triggered by the need to 'remedy' some defective functional categories: Case-checking, Agreement, EPP requirement, 'strong' head features

```
                    TP
              ┌──────┴──────┐
             DP             T'
              │        ┌─────┴─────┐
            John       T           vP
                            ┌──────┴──────┐
                           DP             v'
                            │        ┌─────┴─────┐
                          t_John   AdvP          v'
                                     │      ┌─────┴─────┐
                                   often     v          VP
                                             │      ┌────┴────┐
                                           kisses    V        DP
                                                     │         │
                                                  t_kisses   Mary
```

- Movement (IM) works under Probe-Goal system
  - Trigger: the existence of certain traits of imperfection ("uninterpretable" features of some sort)
  - A functional category containing defective feature(s) [the probe] *probes* for a category (the *goal*) in its c-domain.
  - Probing leads to **Agree** and/or **Move**
  - In the English example above: v probes *kisses* and Moves (attracts) it; whereas T probes *kisses* and Agrees with it.

- Parameters of movement (head-movement, A-movement, A'-movement) defined in terms of lexical features.

4. Parametric theory in MP

- Problems for P&P in MP
  a. Traditional macro-parameters are completely excluded as such. Don't macro-parameters (typological generalizations) exist, and if so, how are they accommodated in UG?
  b. Given the large number of micro-parameters as based on individual lexical items, doesn't Plato's Problem arise again?

- Reconciling macro- with micro-parameters: (a la Roberts and Holmberg 2011).

  A: Existence problem: Both macro- and micro-parameters are needed in linguistic theory, with the former being derivative of the latter. Macro-parameters are simply aggregates of micro-parameters acting in concert.
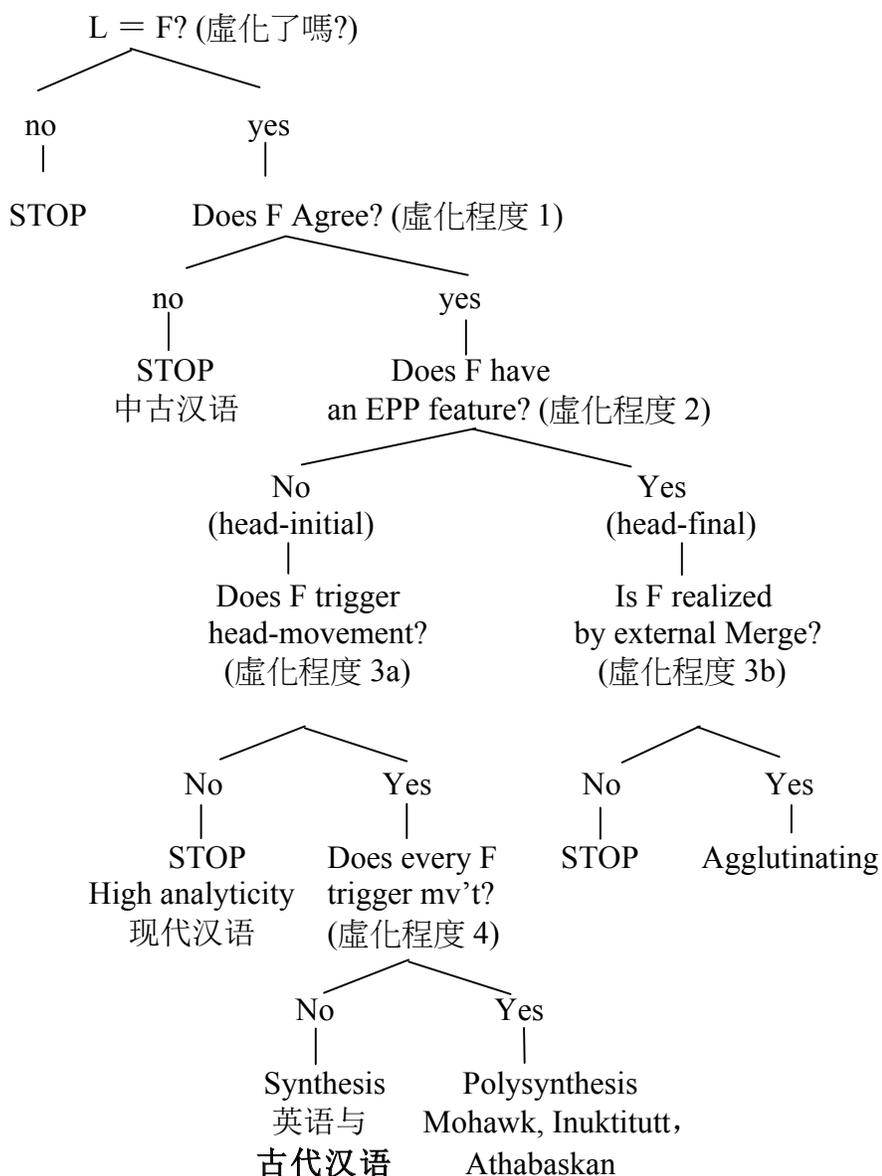
B: Learnability problem:

(a) Micro-parameters may "act in concert" on the basis of a conservative learning strategy: "generalization of the input" (markedness):

已知 L = v, a, n, p, asp, T, etc., P = Parameter

▫ 若 P(v) = +, 则 P(n, a, p, …) = +

▫ 若 P(v) = - , 则 P(n, a, p, …) = -

(b) Parameter hierarchy. The (micro-) parameters are themselves hierarchically organized so fixing one parameter higher on the hierarchy automatically eliminates certain values for other parameters.

Given a lexical item L:

```
            L = F? (虚化了吗?)
          /              \
      no                  yes
       |                   |
     STOP        Does F Agree? (虚化程度 1)
                    /              \
                  no                yes
                   |                 |
                 STOP           Does F have
                中古汉语      an EPP feature? (虚化程度 2)
                              /                    \
                           No                       Yes
                       (head-initial)           (head-final)
                            |                         |
                      Does F trigger            Is F realized
                      head-movement?          by external Merge?
                      (虚化程度 3a)              (虚化程度 3b)
                       /        \                /        \
                     No          Yes           No          Yes
                      |           |             |           |
                    STOP    Does every F      STOP    Agglutinating
               High analyticity  trigger mv't?
                  现代汉语       (虚化程度 4)
                               /          \
                             No            Yes
                              |             |
                          Synthesis     Polysynthesis
                           英语与       Mohawk, Inuktitutt，
                          古代汉语        Athabaskan
```

WVH?

Part II: Macro-parameters in a world of micro-parameters

5. Macro-parametric patterns of Modern Chinese

5.1. The analyticity of verbs and verb phrases

- light verbs vs. noun-incorporation (or denomnalization)

(1) a. John telephoned.
     b. John telephoned his sister.

(2) a. Zhangsan **da**-le   dianhua.
         Zhangsan hit-Perf telephone
     b. Zhangsan **da**-le   dianhua   gei meimei.
         Zhangsan hit-Perf   telephone to   sister

(3) *da yu* 'to fish', *da penti* 'to sneeze', *da hu* 'to snore', *da haqian* 'to yawn', *da you* 'to get oil', *da shui* 'to fetch water', *da deng* 'to use a lamp', *da maoxian* 'to knit (do the yarn)', *da majiang* 'to do (play) mahjong', *da zi* 'to type (do the characters)', *da lie* 'to go hunting', etc.

- The emergence of the light verb construction: Tang-Song Dynasties. 北宋欧阳修《归田录》中的一段话，说明当时轻动词"打"字的广泛使用充分反映了分析性句法的高峰："今世俗言语之讹，而举世君子小人皆同其缪者，惟'打'字尔。其义本谓'考击'[i.e., 敲打]，故人相殴、以物相击、皆谓之'打'，而工造金银器亦谓之'打'可矣，盖有槌挝之义也。至于造舟车者曰'打船'、'打车'，网鱼曰'打鱼'，汲水曰'打水'，役夫饷饭曰'打饭'，兵士给衣粮曰'打衣粮'，从者执伞曰'打伞'，以糊黏纸曰'打黏'，以丈尺量地曰'打量'，举手试眼之昏明曰'打试'，至于名儒硕学语皆如此，触事皆谓之'打'，而徧检字书了无此字。"

Compared to Old (Archaic) Chinese

(4) Wu Wang dian   Yue Wang, yue . . .
     Wu King   phone Yue King, saying
     'King Wu telephoned (or telegrammed) King Yue, saying that ….'

Actual examples include *yu* 'fish, to fish', *shi* 'food, to eat (cf. feed)', *fan* 'rice, to eat rice' and many more (see below for more details).

- At the other extreme are polysynthetic languages like Inuktitut and Mohawk:

(5) Inuktitut:
     tavvakiqutiqarpiit
     'Do you have any tobacco for sale?'

(6)   Mohawk (from Baker 1996)
        Washakoty'tawitsherahetkvhta'se'.
        'He made the thing that one puts on one's body ugly for her.'

while other languages would be situated at various intermediate positions in the continuum:

(7)   Isolating Analytic . . . . Synthetic   Polysynthetic

        Modern Chinese . . . English   . . . Italian / Romance. . . . . . Inuktitut /
                             Old Chinese   Mohawk

 - Pseudo-incorporation [anti-passive] vs. (real) incorporation

(8)   *bu yu* catch-fish 'to fish'; *zhuo yu* catch-fish 'to fish'; *bo pi* remove-peel 'to peel';
        zuo meng make-dream 'to dream'; *kai wanxiao* make-joke 'to joke'; etc.

In another variety, a PNI construction spells out the typical (or cognate) object of a verb:

(9)   *chi fan* eat-rice 'to eat'; *he jiu* drink-wine 'to drink'; *kan shu* read-books 'to read';
        chang ge sing-song 'to sing; *tiao wu* jump-dance 'to dance'; etc.

 - Verbal coercion

(10)   a. John began a book.
        b. John began reading/writing/editing a book.
        c. John began to read/write/edit a book.

As pointed out by Lin & Liu (2005), this type of 'coercion' does not occur in Chinese:

(11)   a. *Zhangsan kaishi yi-ben shu.
             Zhangsan begin one-Cl book

        b. Zhangsan kaishi kan/xie/bian   yi-ben shu.
            Zhangsan begin read/write/edit one-Cl book
            'Zhangsan began to read/write/edit a book.'

The verb *begin* appears to be able to 'eat up' (i.e., synthesizes with) a prototypical
complement verb in English, but its Chinese counterpart *kaishi* does not have this property.

 - Lexical vs. compound vs. phrasal/periphrastic causatives

(12)   English   Modern Chinese   Italian
        enter, come in   jin lai 'come in', *ru entrare, [??]venire dentro
        exit, go out   chu-qu 'go out', *chu   uscire, [??]andare fuori

(13) a. The window broke.
     b. John broke the window.

(14) a. chuangzi po-le.
         window   break-Perf
         'The window broke.'
     b. *Zhangsan po-le chuangzi.
          Zhangsan break-Perf window
     c. Zhangsan da-po/nong-po/gao-po-le chuangzi.
         Zhangsan hit-break/make-break/make-break-Perf window
         'Zhangsan broke the window.'
     d. Zhangsan ti-po/tui-po/ya-po/qiao-po-le chuangzi.
         Zhangsan kick-break/push-break/crush-break/knock-break-Perf window
         'Zhangsan kicked/pushed/crushed/knocked the window broken.'

- Telic vs. Atelic (Tai 1984)

(15) #John killed Bill several times, but Bill did not die.

(16) Zhangsan sha-le   Lisi haoji ci,   dan Lisi dou mei si.
     Zhangsan kill-Perf Lisi several time, but Lisi all not die

- **Interim summary: verbal analyticity**

(17) a. the light verb construction
     b. pseudo noun incorporation
     c. compounds or phrasal accomplishments
     d. verbal atelicity, and
     e. absence of verbal coercion

That these properties all *cluster* within the same language is worth noting, indicating that they represent special cases of a more general character of the language.

5.2. Nouns and other categories

- Numeral classifiers

(18) *yi ben shu* 'one Cl book', *liang zhi bi* 'two Cl pens', *wu pi ma* 'five Cl horse', *ershi-wu ge xuesheng* '25 Cl students', etc.

   - classifiers and 'light nouns' (Chao 1958: auxiliary nouns)
   - mass nouns = atelic nouns
   - As opposed to English, Chinese verbs and nouns are both 'atelic'
   - Note again: clustering.

- Localizers (as light nouns)

(19) a. They went to John.
      b. This idea came from John.
      c. Bill stood at the table.

(20) a. tamen qu-le   Zhangsan-*(nali).
         they went-to Zhangsan-there
      c. Lisi zhan zai zhuozi-*(pang/shang/xia/hou/qian).
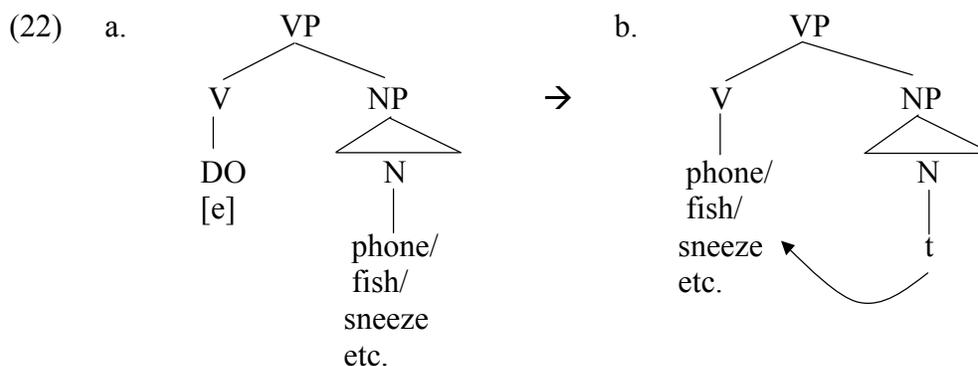   Lisi stand at   table-side/top/under/back/front

- Summary: other categories

(21) a. numeral classifier for count nouns
      b. localizer for locational nouns
      c. discontinuous prepositions (*beside* vs. *by X's side*)
      d. overt positive degree marker (*hen*)

The clustering of these properties (17, 21) makes it clear that Modern Chinese is consistently more analytic than English, with respect to the structure of every lexical category. This is a very striking *macro-parametric* pattern.

6. Capturing analyticity syntactically:

How do we capture the range of properties that systematically distinguish Chinese from a (relatively) more synthetic language?

- There is no parameter called [+analytic] vs. [+synthetic] except as a collective observational generalization.
- Probe-goal system:
  - Merge, Agree, Move.
  - Features of lexical items: [strong], [EPP], etc.
  - Lexical decomposition
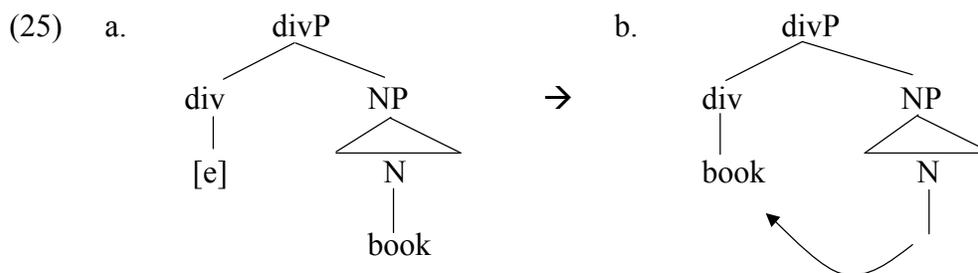- Light verbs vs. incorporation

(22) a.

(23) a.

```
              VP
            /    \
           V      NP
           |       |
          da       N
                    |
                 dianhua/
                 yu/penti, etc.
```

→

b.

```
              VP
            /    \
           V      NP
           |       |
          da       N
           ↖___x   |
                 dianhua/
                 yu/penti, etc.
```
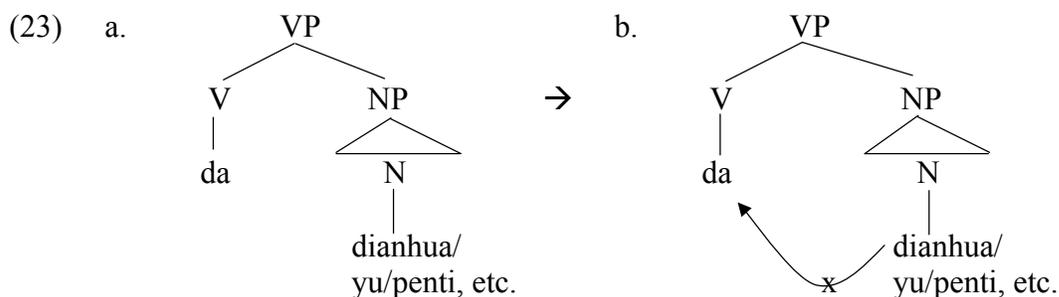
- pseudo-incorporation - similar to above
- causativization: lexical, compound, phrasal

(24) [$_{VP}$ CAUSE [$_{VP}$ (the window) break . . .]] → break (the window)

- Classifers

(25) a.

```
            divP
          /      \
        div       NP
         |         |
        [e]        N
                   |
                 book
```

→

b.

```
            divP
          /      \
        div       NP
         |         |
        book       N
          ↖_____  |
```

(26) a.

```
            CLP
          /     \
        CL       NP
         |        |
        ben       N
                  |
                shu
```

→

b.

```
            CLP
          /     \
        CL       NP
         |        |
        ben       N
          ↖___x   |
                 shu
```
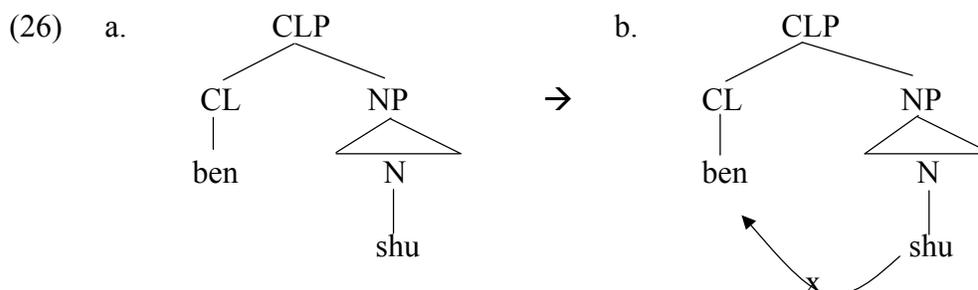
- Localizers, similarly

In each of these cases, we see that head movement results in synthesis, whereas non-movement preserves lexical analyticity. The latter makes Chinese a 'Davidsonian language par excellence' in the sense that it fully spells out each component of a decomposed predicate as assumed in much work on the semantics of events.

WVH?

7. Analyticity in functional syntax

- Wh-in-situ: No T-to-C movement for questions, nor Wh-to-Spec/C

- Wh-the-hell (in situ): no movement to CP

(27)   What the hell are you doing?   Why on earth are you still here?!
(28)   *What are you doing the hell?   *Why are you still here on earth?!
(29)   *Who saw what the hell?   (cf. Who saw what?)

(30)   Zhangsan daodi yao shenme shihou cai lai?
       Zhangsan daodi want what time then come
       'When the hell will Zhangsan eventually come?'

- Negative NPs, reciprocals, binominal *each*

(31)   a. John did not see anybody.
       b. John saw nobody.
(32)   a. They each criticized the other(s).
       b. They criticized each other.
(33)   a. They each ate three apples.
       b. They ate three apples each.

But in Chinese, only the discontinuous (analytic) forms are acceptable:

(34)   a.   Zhangsan mei you kanjian renhe ren.
             Zhangsan not have seen   any   person
             'Zhangsan has not see anybody.'
       b. *Zhangsan kanjian-le meiyou ren.
             Zhangsan see-Perf   no   person

(35)   a.   tamen ge   piping-le   duifang.
             they   each criticized-Perf other
             'They each criticized the other(s).'
       b. *tamen piping-le   bici.
             they   criticized   each-other

(36)   Summary and other differences
       a. *wh*-in-situ
       b. discontinuous *wh-the-hell* construction
       c. absence of negative quantifiers, reciprocals, and bi-nominal *each*
       d. Kaynean word order par excellence (or 'V2 counting backwards')
       e. absence of canonical gapping [略]

Huang (2013): All the properties of (36) follow from: Chinese has V-to-V, V-to-v, but no v-to-T or T-to-C movement.

- **Summary for Modern Chinese:** Modern Mandarin displays high analyticity at almost every level of grammar

8. Old Chinese typological properties

In contrast to Modern Chinese, Old Chinese (Archaic Chinese, 500 BC to 200 AD) exhibits a full array of properties that make it a relatively synthetic language. Indeed, it will be seen that Old Chinese behaved more like Modern English, in the relevant typological properties we have reviewed.

8.1. Lexical categories

At the lexical level, the following properties put OC in sharp contrast with Modern Chinese.

(37)   Old Chinese (OC) lexical categories
     a.   denominal verbs: no need for light verbs
     b.   true incorporation: no pseudo incorporation
     c.   simplex causatives: no compounds or phrasal accomplishments
     d.   countable nouns: no need for numeral classifiers
     e.   nouns qua locations: no need for localizers

- denominal verbs: no need for light verbs

(38)   a. 魚 *yu*   'fish, to fish'
     b. 食 *shi*   'food, to eat'
     c. 衣 *yi*   'clothing, to get clothed'
     d. 飯 *fan*   'rice, to have rice'
     e. 歌 *ge*   'song, to sing'
     f. 王 *wang*   'king, to be a king'

- no pseudo-incorporation
  - no examples like *bu yu* 'catch fish' or *chi fan* 'eat rice' found in Modern Mandarin.

- simplex causatives: no compounds or phrasal accomplishments
  - OC also abounds in examples of causativization, with simplex verbs exhibiting alternations between causative and non-causative readings:

(39)   a. 破   po   'break (both inchoative and causative uses)'
     b. 小   xiao   'small, belittle (= make small)'
     c. 受/授   shou   'receive, bestow (=cause to receive)'
     d. 假   jia   'borrow, lend (=cause to borrow)'

These alternations indicate the existence of verb movement into a light verb CAUSE. Some causative verbs in OC start out as nouns, which first denominalize and then causativize, much as English *food > feed (on) > feed (someone)*. Some examples from the Classical texts:

(40) 君子問人之寒，則衣之；問人之饑，則食之；稱人之美，則爵之。《禮記·表記》
junzi   wen ren-zhi han, ze yi   zhi; wen ren-zhi ji,   ze   shi
gentleman ask person's cold, then clothe him; ask   person's hunger, then feed
zhi; cheng ren-zhi mei,   ze jue   zhi.   (from *Liji, Biaoji*)
him; praise person's virtues, then nobility him

'When a gentleman wonders about one's being cold, he will clothe him; when he wonders about one's hunger, he will feed him; and as he praises one's virtues, he will make him a member of the noble class.'

(41) 諸母漂，有一母見信飢，飯信。《史記：淮陰侯列傳》
zhu   mu   piao you yi mu   jian Xin ji,   fan Xin. (from *Shiji*)
various women wash, have one woman see Xin hungry, rice Xin

'Various women were washing clothes [by the river]. One woman saw Xin being hungry, so she riced Xin [=fed him with rice].'

Mei (1989, 2008a, 2008b & 2012) has postulated a denominative prefix and a causative prefix in OC (and earlier), both reconstructed in the form of *s-*. In the terms of the Probe-Goal system, we can take the *s-* as an affixal light verb with the elementary meaning of DO or CAUSE (or CONSIDER, see note 22). Due to their highly affixal (hence [+strong]) nature, *s-*$_{DO}$ triggers denominalization by noun-incorporation, and *s-*$_{CAUSE}$ triggers causativization by verb-movement:

(42)

shi 'food, feed, feed'
yi 'clothing, get dressed, clothe someone'
fan 'rice, have rice, feed someone with rice'

Some of the causatives are 'Mental causatives' or 'putatives' (意动)：
- 小、好、贤、友
- 如：小天下、好学、礼贤下士、友风子雨

- No resultative compounds (Mei 1991)
  壓而殺之；壓殺百姓；百姓皆壓死；*壓死百姓
  射而傷之；射傷麋鹿；麋鹿皆射死；*射死麋鹿

  - Real resultative compounds were not formed until late in the 6 dynasties and fully in bloom in Tang

- No resultative phrasal constructions

  Only later in MC we have examples like 吹我罗裳开

- No classifers

(43) 三人行，必有我師焉。
      san   ren   xing, bi   you wo shi   yan.
      three person walk must have my teacher there
      'When three people get together, there must be a teacher of mine there.'

- No need for localizers

(44) 八佾舞於庭。是可忍也，孰不可忍也？
      Bayi wu   yu ting, shi ke   ren   ye, shu bu ke ren   ye
      8x8   dance at hall   this can tolerate Prt, what not kan tolerate Prt
      'To have the 8x8 court dance performed in [his own] hall! If this can be tolerated, what [else] cannot be tolerated?'

- Old Chinese exhibit extensive synthesis in lexical categories—both verbal and nominal categories
- Davidsonian structure is somewhat obscured, as in English but different from Modern Chinese.

8.2. Clauses

At the clausal level, OC exhibits several word order differences from Modern Chinese (MnC). The best known is that *wh*-objects are fronted to a pre-verbal position after the subject:

- wh-movement

(45) 沛公安在？《史記·項羽本紀》
      Peigong an   zai?   (*Shiji.Xiangyu*)
      Peigong where be-at
      'Where is Lord Pei?'

(46) 吾谁欺，欺天乎？《论语·子罕》
  wu shei qi,   qi   tian   hu?   (*Lunyu.Zihan*)
  I   who deceive, deceive heaven Q
  'Who do I receive; do I deceive Heaven?'

- Suo-movement under relativization

(47) 魚我所欲也；熊掌亦我所欲也。《孟子》
  yu wo suo yu ye; xiongzhang yi   wo suo yu   ye. (*Mencius*)
  fish I   what like FP, bear-palm   also I   what want FP
  'Fish is what I desire; a bear's palm is also what I desire.'

Certain constituents get pre-posed when they bear the focus, for example when they occur with *wei* 'be' or 'only':

(48) 率師以來，唯敵是求。   《左傳·宣公十二年》
  shuai shi   yilai, wei di   shi qiu (*Zuozhuan.Xuan 12*)
  lead   troop since only enemy Dem seek
  'Since leading the troops, no one but the enemies [have I been] running after.'

Or when they serve as contrastive topics, as pointed out by Aldridge (2012):

(49) 楚國方城以為城，漢水以為池。《左傳· 僖公四年》
  Chu guo   Fangcheng yi   wei cheng, Han Shui   yi wei chi. (*Zuozhuan, Xi 4*)
  Chu state Fangcheng use   be   wall   Han River use be moat
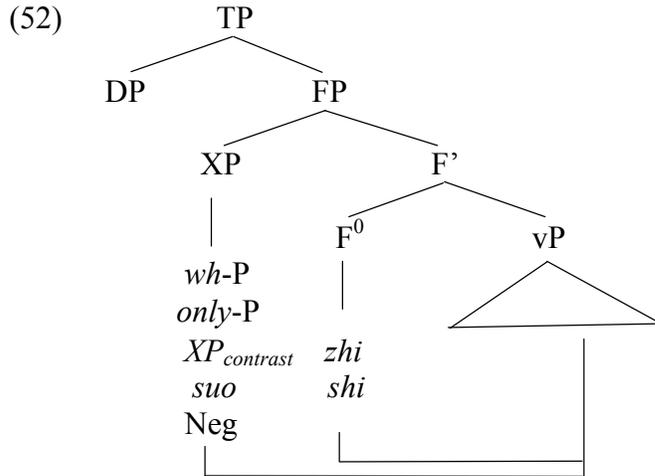 'The Chu used Mt. Fangcheng as their castle wall and the River Han as their moat.'

Pronominal objects are cliticized before the verb in the domain of negation:

(50) 昔君之惠也，寡人未之敢忘。《国语·晋语》
  xi   jun   zhi hui   ye, guaren wei zhi gan wang
  past prince 's   favor FP, I   not it   dare forget   (*Guoyu.Jinyu*)
  'The favor of the prince in the past, I dare not forget it.'

Sometimes pre-posed objects trigger 'clitic doubling', as already shown in (94) above with the demonstrative *shi*, and in (97) below with *zhi*:

(51) 宋何罪之有？《墨子·公输》
  Song he   zui   zhi you   (*Mozi.Gongshu*)
  Song what sin/crime it   have
  'What sin/crime does Song have?'

- [+EPP], etc.

(52)

```
                    TP
              ┌──────┴──────┐
             DP             FP
                      ┌──────┴──────┐
                     XP             F'
                      │        ┌─────┴─────┐
                      │        F⁰          vP
                   wh-P        │          △
                   only-P      │
                   XP_contrast zhi
                   suo         shi
                   Neg
```

There is another well-known difference in word order between OC and MnC with respect to the occurrence of post-verbal clausal adjuncts. Examples like the following are typical:

(53)   萬乘之國，被圍於趙。《史記.魯仲連》
         wan sheng zhi guo, bei wei   yu Zhao.   (*Shiji.Luzhonglian*)
         10K carriage Gen nation, get surround by/at Zhao.
         'A nation of 10 thousand carriages got surrounded by/in Zhao.'

In the following clips from *Mencius*, the adjunct phrase *yi yang* 'with a sheep' has the choice of preceding or following the VP. According to some, the choice is not entirely free, but motivated by considerations of focus (cf. Lu 1982, Liu 1958):

(54)   a. 何可廢也? 以羊易之！《孟子.梁惠王》
             he ke fei   ye yi yang yi   zhi (*Mengzi.Lianghuiwang*)
             how can abolish Prt with sheep replace it
             'How can we abolish [the sacrifice]? Replace it with a sheep!'

         b. 我非愛其財而易之以羊也。《孟子.梁惠王》
             wo fei ai qi cai   er yi   zhi yi yang ye.
             I   not love its wealth and replace it   with sheep Prt
             'It's not because I love [to save] the wealth that I replaced it with a sheep.'

(55)   . . . [[$_{VP}$ yi   zhi]$_j$ [$_{v'}$ yi$_i$ [yang [$_{APPL'}$ t$_i$ [$_{VP}$ t$_j$]]]]] . . .
                    replace it ↑   use   sheep

- Hence, the word order of Old Chinese does not exhibit "Kaynean word order"

- Canonical gapping (from Iris Wu 2002, He (2008):

(56) 為客治飯而自 Ø 藜藿。《淮南子·說林》
wei ke   zhi fan er zi __ lihuo   (*Huainanzi.Shuolin*)
for guest cook rice and self   grass
'For guests cook rice, but for onself [cook] grass.'

(57) 故天子聽政，使公卿至於列士獻詩，瞽獻曲，史獻書，師 _箴，瞍__賦，矇_
誦，百工__ 諫 （國語：周語） （ 春秋左丘明）

- OLD Chinese clauses exhibit various movement to the Focus Phrase region

8.3. The macro-history of Chinese syntax

K. Mei 2003, Wei 2003, Feng 2005, Huang 2006b, Xu 2006 and Hu 2005, 2008).
- Old Chinese (dating from 500 BC to 200 AD) was fairly synthetic
- Old Chinese to Middle Chinese: analyticization: the language underwent a gradual change from the late Han toward analyticity, **peaking** around the Tang-Song dynasties (roughly from 200 to 900 AD)
- After that, 900- (Pre-Modern), a new cycle of development has occurred towards mild synthesis in varying degrees in various dialects, resulting in the major dialect groups of Modern Chinese as we know them today.

9. Parametric variation among Chinese dialects (略)
- The major dialects of Modern Chinese differ in degrees of analyticity.
- In general: Contonese < Mandarin group < TSM
  - W.r.t. to pre-classifer 'one-drop' (本書，個靚仔，片麵包)
    - Cantonese allows it in any position
    - Mandarin allows dropping in object but not subject position
    - TSM disallows dropping anywhere
  - W.r.t. aspects markers
    - Cantonese has more than Mandarin, which has more than TSM
  - W.r.t. definite objects
    - Cantonese strongly prefers SVO, Mandarin allows, TSM prefers SOV

10. Concluding remarks:
- Chinese exhibit typological properties at different stages that distinguish it from other language types.
- Each typological property may be seen as the result of a particular setting of the value of a micro-parameter.
- The clustering of micro-parameters acting in concert give rise to macro-parametric patterns. Hence, there is no need to resort to traditional macro-parameters (like e.g., +analytic, -synthetic, etc.).