5) Theta-Theory and Functional categories

Note that Cook and Newxon want to quote and briefly explain all the key principles and parameters. I will put the principles, so-called, in bold font for you.

predicates (e.g. deplore) and arguments (eg. Mary, violence). Argument structure. Patient th-role, agent, theme, goal: John gave the cheque to his friend.

Nouns too can act as predicates and require arguments: Hillary's conquest of Everest, with an agent and a theme. (This is a *nominalization*).

Predicate s-selects (semantic selection) a particular number of arguments. category selection is c-selection. NP after ask, not after wonder. Subcategorization frame:

ask [_ CP/NP] = ask, then either a Compl phrase or a Noun phrase

wonder [_ CP] = wonder, then a Compl phrase

theta grid: cook <agent, patient> [_NP]

an item both c-selects and s-selects its complements, but only s-selects its subject. (63). Maybe the c-selection can be reduced to s-selection and the subcategorization frames could be eliminated.

Once the head is inserted, the rest of the lexical information will project up into the structure. UG: info in the lexicon cannot be altered by transformations (166). Or added to.

The Projection Principle: Representations at each syntactic level (LF, D-, S- structure) (logical form, deep- and surface-) are projected from the lexicon, in that they observe the subcategorization properties of lexical items. (166).

Theta criterion: only one argument per role. Each argument bears one and only one th-role, and each th-role is assigned to one and only one argument.

What about *John left the room angry*? Are there 2 th roles? More study needed.

No superfluous elements in language. *Every the man loves the woman. But this could be represented algebraically or in logical form. **Full Interpretation** states that every element must be interpreted in some way.

FI means that structures must be as economical as possible. **Principle of Economy.** Later shows up in **Minimalism.**

Th-roles are transferred from predicate to argument by th-marking.

Subjects are more distant from V; they are s-selected, and often it is not the head alone that determines which th-role it may bear. It is a comb. of head and complement, as in John broke the window ~ John broke his arm. Here he is a patient. Subjects are external arguments in the sense that they lie somewhere outside the V' (break…arm}, though they may be analyzed as sister to V'.(171). (This agrees with our intuition and with Jakobsonian theory.)

Complements are th-marked by the head under a sisterhood condition. Subj are also th-marked under sisterhood, but it is the whole V' which does it. (COOL). This is indirect assignment via the X' vs. direct marking between head and compl. Be sure you can understand the diagrams.

173 – English has external role to the left of the V' and internal to the right. Variation in word order may be caused by the parameter setting for direction of th-role assignment. Which does it, the X-bar setting or the th-theory??

Grammatical Functions.

GF's, eg subject of and object of. Object is NP of X' and subject is the NP of X''. Same for obj of a preposition (see 175).

Her parents phoned the school on Friday. NP her parents is immediately dominated by VP''. the school is immediately dominated by V'. Hence it is defined in terms of configurations in D-s.

Argument positions, or A-positions, the specifier of VP, complement of PP, VP. Positions that cannot take arguments are non-A-positions or A-bar positions. E.g. the specifier of CP and the complement of I(nflection), filled by VP. (see tree 178). Can't project arguments here.

Th-positions restricted by sisterhood; sister of a head for internal, sister of X' for external.

Not all A-positions get a th-role. They are always subj positions, eg. spec of IP is an A-position but get no role. Or dummy subj like *there* and *it*, no th-role.

Repeat: the specifier of CP is *not* an A-postion, whle the specifier of IP *is* an A-position. (178)

All subjects have subjects regardless of whether they are semantically required or not (180) !!! **The Extended Projection Principle**. *Seems that Sarah has left. Got to have a

subject filled. (Notice that my previous sentence has no subject. Notice that many Slavic languages have subjectless sentences, or psychological subjects, such as Russian *u menja est' kniga* 'I have a book', where book is Nom and I have is 'by me is'.)

Not all A-positions are th-positions. The specifier of IP is an A-position but has no theta role.

Further types of **FP (functional phrases)**. (181). Separate AGR and tense? Which is higher (181). VSO Berber has AGR inside tense, French, AGR outside tense. In French, there is agreement with the object, as in Paul les a repeintes 'Paul has repainted them (les chaises, fem.)'.

Hungarian: Mutatom a süteményt show-1st sg def the cake-obj 'I am showing the cake' vs. Mutatok egy süteményt show-1st sg indef a cake-obj   'I am showing a cake' AGR obj P and AGR subj P.

Also NEG as a Functional Phrase. Fissioning out of IP. Modal, aspect, passive…DP determiner phrase, above and containing NP.

Put NP as the complement of D (184). non-head must be maximal phrases, determiners are heads of DP. Pronouns are heads of DP's, I Claudius, We men, you fool

John's picture of Bill. John is 'subject' of DP, later gets affix POSS. It stands as sister to D', picture of Bill, contained by DP.

see tree 185. that picture of Bill: NP picture of Bill is the complement of the D; D' contains them both.

Functional elements like C are closed, can't invent a new one. Difficulty in inventing a new non-gender-specific pronoun for English. Lexical elements are open, can invent. P seems to straddle the line.

Function elements can be clitics. Only FP have parameters. The **functional Parametrization hypothesis**. Languages differ only in the properties they select for their functional categories, while lexical cats are universal and uniform (!! –186). Eg tense varies, but *hit* does not. Do you think this is true? I personally do not; I believe in the cultural apparatus built into each language's lexicon.

Mixed reception. Main idea is each infl ending has its own phrase. But many endings show several cats at once [eg Slavic]. Theory runs into difficulty with languages with highly complex morphology. Maybe AGRP is not necessary for them.

6) Movement and Case Theory

Move alpha. What are the restrictions? The elements that move are either maximal projections XP such as NP or heads of phrases such as N. D-structure and S-st. Where1 is2 the hospital t2 t1? Not really movement, but as if they moved; it is a comparison between two abstraction. Seen as chains: Where(i) is (j) the hospital t(i) t(j)?

Movement forms a chain (alpha, t,) where alpha, the head, is the moved and t is its trace. Take passive as an example (192).

defeat V, [_NP] <agent, patient>. c-select an NP, s-selects two th-roles.

The Normans defeated the Saxons.

The Saxons were defeated t. This is S-structure. D-s locates its i its original position: were defeated the Saxons.

Subject? needed by **Extended Proj** principle. So use empty category e. Diagram 193. Here spec of AGRP has the e; also there is an e in spec of VP. The e moves from its place as subject in the NP sister to V', up to the specifier of AGR, past Tense and just below CP.

Specification must be satisfied at all levels, hence the t and the two e's.

D   e were defeated the Saxons

S   The Saxons were defeated t

Passive morphology triggers movement. eg the past part and an auxiliary V. *Were defeated the Saxons is not allowed.

In Spanish, the sentence

ha sido devorada la oveja por el lobo

it has been devoured the sheep by the wolf. Here (195) the NP obj may stay in its position.

Or impersonal passsives with expletive: Es wurde getrunken 'drinking took place,' Czech pilo se 'drinking took place.'   English: it was thought that…

Parametrized. movement shifts Saxons from one A-position, the G(rammatical) F(unction) obj, to the A-position of GF subj. This position, the specifier of AGR, can't have a th-role already. Position must be free of thematic content, no th-role assigned to

subj. "Languages have devices for suppresing the subject," said Chomsky. So they do, so they do.

196 – the passive morphology acts like an argument that needs a th-role, eg subj. Absorbed and assigned to it (!!!) The passive morpheme sucks up the th-role. (How??) e was won the battle by the Normans. agent role assigned to the PP, acting as an adjunct. You can have other th-roles, eg goal: the witness was sent a summons, [I was told, mne skazali].

197 Passive is not an isolated phonemenon. Raising does a similar thing: e seem they to be competent. *they* gets its th-role from be competent, moves to subj: they seem t to be competent. *Seem* has no external subject role in its subcategorization frame.

In both cases no agent role is assigned at D-structure to the external subj position so that movement can take place to an unmarked position. e seem they to be competent > they seem (t) to be competent.

movement history from an a-position in D to an empty A-position that has neither contained a real NP nor had a th-role.

eg: the book was said t' to be lost t.   Moves twice. Movement from a th-marked A-position in D to a non-th-marked A-position in S.

199 – Wh-movement

who, which, how. Either head of a phrase or of a DP containing an NP, hence either q's or relatives. Who did he see?

see V, [_NP] <experiencer, source>.

D: he past see who

he: exp, source: who. Where can who move?? Into a non-A-position, getting

who he past see t

the specifier of CP!! see 200. This is not an A-position, th-roles cannot be assigned to it. Can have several steps, as with NP-movement.

What did he believe he saw? < what he past believe t' he past see t (S)

First to spec of embedded CP, then to spec of main clause.

What triggers this? Is there an abstract feature forcing wh- to move there, like verbs moving to AGR to pick up features? Some complementizers are interrogative (whether), some not (that). "All +wh- complements have to have a +wh- element"

Specifier-head agreement. eg. the subj of a finite clause in spec of AGRP agrees with the head of AGRP. If this is universal, then spec of CP will agree with its head, both having a plus or minus wh- feature. (202), **The wh- Criterion.**

but *who do you wonder John likes t? Perhaps there is no +wh in the CP, so it's violated. *I think who John kissed. the predicate subcats for a –wh CP complement, hence it can't stay here, but it could move up to 'who do I think John kissed t'

203- relatives. The student who the examiner failed was Tom.

D – the student [the examiner failed who] was Tom. Who is GF object, a-position. Moves to spec of CP.

Starts from a th-marked A-position and goes to a non-th-marked.

204 – but you could have no relative: the student the examiner failed, or that the examiner failed. This is the complementizer as in I think that…

Can't have both who and that. **Doubly Filled COMP filter**: can't contain both wh- and overt COMP. Not universal, see Dutch. This is a parameter setting for English.

205 – Ik vroeg him wie of hij had gezien

I asked him who whether he had seen

wh- also a chain. Who did he see? with S: who did he see t

is a chain who, t. A non-A-chain because they are in non-A positions.

hence both questionss and relatives involve movement of wh- from object position to spec of CP.

207 – Subject and verb movement

Susan likes tomatoes. moves by NP-movement to the spec of AGRP, sister of AGR'.

Leaves a trace, of course. A parameter: Welsh and Catalan can stay in VP.

ha ficat les sabates a l'armari l'Oriol

has put the shoes in the closer the Oriol = it was Oriol who put…

Catalan subjects don't raise and can move within the VP.

209 Verb movement. Will Judith pass? When will you leave?

'will' might come in as head of TP, but this is far from clear. see 209. Judith moves to spec of AGR'. The aux moves first to the head of AGRP, then to the head of CP (sic!!), produces in the order in 209. Gets its inflection in AGR, then to its final position in front of the subj. Aux moves first to the head of AGRP, then to the head of CP; subject Judith moves to the specifier of AGRP.

Inversion q's in English demand an auxiliary. If there is none, a dummy *do*: Did John see him?

Be and Have with possessive meaning can act like auxiliaries and go to the C position: Is he a fool? Have you many children? (cf. American do you have children and the stock answer 'not very often' from the British).

This is parametric variation again.

Negative. John does not like Mary *John likes not Mary. But French Jean n'aime pas Marie.

211 see the Fr tree. Subj moves way up to the spec of AGR – s; aime moves first to the head of AGR –obj, then to the head position of NEG, picking up ne, then ending up at the head of TP, picking up present; it is before pas but with ne stuck to it (!!)

Eng has the same D-structure but the verb can't pass the NEG. This is called a weak AGR obj, meaning that if a lexical verb were to move into it, the verb would not be able to assign its th-roles. The French AGR obj is transparent and allows the V to assign its roles.

The reason have and be can move is that they too do not assign th-roles.

This is another parameter setting.

Main verbs can't come in Eng at the beginning - *likes he Mary, but they can in French. Adverbs can't come after the V in English, as the V can't move inot the head of AGRP because of its weakness, but they can in French: Jean embrasse souvent Marie.

Quantifier all precedes the V in Engl, tout follows it:

My friends all love Mary.

214 – Mes amis aiment tous Marie.

Thus the parameter difference has huge consequences.

V-movement involves head of phrase (V) rather than the maximal phrase V'', to head position, vs. NP. known as head-movement. Has to be in a series of steps. **Head movement constraint**; only to a position that governs its maximal projection.

How does the Eng verb get tense and number if no auxiliary and no dummy do? Got to be lowering? Or. assume it has movement at LF rather than in syntax, as Japanese has wh-movement at LF. Idea in minimalism that the inflections come in lexicon and that movement to the noes is to *check* that the verb has the right features.

Word order. Eng is SVO. Japanese is SOV.

Shikisha-ga boo-o furu

conductor baton waves.

216- Welsh is VSO: killed the dragon the man. All possibilities occur. SOV 45%, SVO, 42%, VSO 9 %, VOS 3%. Less than 1% are OVS (e.g. the man killed the dragon) and OSV – all in the Amazon basin.

How can we have VSO, with the V separated from obj? The V has got to move out of the VP over the subject. 217.

V-movement in German. Main clause, finite V always in 2nd position after S, O or adverb.

Bruno verlor dieses Buch, Dieses Buch verlor Bruno, Heute verlor Bruno dieses Buch.

aux is the finite V and main vb is final: Bruno hat dieses Buch verloren.

If subordinate clause, finite V is last: dass Bruno dieses Buch verloren hat, verlor.

Starts out in VP-final and then moves to the C, if this is free. Then, in main clauses, the other element moves to the spec of CP. see 219.

D: Brno (spec of V) dieses Buch verlor (head last). Verlor goes to the C position and Subject to specifier, producing Bruno verlor dieses Buch. see 220 and note that the heads are all to the right of the complements. (Except that C is to the left of AGR, and specifier are all to the left, as in Eng).

If there is a dass, then the V stays in the AGR in final position (221).

Most Germanic langs are V2 (complementizer), not all underlying SOV like German.

English is SVO, Danish SVO. Thus V-movement to the C is a key here.

Hungarian: what the hell is its order? Maybe non-configurational. [Note bad errors in German agreement in the chart on p. 222].

222 – Case Theory. English: genitive in NPs and pronoun system, vs. inflected languages. Case Theory assigns abstract Case to NPs and helps explain movement. She dislikes him. She is nom (subj usually nom), him is acc. Like th-roles in that there are Case assigners, V and P. Nom case is restricted to subj in finite clauses. *I tried she to hit him. not allowed. the nonfinite *to* is minus tense, finite has + tense. nonfinite have no AGR, only a tense element, minus. Hence they should be in a TP (tense phrase), see 225, not AGRP. Subj of finite clause is in spec of AGRP, while subj of nonfinite is in the spec of TP (see). **AGR assigns NOM case**. Structural case vs. inherent case, like Sie hilft ihm, Ihm wird geholfen, 'She helps him (dative)', 'he is being helped' . [Russ case valences.] Structural case assigned at S-level, after movement; eg nom is assigned by AGR in S-structure to the GF subject: he disappeared. Inherent case is given in the lexicon. Genitive may be the spec of NP, inherent as argument of nouns. np [NP _]

The Case Filter. Every phonetic NP must be assigned Case.

I was sorry to have to leave.

*I was sorry I/me/myself to leave.

I was sorry I had to leave (finite).

Can't have overt subject because there is no AGR to assign nom case. It is ungrammatical because of the case filter: you have to have some case assigned.

But in

228 – I believe him to be intelligent. We were anxious for him to leave

the case is assigned by the V believe and the COMP for. English is exceptional in allowing these overt subjects and not all infinitival clauses can have them hence they are

Exceptional Case Marking, ECM.

How do the subjects of passives get Case? The passive morphology absorbs the external th-role by taking it for itself. What about Case? If assigned at S-structure, it moves to a position where it can get case and the filter is satisfied. Indeed this is such a position. And, indeed, the Case Filter FORCES this movement to a Case-marked position from a caseless one.

Filter will also force raising, as in e seems John to be intelligent to   John seems t …

230 – and in declarative clauses, John will kiss Mary, the subj has to move out of the spec of VP to get Case. To motivate this further, say that it effects the visibility of th-arguments. Now it is in the Full Interpretation theory.

231 Parameters of Case theory. ECMs? (I want them to go.) Engl demands the Case assigner be adjacent to the NP that it assigns case to. *I liked very much him. *I banged very loudly the door. But allowed: I banged very loudly on the door. Fr: J'aime beaucoup la France.

Case Adjacency is thus postulated as a parameter.

Engl assigns case to the right and Japanese to the left. You could have a marked situation which is different from the X-bar structure. Eg Chinese, a head-final, still has VO. case is assigned rightwards.

Should move alpha be rather affect alpha?