

Transformations – a longer list (refurbished I.III.2010)

Haj Ross
 Department Linguistics and Technical Communication,
 University of North Texas
 haj@unt.edu
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The following list, which makes a half-hearted attempt to assemble the major processes which shape English sentences, was begun around eleven years ago, when I was visiting my friend Franz Guenther and his research group – CIS, das Centrum für Informations- und Sprachverarbeitung, at the Ludwig-Maximilians-Universität, München. I thank Franz and his fellow CISler for their hospitable open-mindedness, over the years. It was fun to work and think with all of you.

I say “half-hearted,” because I am pretty sure that an exhaustive search through all the books and articles that have discussed English syntax in the last 60 years would probably arrive at a list perhaps five times as long as this one (or even longer?). But, on the other hand, what army of researchers is liable to do all the reading and compiling that such a list will require? With what funding? Since these questions are both pretty rhetorical, I offer this list of the *!TOP ONE HUNDRED PLUS TRANSFORMATIONS OF 1999!* for your inspection of and additions to.

For what purpose(s)? For a broad-brush limning of the major players in English syntax. So students in their first syntax course can be shown this list with the admonition that they should try to stretch their minds to a big enough size that they understand that English is no smaller than this.

The list is, like your humble author, and his linguistic training, is obviously shaped by and framed in terms of the theories of his teachers, Zellig Harris, Noam Chomsky, Ed Klima, Paul Postal, and then those of his friends, at MIT and thereafter: Bruce, Chuck, Dave, George, Jake, Jim, Joan, John, Ken, Paul Kiparsky, Ray, Robby, who multiply on into the impossibly totally nameable hundreds I thank you each and all.

Above all this list is intended to be part of the ageless tradition, named so deftly by Chuck Fillmore: this list is for all of us OWG's – Ordinary Working Grammarians. It hopes to be making no theoretical claims at all – certainly none that will make it uncomfortable for theoreticians of one or another stripe to use. Like Lieutenant Friday, it aims at just the facts, Ma'am.

I think it may prove to be useful for advanced learners of English. After your first two years or so of English, you should be able to use all of these constructions / do all of these processes. If you are comfortable with all of them, they should serve you in good stead in academic and bureaucratic prose, and even in not-too-flowery literature. This is meat and potatoes English.

If you find this list useful, but are put off by some of the glaring omissions that I am sure are there, please let me know what they are, and I will try to remedy them in subsequent refurbishments.

Last, it is obvious how much this list owes to the brilliantly playful spirit of Jim McCawley, to whose memory it is affectionately dedicated.

I. EMPHASIS

A. Pseudoclefts

1. PSEUDOCLEFT FORMATION: *What I ate was (~~I ate~~) an eel.*
What I ate was (%I ate) an eel. → *What I ate was an eel.*
2. COPULA SWITCH: [*What I ate was an eel.*] → *An eel is what I ate.*
3. BROGAN FAKE RELATIVIZATION: *Say the house that you saw.*
[*Say which house you saw.* → *Say the house that you saw.*
This rule also works in pseudoclefts: *Who left was Al* → *The one who left was Al*; *What Tina claims is that we are nuts.* →
(?)*That which Tina claims is that we are nuts*]
4. CONJUNCTIVE WH-CLAUSE NOMINALIZATION (G): *Bill's claim is that he is an alien.* [From: *What Bill claims is that he is an alien.*
Works for conjunctive *wh*-clauses in other contexts as well:
We mentioned what Bill claimed → *We mentioned Bill's claim.*
NB: G = a governed rule, i. e., a rule which does not work for all predicates, and for which one must therefore indicate for each predicate or class of them whether the rule applies or not. Thus, with respect to the present rule, it is impossible to apply it to *what Ed saw was that his van was gone* – see will not undergo this rule.
5. LEFT AND RIGHT DEICTIC DISLOCATION:
[*It won't cost \$2.* → *\$2, it won't cost that.*] (via LEFT DEICTIC DISLOCATION) or: [*It won't cost \$2.* → *It won't cost [this / that] – \$2.*] (via RIGHT DEICTIC DISLOCATION)
6. LEFT AND RIGHT DISLOCATION: [*My horse snores.* → *My horse, he snores.*] (via LEFT DISLOCATION) or: [*My horse snores.* → *He snores, my horse.*] (via RIGHT DISLOCATION) In pseudoclefts, this rule will produce related sentences like the following: *Anne's brother is the one who left* → *Anne's brother, he is the one who left.* The rule can apply to its own output, producing sentences like *Anne's brother, HIM – HE is the one who left.*

NB: LEFT DISLOCATION may apply to the output of LEFT DEICTIC DISLOCATION, in this manner: *Anne's brother is the one who left.*
→ *Anne's brother – that is the one who left.* →
Anne's brother – HIM – THAT is the one who left.
7. SLUICING: *I know he is looking at something, but I don't know at what (~~he is looking~~).* In pseudoclefts, this rule will convert (in some dialects) a sentence like *We need a fork is what we need.* into *We need a fork is what %(we need).*

B. Clefts

- 1a. WH-CLEFT SENTENCE FORMATION: *It was an onion which I ate.*
 1b. THAT-CLEFT SENTENCE FORMATION: *It was an onion that I ate.*

There have to be two distinct rules of clefting, because while the *wh*-clefts cannot cleft sequences of constituents which do not (seem to) be dominated by any single node, this is sometimes possible for *that*-clefts, as we see below:

*It was Jim swimming [that / *who] I saw.*
*It was in March for six weeks [that / *when] I worked there.*

At present, I do not know of any interesting story about where cleft sentences could derive from. On the one hand, they seem virtually indistinguishable, functionally, from pseudoclefts – both have the job of putting certain emphasized constituents in the limelight. And there are strong syntactic reasons too – like: neither likes the present perfect of the main verb *be* (?*What I eat has been beans* / ?*It has been beans that I eat.*) [FN: unless the verb in the *wh*-clause is also in the present progressive, e.g., *What I have been eating has been beans.*] However, there are grave differences in behavior which (seem to?) preclude deriving both from the same source. I shall thus temporize by extracting clefts from the brow of Hera.

The clefted constituent may later be topicalized (*An onion it was that I ate.*), and, topicalized or not, it may be deictic dislocated: *An onion – it was [THAT / THIS] that I ate.* *An onion – [THAT / THIS] it WAS [that / > ?which] I ate.*

2. PRESUPPOSITION DELETION: *They say that it was Barbara who ate all the leeks, but I know that it was Michele (~~who ate all the leeks~~).*
 This rule seems highly similar to SLUICING – it may eventually turn out that the two rules are to be identified.

C. Frontings

1. TOPICALIZATION: [*I don't watch TV* → *TV I don't watch.*] [*I would never send anything to Harry.* → *To Harry I would never send anything.*] [*We have been stupid only about citizenship.* → *Stupid we have been only about citizenship.*] [*We should word this reply tersely.* → *Tersely we should word this reply.*] NB: Many Southern speakers aver that they can't do this kind of preposing. For some reason, NP's with deictic determiners prepose easier: [[*THAT / THIS*] / > ?*The* / ?**A*] *cat I fed.*]
2. NEGATED CONSTITUENT TOPICALIZATION: [*She will invite no one from Montana.* → *No one from Montana will she invite.*] [*You should pat my tarantula under no circumstances.* → *Under no circumstances should you pat my tarantula.*] [*I have never lied* → *Never have I lied.*]

3. *THOUGH-PREPOSING*: [*Though Bill is rich, he eats a mean waffle.* → *Rich though Bill is, he eats a mean waffle.*] NB: this rule must be formulated in such a way as to delete indefinite articles when a predicate nominal is preposed: *(*A) pig though Milford is in bed, he sure can sing falsetto.*
4. *AS-PREPOSING*: [*As Bill is rich, he will be perfect as a dishwasher.* → *Rich as Bill is, he will be perfect as a dishwasher.*]
5. *VP PREPOSING*: [*The feds fear that I will go to Lubbock, and I will go there* → *The feds fear that I will go to Lubbock, and go there I will.*]
6. *ADVERB PREPOSING*: [*I think he'll be in Texas tomorrow.* → *Tomorrow I think he'll be in Texas.*]
7. *SLIFTING* [= sentence-lifting] (G) : [*I feel that Terry is brilliant.* → *Terry is brilliant, I feel.*] NB: this rule must follow a rule of *NOT-COPYHOPPING*: [*I think that Mel is not sober.* → *(*I don't think that Mel is not sober.)*] Here, the doubled negative is audible (which produces an ungrammatical string, a necessary intermediate stage):

*(*Mel isn't sober, I don't think.*

But if the complement of *think* is then SLIFTed, then the original *not* must be deleted, producing *I don't think that Mel is sober.*

8. *SENTENTIAL AS-PREPOSING* (G) : *Mel is drunk, as I feared.* [From (perhaps): *I feared that Mel was drunk, and he was.*] NB: when these sentential *as*-clauses follow a sentential negative in the (superficial) main clause, the *as* can refer to the positive clause which is inside the sentential negative, as we see below:

Mort is not, as we feared, completely besotted.

This can mean either that we feared that he was drunk, or that we feared that he was not.

9. *ADVERB OF RANGE PREPOSING*: [*Tom, of all the students, has the biggest house.* → *Of all the students, Tom has the biggest house.*]
10. *EXCEPTIVE FRONTING*: [*I bet everyone except for Claude had a blast.* → *Except for Claude, I bet everyone had a blast.*] [*I bet everyone except for Claude's house was ransacked.* → *Except for Claude, I bet everyone's house was ransacked.*]

II. COORDINATE STRUCTURES

- A. *CONJUNCTION REDUCTION*: [*Ed sings and Jane sings.* → *Ed and Jane sing*]; [*Ed eats and Ed runs.* → *Ed eats and runs.*]

- B. COORDINATE CONJUNCTION SPAWNING: copiable coordinate conjunctions (like *and*, *or*, *nor*) get Chomsky-adjoined to each conjunct. [[*and* (/ *or* / *nor*, etc.)] [C C C ...C]_C]_C → [[*and* C]_C [*and* C]_C [*and* C]_C...[*and* C]_C
- C. WEIRD FIRST CONJUNCTION:
The first *and* → (*both*) before anything but a S. Before S, it deletes.
The first *or* → (*either*). The first *nor* turns to *neither*.
- D. ALL BUT LAST CONJUNCTION ZAPPING: *red and white and blue* → *red, white, and blue*; *neither animal, nor vegetable, nor mineral* → *neither animal, vegetable, nor mineral*
- E. GAPPING: *Mike ordered Cheerios and Anne ordered Wheaties.* → *Mike ordered Cheerios and Anne Wheaties.*
- F. RIGHT NODE RAISING: [*He may like poptarts, and Sheila definitely does like poptarts.* → *He may, and Sheila definitely does, like poptarts.*]
OR: *He may like, and Sheila definitely does like, poptarts.*

III. DELETIONS

- A. COMPARATIVE AND EQUATIVE DELETION: *Sandi has [more cars/ as many cars] [than / as] Ted (does / has) yachts; Bill wanted to try to build as big houses as Toni (wanted (to try (to build))) igloos.*
- B. COLON ZAPPING: *Terry said something dumb to them: he said a swear to them.*
→ *Terry said something dumb to them: ~~he said a swear to them~~*
- C. BE-DELETIONS
1. In adverbial clauses: *Though (~~being~~) polite, Ted was angry; [If / When / Though / While] (~~being~~) [in London / drunk / a doctor], I always rely on Schweppes.*
Cf. also: [*When(ever) / If / Where(ver) / As [soon/long] as / Insofar as] (*~~being~~) [possible/ expected], I keep my cool.* NB: in these latter sentences, the subject of the deleted copula was *it*, instead of a pronominal copy of the subject of the matrix sentence.
 2. After RAISING (G) : *Max seems (to be) happy. I found Max (to be) odd.*
 3. Absolutives: *(Bob) (being) scared of the ice, Jill drove slowly.*
- E. Adverbial Preposition Deletion(s):
*(*in) [last / this / next] week; (for) three week; (on) (last/next) Friday; (in) [this / *last / *next] month, (in) [that/ the same] way*

- F. Deletion after *too* and *enough*:

*He sent me something [too slimy / slimy enough] to eat (*it).*

- G. PRE-(SENTENCY) COMPLEMENT PREPOSITION ZAP:

*I'm ashamed (*of) [that I have / to have] two Porsches.*

Compare: *I'm ashamed *(of) having two Porsches.*

- H. QUANTIFIER OF-ZAP:

[All / Both] (of) the owls were asleep.

NB: if this deletion happens after *all* + Number, the head NP must undergo ascension, or the definite article must also be deleted:

**All three the owls were asleep. → The owls all three were asleep. OR:
→ All three owls were asleep.*

- I. INFINITIVE DELETION: This rule is OPTIONAL after only one verb that I know of *help*: *I helped him (to) bathe his cheetah.* A few verbs delete the infinitival *to* when the verb is active (*I [made / saw / heard] him (*to) leave.*) but must keep it when the verb has been passivized (*He was [made / seen / heard] *(to) leave.*) And *let* has to delete its *to* when active, and refuses to passivize, except if the embedded verb is *go* (*We let him (*to) [go / play chess] vs. He was let [go /*play chess].*)

It may be that the rule which gets rid of the *to* after need in affective environments can be collapsed with the transitive cases above – this remains an open issue, as far as I know.

We need [(to) change this tire / not *(to) change this tire.]*

IV. NOUN MODIFICATIONS

- A. APPOSITIVE CLAUSE SWOOPING: *Ev has two fruit bats, and I really trust her → Ev, and I really trust her, has two fruit bats.* NB: we note that the shared NP (to use Harris's term) in the clause to be appositivized, need not have been topicalized, though it can be: *Ev has two fruit bats, and her I really trust → Ev, and her I really trust, has two fruit bats.*
- B. RELATIVE PRONOUN FORMATION: *Ev, and her I really trust, has two fruit bats. → Ev, who I really trust, has two fruit bats.*
NB: special provisions must be made for parasitic gaps: in the following sentence, there is one gap after *threw away*, and another, the "parasitic" one, after *reading*: *The book; which I threw away \emptyset ; before reading (it) was extremely interesting.]*

- C. WHIZ DELETION: *Somebody (~~who is~~) tall slept here; Mort, (who is) (a) consummate chess player, has warthogs in the basement.* [NB: there are interesting dependencies between WHIZ DELETION, the properness or commonality of the modified noun, and the possibility of various deletions *Sally, (who is) (the one) who called you last night, has moved* vs. *The painter (who is (*the one)) who called you last night, has moved / The painter (who is) who called you last night, has moved.*
- D. MODIFIER SHIFT (G): *the children sleeping quietly → the children quietly sleeping → the quietly sleeping children.* Modifiers can shift to prenominal position only if their head is phrase-final: **the sleeping quietly children.*
- E. INCORPORATION (G): *the detective smoking a pipe → (*the) detective pipe-smoking → the pipe-smoking detective; the detective traveling to London → ??the to London traveling detective; the detective having a big heart → (*the) big-heart-having detective, whence, obligatorily: the big-hearted detective.*
- F. PRENOMINAL ADVERB PREPOSING CUM PREPOSITION OBLITERATING: *the temperature in the city in Dallas on Thursday → the (*on) Thursday (*in) Dallas in-city temperature*
- G. THAT-DELETION: *The house [that → Ø] I looked at was costly; We mentioned the fact [that → Ø] it had rained too much.*
- H. ATTITUDE-PREPOSING (G): *his attitude of "No, you can leave it right there → his no-you-can-leave-it-right-there attitude*
- I. POSSESSIVE FORMATION (G): *a book which Mel has → a book of Mel's.*
NB: for some nouns there is a pluralization of the head noun, sometimes optional, sometimes obligatory, as a kind of agreement with the number of the possessivizing NP, and I don't know which when: *the height(*s) of Mel - the height*(s) of Mel and Al*
- J. OWNING: *himself's → his own*
- K. POSSESSIVE FRONTING: *[A picture / the height] of Mel(s) -> Mel's [picture / height].* This rule probably has to be split into two; for the case of plain possessives (the ones meaning *have*), the article which conditions the fronting is *the*, which doesn't seem to have to be the case for at least some abstract nouns with which the function of the possessive is to express a subject relation (as with *height, arrival*, etc.) or an object relation (as with *Mel's picture, the city's destruction*, etc.)

V. INSERTIONS

- A. NICHING: *"Ed • might • not • have • been • talking • to Pete • about this • yesterday,"* said Tex. [The parenthetical *"said Tex"* can be inserted anywhere where there is a black dot. The same applies to such sentence

adverbs as *perhaps*, *reportedly*, *why am I telling you all this?*; *could you reach over and pass me the flyswatter?*, etc. - all can be inserted in (VERY) roughly the same niches.]

- B. *THERE-INSERTION* (G): *A commotion arose* → *There arose a commotion*; *A giraffe is standing in the shower.* → *There is a giraffe standing in the shower.*
(Cf. Levin p. 88)

VI. PRONOMINALIZATIONS

- A. *EQUI(-NP DELETION)* (a.k.a. “control”) (G): Into complements : *I claim that I am able to eat olives.* → *I claim(*for me) to be able to eat olives.* Into infinitival relative clauses : *We took Betty a novel (for her) to read on the train.* Into adverbial clauses: *Before I got up, I shaved.* → *Before getting up, I shaved.*
- B. *REFLEXIVIZATION*: *(*I want to talk to me about you* → *I want to talk to myself about you*; *I want to talk to you about you.* → *I want to talk to you about yourself.*
- C. *THAT₂THERE-ING*: *He moved to Illinois, and after moving to Illinois, he became a narc.* → *He moved to Illinois, and after that, he became a narc.* → *He moved to Illinois, and thereafter he became a narc.* → *He moved to Illinois, and thereafter becoming a narc.* Other *there-able* prepositions: *there* + [*upon / by / in / from / with / etc.*]
- D. *ANAPHORIC COMPLEMENT DELETION* (G): *He left, but they don't know (that he left).*
- E. *VP-DELETION*: *If you will order a bagel, I will also (order a bagel).*
- F. *S DELETION* (G): *Greg always had fleas, but he never knew [that he had fleas]_i.* → *Greg always had fleas, but he never knew it_i.*

NB: under an abstract analysis of actions, where, for instance, *Max is walking* comes from *Max is doing [walk]*, *S DELETION* can be used to derive so-called “pro-VP's,” like *do it*.

- G. *SO-PRONOMINALIZATION* (G): *Jeff used to yoyo secretly, but his mom never thought [that he used to yoyo secretly]_i.* → *Jeff used to yoyo secretly, but his mom never thought so_i*

NB: under an abstract analysis of actions, where, for instance, *Max is walking* comes from *Max is doing [walk]*, *SO-PRONOMINALIZATION* can be used to derive so-called “pro-VP's,” like *do so*.

VII. ADVANCEMENTS

To subject position:

- A. PASSIVE (G): *Terence was stalked by the paparazzi.* For certain idioms, there are two possible passives: *Advantage was taken of the favorable climactic conditions;* *The favorable climactic conditions were taken advantage of.* (Cf. Levin p. 85)
- B. UNPASSIVE (G): *No one has painted the car.* → *The car is unpainted.* ; *Nobody is caring for my sheep.* → *My sheep are uncared for.*
- C. STATIVE PASSIVE (G): *Someone has paid for the shoes.* → *The shoes are paid for.* (Cf. Levin p. 86-87 - “adjective” passive)
- D. SOURCE → I (G): *Beer is oozing from the vat.* → *The vat is oozing beer.* (Cf. Levin p. 32)
- E. LOCATIVE → I (G): *Bees are swarming in the garden.* → *The garden is swarming with bees.* (Cf. Levin p. 53)
- F. HIDDEN (?) LOCATIVE → I (G) : (Perhaps from (*) *water filled into the pail*) *Water filled the pail.* → *The pail filled with water.* (Cf. Levin, p.81)
- G. CRYPTOLOCATIVE NATURAL FORCE SUBJECT DISPLACEMENT BY PATIENT (??) (G):
The sun dried the clothes. → *The clothes dried in the sun.* (Cf. Levin, p.79)
- H. TEMPORAL → I (G): (*Columbus was in Sorrento in 1491*) → *1491 [saw / found] Columbus in Sorrento.* (Cf. Levin pp. 79-80)
- I. INTO → OUT OF (G): *The acorn grew into an oak tree.* → *An oak tree grew out of the acorn.* (Cf. Levin, p. 57)

To object position:

- A. DATIVE (G): *I sent a jararaca to Mitchell.* → *I sent Mitchell a jararaca.* (Cf. Levin p. 45)
- B. BENEFACTIVE (G): *We baked a cake for Al.* → *We baked Al a cake.* (Cf. Levin p. 48)
- C. GOAL → 2 (G): *We loaded hay onto the wagon.* → *We loaded the wagon with hay.* (cf. Levin, p. 50) Also: *We fashioned the noodles into bayonets.* → *We fashioned bayonets out of the noodles.* (Cf. Levin, p.56)
- D. LOCATIVE → 2 (G) : *Harrison searched for nuts in the forest.* → *Harrison searched the forest for nuts.* (Cf. Levin p. 70)
- E. TO → WITH (G) : *He presented a cake to me.* → *He presented me with a cake.*

(Cf. Levin, p. 65)

- F. *AGAINST* → *WITH* (G): *We hit the stick against the fence.* → *We hit the fence with the stick.* (Cf. Levin, p. 67)
- G. *BLAMING* (G): *I blamed the damage on Oz.* → *I blamed Oz for the damage.* (Cf. Levin, p. 69)
- H. *PARTICLE MOVEMENT* (G) : *You have ripped off too many taxpayers.* → *You have ripped too many taxpayers off.*
- I. *SOURCE* → 2 (G): *Ted cleared the snow from the sidewalk.* → *Ted cleared the sidewalk of snow.* Also: *We left from Dallas for Waco.* → *We left Dallas for Waco.*

VIII. ASCENSIONS

To subject:

- A. *A-RAISING* (G): *For Mark to win is likely.* → *Mark is likely to win.* [Cf. Postal (1974)]
- B. *TOUGH-MOVEMENT* (G):
 Short - *To get Mike to bite me will be tough for me.* → *Mike will be tough for me to get to bite me.*
 Long - *To imagine making Betty say that she wore this hat will be tough for me.* → *This hat will be tough for me to imagine making Betty to say that she wore.*
- C. *POSSESSOR ASCENSION* (G): *IBM's price went up.* → *IBM went up in price.* (Cf. Levin, p. 77)
- D. *QUANTIFIER FLOATING* (chopping): *[All / Both] of the eagles had a snack.* → *The eagles [all / both] had a snack.*
- E. *QUANTIFIER FLOATING* (copying): *[All / Both / None / Neither] of the eagles had a snack.* → *The eagles [all / both / none / neither] of them had a snack.*
 NB: a fuller treatment would have to specify the various nichabilities for each of the copying floated quantifiers. The problem can be seen in this first sentence: *all of them* can be inserted in all of the places marked with a '•' dot.
- The eagles • may • have • been • being • photographed by Fred, •.*
- F. *PROPERTY FACTORING* (chopping or copying) (G): *Bob's eyebrow texture and Hal's eyebrow texture are similar.* → *Bob and Hal are similar in (their) eyebrow texture(s).*
- G. *BY-RAISING* (chopping) (G): *Mel's winning the lottery surprised me.* → *Mel surprised me by (??his) winning the lottery.*

- H. WITH-RAISING (copying) (G): *Carol's surliness shocked us.* → *Carol shocked us with *(her) surliness.* (Cf. Levin, p. 76-7)

To object:

- A. B-RAISING (G): *I know that Solly chews gum.* → *I know Solly to chew gum.* [Cf. Postal]
- B. POSSESSOR ASCENSION (G): *We kissed Queen Victoria's hand.* → *We kissed Queen Victoria on [the/ ?=her hand].* (Cf. Levin, p. 71)
- C. EACH-FLOATING: *We will give each of the finalists a piece of gum.* → *We will give the finalists each a piece of gum.*
- D. EACH-HOPPING: *We will give the finalists each a piece of gum.* → *We will give the finalists a piece of gum each.*
- E. POSSESSOR ASCENSION WITH [FOR/THE] (G): *We admire Bev's determination.* → *We admire Bev for [her/the] determination.* (Cf. Levin, p. 73)

IX. INCORPORATIONS

- A. SUBJECT INCORPORATION (G): *Rain [fell]_V.* → *(*It [rain-fell]_V.* → *It rained.* NB: the substitution of the verb *rain* for the incorporated verb compound *[rain-fell]_V* is obligatory if this lexeme is a surface verb. However, if it surfaces as a noun, the results of the operation of SUBJECT INCORPORATION can be clearly seen, in such compound nouns as *rainfall*, *snowfall*, *birdsong*, etc.
- B. THEME INCORPORATION (G): *I removed the peel from the banana.* → *(*I [peel-removed]_V the banana.* → *I peeled the banana.* And: *Tanya spread butter on the toast.* → *Tanya [butter-spread]_V the toast.* → *Tanya buttered the toast.* As with the previous process, while incorporated forms show up rarely as superficial verbs, this is sometimes possible in nounier environments: *The butter-spreading (?*of the King's toast) can take hours.*

X. RULES AFFECTING PATHS (cf. Ross (1995))

- A. TOWARDS-INCORPORATION (G): *We swam towards the shore.* → *We swam shorewards.*
- B. PREPOSITION ZAPPING IN END-LEGS: *They swam from (in) the river to (in) the lake.*
- C. PREPOSITION ZAPPING BEFORE PATH-LINKED PROFORMS (G) *We can skate (to) there in a flash. I don't want to stay (at) here. We have been skating (*at / ?to) everywhere for free.* NB: in some dialects, the *at* can surface if stranded: *where's Joe Bob at?* vs. *who's (*at) where?.*

- D. DEPREPOSITIONALIZED GOAL-FRONTING: (??)*Felicia flies from LA (??to) everywhere.* → *Felicia flies everywhere from LA.*
- E. ANAPHORIC LOCATIVE PROFORM DELETION (G): *Let the cats in (to) here* → *Let the cats in.* *Let the cats out of there* → *Let the cats out.* *We had to push the needle through there.* → *We had to push the needle through.* [Cf. Fraser (1965/1976)]

XI. REORDERINGS

- A. SUBJECT-VERB INVERSION(S?):
 After preposed *wh*-words – (*)*When you were in Moscow?* → *When were you in Moscow?*
 After preposed negative constituents – (*)*At no time you will be alone with King Kong.* → *At no time will you be alone with King Kong.*
 In *than*-clauses and *as*-clauses – *Hasso is more vicious than Bodo was.* → *... than was Bodo.* *Lilo is as considerate as Lucretia was.* → *... as was Lucretia.*
 After certain degree-modified preposed constituents:
Max was so big that ... → *So big was Max that ...*
Sonja was tall enough for me to ... → *Tall enough was Sonja for me to ...*
This is too zany a plan for me to ... → *Too zany a plan is this for me to ...*
- B. PP-SCRAMBLING: Post-verbal PP's are in general pretty freely ordered.
Talk to Homer about this for a few days. - *Talk for a few days to Homer about this.* - *Talk about this for a few days to Homer.* - etc.
- NB: This rule is also applicable in sentence-initial position, if more than one PP has been preposed. In general, it is only possible to prepose more than one PP if the PP's are loosely attached ("adjuncts," in GB terms); preposing two PP-objects is (always(?)) prohibited: cf. *(To Ed) (*about deforestation) I will be talking tomorrow.* vs. */For this reason / on the fourteenth of July / in front of the old oak tree, we drank seven sixpacks.*
 In this sentence, the preposed PP's between ' / ' marks can be scrambled in any order.
- C. HEAVY NP SHIFT: *I painted the little birdhouse sky blue.* → *I painted sky blue the little birdhouse.*
- D. RIGHT NODE RAISING: *I **may** have psoriasis, and Ray definitely **does** have psoriasis.* → *I **may** have, and Ray definitely **does** have, psoriasis.*
- E. EXTRAPOSITION (G): *That you like ouzo is pretty obvious.* → *It is pretty obvious that you like ouzo.* And, in object position: *We took that you would be back for granted.* → *We took it for granted that you would be back.*
- F. EXTRAPOSITION FROM NP: (a) For relative clauses (only restrictives can participate): *A sergeant (that) I had never met lurched in.* → *A sergeant lurched in (that) I had never met.* For noun complements: *The claim that our salaries*

should be tripled was discussed. → *The claim was discussed that our salaries should be tripled.*

- G. EXTRAPOSITION OF PP: *A review of Nodoffski's newest tome is coming out this month.* → *A review is coming out this month of Nodoffski's newest tome.*
- H. RAISING TO OBJECT OF HAVE (etc.(?)) (G): *I have to remember grading these papers.* → *I have grading these papers to remember.* Cf. also *There is grading these papers to remember.* (No agreed-on source yet proposed)
- I. INVERSION IN ROOT CLAUSES: *The cops dashed into the lab.* → *Into the lab dashed the cops.* Cf. also: ((?)*The weasel goes pop*) → *Pop goes the weasel.* *Willa shrieked, "Yikes!"* → *"Yikes!" shrieked Willa.*
- J. INTENSIFIER CLIMBING: Intensifiers like *even*, *also*, *only*, and laid-back *like* can be raised to Chomsky-adjoin to the left or right of any higher constituent that contains them in their original position adjacent to their focus. In the example that follows, the left margins are marked with dots: *He might • have • been • talking to Ellen [even / also / only / like] about the cosmos.* Cf. Ross and Cooper (1979)
- K. NOT-HOPPING (G): *We believe that Tim is not exactly a liberal.* → *We do not believe that Tim is exactly a liberal.* NB: this rule should best be seen as a two-part rule: first the negative is copied into the higher clause, and then, after SLIFTING has had a chance to apply, if the lower clause is still adjacent to the one into which the negative has been hopped, the lower negative is zapped. This split into copying and deletion is necessary to account for the fact that parentheticals can show up negated in just those verbs for which NOT-HOPPING works; cf. *Max is not, I don't think /*say, a terrorist.* Cf. #7 above.
- L. NEVER-HOPPING (G): *I want to never go there again* → *I never want to go there again.*
- M. EVER-HOPPING (G): *I don't remember ever having gone there.* → *I never remember having gone there.* NB: the rule, which only works for *remember*, seems really to be necessarily seen as a copying rule – cf. *I never remember ever having gone there.*
- N. NEGATIVE INCORPORATION: *I will not force her to marry anyone* → *I will force her to marry no one.* (cf. Klima (1964))
- O. EXTREMING: *I never eat walnuts.* → *I never ever (ever) ... (ever) eat walnuts.* NB: I do not know if there is only one or if there are many rules which produce things like: *I do not ever eat walnuts – never – not **ever** – never at any time – NEVER!*
- P. N'T-ING (G): *I do not believe this.* → *I don't believe this.*
- G. EXTRAPOSITION OF PP FROM AP (G): *How sure of this are you?* → *How sure are you of this?*

- H. QUANTIFIER CIRCUMPRONOMINAL POSTPOSING: *I photographed [all / both] of them.* → *I photographed them [all / both].*
- I. ADJECTIVE→ADVERB (G): *The FBI kept track of Harold carefully.* → *The FBI kept careful track of Harold.* *I drank a cup of coffee quickly.* → *I drank a quick cup of coffee.*
- J. NOMINALIZATION (G): *That Janice dislikes baths is alarming.* → *Janice's dislike for baths is alarming.*

XII. LEXICALLY GOVERNED RULES OF DELETION

- A. POSSESSED BODY PART DELETION (G): *Maxine flosses (her teeth).*
Tony shaved (his face). (Cf. Levin, p. 34)
- B. REFLEXIVE DELETION (G): *Miss Johnson is dressing (herself).*
(Cf. Levin, p. 35)
- C. DIRECT OBJECT RECIPROCAL DELETION (G): *Bill and Christine kissed (each other).* (Cf. Levin, p.62)
- D. THAT-DELETION (G): *Twombly knew that he had lost everything.* → *Twombly knew he had lost everything.*
- E. MODAL DELETION (G): *Sue demanded that she (must) not be weighed.*
- F. UNSPECIFIED (PREPOSITIONAL) OBJECT DELETION (G): *Zelda is eating (something).* *Tony is looking (at something.)* *We sold (stuff) (to people) like crazy.*
(Cf. Levin p. 33)
- G. UNSPECIFIED AGENT DELETION (G): *Gates will be investigated (by someone).*
Cf. *The fire was caused *(by somebody).*
- H. EQUI-OBJECT DELETION (G): *The buns are ready for us to eat (them).*
- I. Reciprocal PP Deletion (G): *Mike and Todd differ (from each other).*
I compared the banana and the kangaroo (with each other). (Cf. Levin, p. 59, 61)
- J. TO BE → AS (G): *We appointed Trey to be the Commissioner of Yoyo Size.*
→ *We appointed Trey as the Commissioner of Yoyo Size.* (Cf. Levin, p. 78)

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