Optimality theory and Greek syntax[1]

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1. Background

This paper claims that the ranking of constraints, a fundamental tenet of Optimality Theory (OT), is a central part of Modern Greek syntax, and hence potentially of universal grammar.

As against Connectionism, OT respects symbolic representations and does not attempt to replace them or merely implement them. Thus on the one hand many old syntactic friends will be found in the present account, though perhaps transformed, e.g., the lexical categories, the constituent types, and constraints like case, the Projection Principle and the Wh-criterion; and on the other, not numerical weighting but simply ranking of constraints will be decisive.

As against traditional principles and parameters (P&P) treatments of phonology, morphology and syntax (including minimalistic ones), OT accounts involve no ordered rules or other derivational-processes or steps. OT involves only input representations, together with ranked constraints that filter candidate output representations. As for Minimalism in syntax, Chomsky's attitude remains arch-conservative. While for Bromberger-Halle (1989) 'Phonology is different' in requiring ordered rules, for Chomsky (1994) syntax absolutely depends on derivations.[2]

As against P&P and Minimality, the source of syntactic variation or change lies for OT not in the language-specific (morphological) properties of functional heads, but simply in the language-specific ranking or re-ranking of constraints.

And lastly, as against P&P and Minimality theory, which require a supplementary acquisition algorithm, OT is claimed to constitute its own ready-made (serial or parallel) acquisition algorithm: for Tesar (1993), a constraint hierarchy is essentially learnable.

2. Syntax

2.1. History

Bromberger and Halle (1989) proposes to answer a challenge from syntax. 'Questions about the ordering of transformations and about intermediate representations have all but disappeared from syntax..... This raises the question whether phonology should not undergo a similar development'. They add, however, that 'the facts ..are of a very different nature, and .. therefore there is no reason to assume a priori that they must be covered by formally similar theories'. And Chomsky (1994) remains somewhat underwhelmed by the suggestion, as already indicated.

But now that phonology and morphology have increasingly abandoned rules and derivations in favour of an OT approach, the converse question arises, do we really have to show why syntax is different? And in fact we will assume for present purposes that syntax is NOT different, and thus take the counter assumptions seriously, viz., (1) that there are no derivations -- there are only output representations of inputs -- and (2) that all constraints are violable, and there are no holy cows, not even the Wh-criterion, much less subjacency.

2.2. Constraints in syntax and OT

We survey first some general principles for clause structure

2.2.1.Ready-made constraints

Here are some old friends -- viz., Chomskian minimality constraints ready-made for taking over as OT constraints:

Move only if necessary, move minimally, Full-Interpretation,
ECP, Subjacency, Case Filter, Wh-criterion,
Last resort, No vacuous Quantifier/Operator-interpretation

2.2.2. Grouped

And here they are as in Grimshaw (1994); grouped, though not ranked.
Some refer to Specifiers, as in

(1) Op-in-Spec, part of the Wh-criterion;
(2) Spec-Phi (Spec of a head with phi-Features) must be filled at SS, equivalent to the Case Filter *NP [-Case]; and
(3) Subject, or the EPP - the highest A-specifier in an extended projection must be filled.

And some refer to Heads, e.g.,

(1) Ob-Hd - a projection obligatorily has a head;
(2) Hd-left - a head is leftward in its projection; and
(3) *Lex > Func - no lexical head in an F projection.

Others refer to government, e.g.,
T-(Lex) government: T is either governed, or lexically-governed.

And yet others include the well known triad

(1) Projection Principle. No movement to head of, and no adjunction to a selected clause;
(2) STAY ~ *trace = move only if necessary; and
(3) Full Interpretation (FI)

2.2.3. Further cases

From my own work I add

(1) Minimal structure is to be assigned for each construction token in its own right (Drachman (1989)) -- though contrast Sportiche (1993); and
(2) Corollary to (1): No generalising assumptions such as 'all complements are CP' are allowed. The size of a (Grimshaw-extended) projection is variable.

And in addition I shall employ

(3) Align -- borrowed from OT-morphology; and
(4) A split form of the Wh-criterion (adapted from Grimshaw, as the constraint True-Topic - Subjects may be truly Topics, with A' movement.

2.3. Clause division

2.3.1. The division

The functional division of clauses into Theta (VP, or Argument structure), morphological checking, and Typing/Operator components discussed in Drachman (1994) may now be handled partly under a general 'Align' constraint (checking, Typing, or Scope), perhaps parallel to Merge in Chomsky. We have the principle:

Left align Functions, from the right.

This gives us: (1) Align Head, Left of its complement; and (2) Spec, Left of Head-complement, as in:

a) in VP (Theta complex);
b) Align Verb-Morphology (Checking module) Left of Theta-complex;
c) Align Type (Decl, Interrog): Complementiser Left of checking module;
d) Align Scope: Align Operators (Topic, Focus, Wh) Left of Type.[3]

2.3.2. Consequences of the tripartite clause division
With leftward verb-head, a surface configuration XP-Verb is interpreted as resulting from left movement by XP over the verb; it must be motivated, by feature-checking or attraction by an operator. Subject raising in Greek can hardly serve nominative-assignment (Nom) , since the possibility of VSO shows that Nom-checking may (and therefore must) be delayed until LF under Procrastinate. Then, supposing a Topic operator is present, subject movement is obligatorily out of MP -- though via Spec-MP, to preclude violation of the EPP.[4] If only fully M-checked (e.g., Case-checked) elements can Wh-move, checking must intervene before Op-movement; this leaves NP-movement to operate before checking, for instance to guarantee Nom for raised passive objects. And finally, Op-movement always involves scope, so it may only be leftward up the tree. We thus at least partly derive the mutual ordering of the projection modules.

3. Case Studies

There follow now some tentative case studies, the aim of which is to show not merely that current theories are translatable into OT terminology, but also that OT brings a fresh and productive perspective to certain problems in Greek syntax.

3.1. Wh-movement
The output of so-called Wh-movement responds in Grimshaw (1994) to (among others) the three ranked U-constraints

Operator-in-Spec >> Minimal clause >> Move minimally, and/or *trace [5]

3.1.2. Wh-movement for Greek and English
Since Wh-movement is obligatory in the syntax for Greek as it is for English, we assume that Op-in-Spec is an undominated constraint in both languages. But of course a Wh-element cannot be moved to a Specifier already occupied by another constituent (or the trace of one). Compare English with Greek in this respect:

Wh goes to ⇒	Spec-CP	Spec-IP	Spec-VP
IN ⇓			
English:	Obligatory	NO: NP-Subj	NO: Deep-Subj
Greek:	Last resort	Oblig when possible	NO: Deep-Subj

If we assume 'Subject in VP' is a universal, since all the arguments of a verb must be in its (immediate) projection, it follows that Spec-VP is never available as an Op-landing site. But Spec-IP and Spec-CP are still candidates. What chooses between them?

3.1.3. English
English has Nominative-assignment overtly in syntax, in Spec-IP. So the first free Spec (recall, *trace) for English is indeed Spec-CP. Then for English, satisfying Op-in-Spec forces a violation of Minimal clause by projection-extension to CP.

3.1.4. Greek

Greek has SOV and VSO (not to mention VOS) orderings on the surface. As mentioned above, we assume all these orderings to implicate Subject-in-VP and verb-raising, so that VSO is the SS order with the minimum, i.e., only obligatory movement. But we also assumed Nom-checking movement in Greek may, and by Procrastinate, must be delayed until LF. Crucially, then, the VSO option leaves Spec-IP (or whatever it is in Greek ; say, Spec-MP, as I and others have claimed) free.

Drachman (1989) claimed, against conventional wisdom and the Uniformity Mafia, that Wh-movement may, and therefore must be to Spec-MP, at least for root sentences in Greek. Restated in the present OT context, Greek does not need to (and so may not) violate Minimal structure; MP is enough, e.g., for sentences like (1-2)

(1) *pyon filise i-Maria*? 'Whom did Mary kiss?'
(2) *pyos filise tin-Maria*? 'Who kissed Mary?'

where any further movement would be vacuous.

3.1.5. The Wh-criterion: a radical cure

But of course this proposal faces the principled and serious objection that it violates the Wh-criterion. I now offer a radical cure for this apparently fatal woe. Recall the OT tenet; that variation (whether between individuals or languages) is to be attributed to the 're-ranking of universal (but universally violable) constraints', so that a given constraint either emerges to greater (or even despotic) dominance, or sinks into submissive oblivion. What constraints could be relevant here? Well, obviously the Wh-criterion vs. Minimal-structure.

This idea might be carried out as follows. The Wh-criterion is first split into its two parts, viz., Op-in-Spec, and Filled head, as in Grimshaw (1994). Now look at the cases.

3.1.5.1. For English. In languages like English, there is a conflict-laden constellation (of course topped by the undominated Case-Filter), viz.,

Op-in-Spec (Wh-element in Spec) >>Filled head (by inversion) >>Minimal Structure.

As was said above, Spec-MP cannot be used as an escape hatch, since it is occupied by the Subject (moved for EPP and obligatory SS Case); and CP is created because of the overriding need for a Spec position to host the Operator. Minimal structure is violated, and *trace too, in favour of Op-in-Spec.

3.1.5.2. For Greek. But now suppose that for Greek Minimal Structure is the undominated constraint, thus;

Minimal structure >> Op-in-Spec/Filled Head (a tie)

Then not only is structure conserved, but we also avoid violating *trace for verb-movement; the trade-off this time is violation of (part of) the old Wh-criterion, the now-dominated constraint, Filled Head. No Greek speaker need lay down his life for this!

Compare also the idea of Subject Wh in-situ for English, characterised as avoiding vacuous movement in Chomsky (1986: 48-54), but perhaps now interpretable as the emergence of the default dominance of Minimal clause and *trace.

3.1.6. Graded responses

Of course, this Wh-in-MP version accounts for the blocking when we try to operate Wh-movement and simultaneously front a Subject, Object or Adverb. This was the original

problem data in Drachman (1989). But crucial to the present argumentation are the data on graded responses: Min-clause, Op-in-Spec, and Filled Head are again implicated.
Take now the graded triple (3-5)

(3) **pyon ton-filise i-Maria*? 'Whom did Mary kiss-him?'
(4) *?pyon i-Maria filise* 'Whom did Mary kiss?'
(5) *pyon filise i-Maria* ditto

Now 3) **Pyon ton-filise* is clearly catastrophic, and never subject to variable judgements. And conversely speakers agree that (5) *pyon filise i-Maria* is perfectly well formed. But why is 4) **?pyon i-M filise* bad yet not catastrophic for many speakers?
The gut reaction in this version is that (4) shows 'dialect variation'. But exactly what is it that is varying between the putative 'dialect' grammars? In the present framework we will not allow individual degrees of rigour for different parameters (cf. postulating that Subjacency is only a 'weak' constraint) or even the counting of violation-stars under OT. Rather, we interpret 'weak' as 'down-ranked' , and we thus re-rank our two constraints as the marked, last resort case for Greek[6]. This creates precisely that CP forbidden by an undominated Minimal structure in 1) , with Greek half-way to the English ranking, as in

CP[pyon MP[i-M filise .....

Op-in-Spec >> Minimal Structure >> Filled Head

with Part II of the old Wh-criterion, viz., Filled Head, downranked to inactivity; and the proper output is guaranteed. Clearly, the alternative in (5) above, repeated here as (6)

(6) *Pyon filise i-Maria* 'Whom did Maria kiss?'

with Op-in-Spec, Min-clause and Filled Head all respected, wins hands down -- so that our reversals constitute marked situations. As before, Fill Head is satisfied by a full verb, just as in the German in (7)

(7) *Wen kuesste die Maria*? 'Whom did Maria kiss?

3.2. Support from binding
Under Binding, the Minimal-clause constraint interacts with A/A'-movement. Support the kind of analysis just given comes from 'weak cross-over' facts. Take the example, used in another context in Horrocks 1994), in (8-9)

(8) **ton$_i$-agapay i-mitera tu-Petru$_i$* loves-him the mother-of-Peter
(9) ok/* *i-mitera tu-Petru$_i$ ton$_i$-agapay [t]$_i$* 'the mother-of-Peter loves-him'

(8) is of course a catastrophic sentence in the intended interpretation, since the pronoun c-commands the coindexed NP. What requires explanation is the variable status of (9), rejected by some speakers (X) but acceptable to others (Y). I will assume that there are two constraints involved, viz., Min-clause, and True-Topic, where True Topic implies that Subjects are 'really' topics and thus in an extra-clausal A' position in Greek.

3.2.1. Take first speakers X
These speakers have the constraint ranking

3.3.2. Other non-selected adverbs

Taking the enquiry to other non-selected adverbs. Suppose that such adverbs can indeed be licensed, roughly under 'sister to V-head' conditions, as in Drachman-Klidi (1992). If licensed, they behave like arguments, in that they obligatorily extract to quasi-Operator position, i.e., Spec-MP: and this extraction should and does block in the diagnostic configuration of a fronted Subject (the 'pos' intended here is of course the Manner adverb, and not 'how come?'), as in the pretty bad (18) above. We come back to the question, why this is not a catastrophic sentence, in a moment.

For the moment, compare the analysis of (18)

CP[pos [MP[o-Petros ilthe t

This violates Min-clause & Fill-Head. Now consider the alternative in (19) below, with its CP-analysis, including inversion:

(19) *Pos ilthe o-Petros* ?
CP[pos C[ilthe MP[o-Petros [t

This analysis would (ignoring *trace) violate only Minimal clause, but that is the undominated constraint for Greek, as we have suggested. So the alternative analysis, respecting Min-clause (as we showed, available for Greek though not for English) is preferred. On one interpretation, it does not even violate part two of the Wh-criterion, since Head is indeed filled:

MP [Pos M' [ilthe VP[o-Petros t

Now suppose there is an intervening constitutent, so that the adverb cannot be a sister to the verb? Then, the adverb is simply not licensed in VP. But adverbs can still extract, at least for some informants. We thus suppose that in such cases an adverb is inserted in-situ in the last resort Spec-CP, the position originally reserved for inherent Operators - those with in-situ adverbs, with no movement. This gives us (20-21)

(20) CP[Pos [MP[o-Petros filise tin Maria?
Pos o-Petros filise tin Maria?
'How did Peter kiss Mary?' (e.g., with passion!)

(21) *Pos o-Petros ilthe stin Athina*?
'How did Peter come to Athens?' (e.g., by train)

Of course, such constructions are far from immaculate; they violate at least Minimal clause, Fill-Head, and Stay (twice), and everyone prefers the minimal structure I suggested, as in

MP[Pos Agr[ilthe VP[o-Petros stin Athina

which of course violates none of our constraints except Fill Head (and trivially, *trace for verb-raising).

To conclude here, we revert to the construction in (18) above, repeated here as (22)

(22) ?*Pos o-Petros ilthe?*

This is for some informants not thoroughly bad -- again suggesting that some speakers use the marked possibility, Spec-CP of last resort, of course thereby violate at least the dominant Minimal clause constraint.

3.4. Negation: constraint conflicts

3.4.1. Neg-Scope

It is well known that the morphological imperative cannot be negated in MGk. The contrast between morphological and periphrastic imperatives is clearly seen in (23-4) vs. (25):

(23) *grapse-to*! 'Write it!' and
(24) **min grapse-to*! 'Don't write it!'
(25) *(na) min to-grapsis!*

Now as compared with Argument and Operator projections, checking projections have a questionable status. And we might infer that they should provoke no blocking effects. Then, instead of looking for ways to block V-movement in Neg Imperative (e.g., by assuming Neg is a head and thus blocks V-movement), we will suppose that there is no such blocking.
To support this, however, we will not take the problematic step of denying that Neg is a head. Rather, we will change the focus of attention. Suppose now, with Platzack-Rosengren (1994), we assume (1) that Imperative involves an abstract Imperative-Pronoun (Imp-pro), positioned in D-zero of a projection under Spec-VP, and distinct from the optional vocative addressee pronominal; and (2) that there is a condition such that Neg may NOT have scope over this abstract Imperative-pronoun. Thus for present purposes, under OT, we thus invoke the constraint

*Neg scope over Imp-pron

At first sight this condition seems too strong, for (ceteris paribus) it should block Neg Imperative everywhere. But now suppose Neg could cliticise to some X, thus blocking c-command of Imp-pro by Neg. For English, X might well be the inserted 'do' in a phrase like 'don't go!' For Greek, which has no equivalent to 'do', recall the earlier claim in Drachman (1994b), viz., that Neg-Imp somehow requires Modal 'na'; and we can now see why this is so. The modal particle 'na' functions as a host to the clitic Neg , just like 'do' in English, and with the same desired result.

So we now have a potential c-command-circumvention strategy of cliticisation as in

na-MIN + Imperative

However, in Greek, once na is introduced, its own selection properties are of course activated. Thus the further (and dominant) constraint Finite-Agreement is activated; the resultant clash between the [+finite] selected by 'na' and the [-finite] inherent feature of the imperative verb rejects the construction Na+M-imperative in favour of Na+subjunctive.
Thus it follows that, under OT, it is the tension between two constraints that produces the ban on Neg-Morphological-Imperative. The satisfaction of the anti-command constraint demands Neg-cliticisation; this in turn violates Full Interpretation in English and Greek. We seek to express prohibition, but cannot: and Last Resort adds 'do' in English and subjunctive in Greek.

3.4.2. OT and historical change

Now consider the classical Greek (AGk) situation as in (26-7):

(26) *kai me: vradine* 'don't tarry!'
(27) *me:de epimne:sthe:s eti Troias* 'neither think about Troy any longer!'

Clearly, AGk indeed allowed not only Aorist Subjunctive Neg Imperative, but also Morphological-Neg-Imperative constructions. In our OT model, AGk must have allowed low

ranking of the scope requirement. The outcome is that no cliticisation-insertion would be needed, so Finite Agreement is not violated; instead, the (low-ranked) Scope constraint is itself violated. Formally, the crucial constraints are ranked as follows:

Modern Greek: Finite-Agr >> Neg-Scope >> Full Interpretation
Ancient Greek: Finite-Agr >> Full Interpretation >> Neg-Scope

3.5. On emergence

We claimed that all constraints are Universal, and must be present as potential in all languages, just as the Distinctive Features in phonology are. For a given language, however, some never appear, so that they must be presumed so subordinate (low-ranked) that they never get a chance to operate. That this is not a vacuous (not to say, absurd) assumption is shown by what is called emergence, where in some context a very subordinate constraint is in fact suddenly up-ranked (cf. McCarthy-Prince (1994)). Consider briefly the following candidate cases in Greek and English.

3.5.1. Overt and null subjects

Suppose with Grimshaw (1994) we interpret the Extended Projection Principle (Nom in syntax/LF) as the constraint 'Subject', and the pro-Drop parameter as 'Free Pronoun'.

Then English has: Subject (NOM in syntax) >> Free Pronoun
But Greek has: Free Pronoun >> Subject

Yet an overt Subject (clitic) pronoun does in fact turn up in one small corner of Greek. Consider the sudden appearance of subject clitics in (28-9):

(28) Deictic: *na o-Petros! ~ na-tos!*
(29) Loc/Interrog: *pu ine aftos? ~ pundos?*[9]

The accident with *na-tos* is the existence of the uninflectable deictic verb *na*, which rather supports the notion that at least some post-clitics are phonological rather than syntactic clitics. The case of *pu-ndos* (by contraction from pu ine tos) is different.[10]
Conversely, pro-drop does emerge in English, by upranking, although only where discourse conditions allow Free Pronoun to also dominate Full Interpretation, thus permitting information-loss. Thus contrast the Declarative with the Interrogative prosodic patterns in (30-31)

(30) Declarative: (*I*) *Lost the car keys!* (interpreted as 1sg.)
(31) Interrog: (*YOU) Lost the car keys?* (interpreted as 2sg.)

The alternation of Subject dominant with Free Pronoun dominant of course makes the difference between English and Greek. Cf. Drachman (1975), Grimshaw (1994).

3.5.2. Emergence as a last resort

Here, recall the Clitic-projection in Greek, proposed in Drachman (1994). This projection is required (e.g.) to explain the Tobler-Mussafia effect, viz.,. that a clitic cannot stand clause-initially. This effect is normally inert in standard Greek, where the pronominal clitics are arguably associated with Agrs instead. But the emergence of a nominative-assigning clitic projection may be involved as a last resort to save a construction from Crash by *Case (details in Drachman ibid). Thus, in the construction in (32)

(32) *Pyon i-Maria*$_{Nom}$ *filise* 'Whom did Maria kiss?'

Nominative *i-Maria* can be in Spec-cliticP, a Nom position; but the corresponding Accusative could not, in the thus unacceptable (33)

(33) **Pyos tin-Maria*$_{Acc}$*filise* 'Who kissed Maria?'

4. Coda

4.1. On the sources of variations

Under P&P the variation was given by the values of parameters. Under Minimality, on the other hand, variation lies in the (morphological) properties of F-heads in the lexicon. Sportiche (1993) reduces this to Morpho-Phonemic properties, a theme recurring in Cardinaletti-Starke's (1994) Strength-Deficiency scale. In addition, is there convergence, at least of theories; e.g., does the growing importance of 'last-Resort' violation of hitherto absolute principles bring Minimality a step nearer to OT?

Sportiche (ibid) talks of the 'ranking of strength among these principles', viz

1) Lexical properties, such as that Q is a bound morpheme, are inviolable;
2) ECP is inviolable;
3) Paradigmatic Uniformity -- may be violated to avoid violations of 1) or 2); and
4) Greed may be violated to avoid violating 1), 2), or 3).

But it may be only a lexical coincidence or slip of the pen when Chomsky writes (1994:48) of 'the class of derivations that have to be considered in determining optimality': for indeed we recall the earlier passage (pg. 5 ibid) declaring that 'its derivation must (also) be optimal, satisfying certain natural economy conditions, e.g., conditions of locality of movement. Less economical computations are 'blocked' even if they converge'.

And in fact, Chomsky's aims (pg. 5 ibid) do not concern the properties of the computational system expressed in terms of output conditions -- whether through filters in Chomsky and Lasnik (1977), chain-formation algorithms in Rizzi (1986), or phonology in terms of OT as in Prince & Smolensky (1993).[11]

In turn, Optimality Theory lays the whole weight of variation on the ordering of universal constraints (many of which, as we saw, are all but identical with Minimality principles) -- only that the constraints are all violable. Questions of opacity as such have, on the other hand, hardly been dealt with in OT so far.

4.2. On Economy

We agree with those who, like Cardinaletti and Starke (1994) hold that all economy principles are of the 'minimise alpha' format. But the incorporation of the condition 'up to crash' makes such principles transderivational; 'you know you must stop if you know that going further will trigger ungrammaticality' (footnote p. 38).

The Optimality approach circumvents and trivialises this problem at once. Suppose the output candidate must satisfy 'weak pronominal'. Then if you must violate this, do so minimally: it follows that that output with the weakest pronominal that does not crash is optimal.

Notes

[1] Shortened from the paper read at the Workshop in Greek Syntax, FAS Berlin, Dec. 1994

[2] First, to the opacity problem. In phonology it is clear that, as compared to e.g., Korean Umlaut (Hume 1990), German Umlaut is opaque wrt the original phonetic front-vowel trigger. Yet it proved possible (Fery 1994) to predict a significant productive set of the German

Umlaut cases, viz., those in *-chen*, for both positive and negative sub-cases; and this by moving the synchronic motivation away from derivational history, in fact to the level of output prosodic structure. A parallel stratal treatment might be feasible in the case of syntactic traces, at LF.

Second, to the absoluteness of constraints. Over the years a certain falling off from the grace of absoluteness in classical 'constraints' is observable. Setting aside long-standing distinctions such as weak vs. strong Islands, weak vs. strong Crossover, and the characterisation of Subjacency as a weak constraint as compared (e.g.) to the ECP, -- and noting in passing that even weak ECP violations are countenanced (Chomsky Barriers) -- consider also a) Pollock/Chomsky weak (e.g., Theta-opaque) vs. strong (Theta-transparent) affixes; b) the deployment of Last Resort to ensure convergence in Chomsky 1994, and c) Cardinaletti-Starke (1994) on three degrees of element-strength, correlating with distance of movement.

Nevertheless, Chomsky (1994) shows no interest in characterisations of the properties of the computation system in terms of output conditions. On the contrary, he attributes greater prominence than ever to the derivational approach (ibid, pp.6-7), emphasising its inevitably step by step nature in the face of opacities between input and output strings, in syntax as in phonology.

For syntax, Chomsky notes crucially the opacity created by deletion and even replacement of traces. For example, despite the constraint on vacuous subject-movement in syntax, cases of ECP like the following arise:

*how do you wonder who fixed the car?

where in the syntax, 'how' moves to the inner Spec-CP, then to outer Spec-CP, leaving behind how-t'. At LF, however, 'who' moves to inner Spec-CP, deleting (or now co-occurring with) how-t'. Thus the original trace of 'how' is no longer p-governed, violating the ECP

[3] It is a question whether we also need Align-I: Agr to left of VP (State or Event) - making an I-relation. We will necessarily revert to align (but elsewhere, for lack of space) to deal with directionality in clitic placement.

[4] But there is a problem here. If ECM cases require independently motivated movement for EPP to Spec-Agr_SP before Object raising to matrix, as Iatridou (1994) claims, then EPP applies to simple clauses too. But then, what allows VSO structures to survive Spell-Out? We have assumed NP-Subject can remain in VP, so are these cases to be reinterpreted as cases of NP-subject to Spec-MP (motivated by EPP), followed by Verb-to-Comp? The problems are: 1) what would motivate Verb-to-Comp here? and 2) Negative always precedes the verb (main or auxiliary), for both SVO and VSO configurations; we would have to assume that Neg always syntactically cliticises to its verb.

[5] And note the tension whereby certain fully acceptable constructions will still necessarily contain (lower-ranked) violations: thus, eg.,

a) Wh-in-situ violates Op-in-Spec, but
b) Wh-in-Spec of course violates *trace, and may violate minimal clause as well.

So far as I know, LF movement is so far hardly taken into account in OT.

[6] Last resort is something of a problem, because subject-fronting is not the only way to achieve prominence for that NP.

[7] Compare also Tsimpli 1990, which takes Topics in Greek to be base-generated in CP-adjunction -- though that too is of course an A' position. So for Tsimpli there are only X-type speakers.

[8] Cf. pos2 and the 'how-come?' reading in
Pos o-Petros ilthe 'How did Peter come?'

where pos2 is probably an inherent Wh-word, like yati.

[9] The missing Qns (how/when/ why is he?) would be semantically anomalous.

[10] What about Who/what (is) he/it? These would have Agr-adjustment. And there is the problem of where *na-tos* get its case.

[11] Support for this judgment comes from the fact that the derivational approach is assigned even greater prominence under Chomsky's Minimalism (1994:6-7), emphasising step by step derivation, and pointing to the opacity relations often obtaining between input and output strings in phonology as well as syntax. Successive raising is an example. 'Thus...head-movement meets locality conditions, but several such operations may leave a head separated from its trace by an intervening head, as when N incorporates to V leaving the trace t_N, and the $[_V$V-N] complex then raises to I leaving the trace t_V, so that the chain (N, t_N) at the output level violates the locality condition satisfied by each individual step'. In Chomsky's view a fully derivational approach captures opacity in both syntax and phonology, 'and indeed suggests they should be pervasive, as seems to be the case'.

Chomsky claims we might indeed formulate the desired result in terms of outputs: since the trace is plausibly a copy, we could invoke a record of the original (and purely local) raising, within the intermediate trace. But he holds this is the wrong move, since the relevant chains at LF are (N, t_N) and (V, t_V), and in these the locality relation eliminated by successive raising is not represented. And he concludes that 'the computational system C_{HL} is strictly derivational' and that 'the only output conditions are the bare output conditions determined externally at the interface'.

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