Towards an elegant solution to language variation: Variation reduces to the size of lexically stored trees.

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Three decades after the "Principles and Parameters" revolution in language variation, we still have no theory of variation. Thirty years ago, if some element moved in one language but not in another, this would be expressed by adding a movement rule to one language but not to the other. Today, it is expressed by adding a feature "I want to move" ("EPP", "strength", etc.) to the elements of one language but not of the other. In both cases (and in all attempts between them), we express variation by stipulating it, via the postulation of a brute-force marker.

This paper shows that you can do variation without inventing any dedicated marker such as "EPP features" or "strength of features". The solution is simple: if you allow lexical items to spell out entire syntactic phrases, some lexemes will be bigger phrases, some will be smaller phrases – and I explore the conjecture that this is all we need for variation.

Before I show you how to do parameters this way, we need to clarify some backdrop: where Principles & Parameters (P&P) stands today, and why we ended up with [±"I want to move"] features. On occasions such as this conference, one sometimes comes across the claim that Minimalism is the successor to P&P, or that P&P failed because some ideas about parameters are wrong, etc. Such claims rest on a misunderstanding of what P&P is about.

The current lack of a satisfactory theory of parameters should not be taken to mean that P&P failed as a framework. On the contrary, it has been working remarkably well at its core. The "core" of P&P (Chomsky 1981) is the idea that most of grammar – perhaps all of it – is invariant across languages. I.e. the "core" of P&P is the "principles" part. Parameters are secondary in that they presuppose the principles: parameters only make sense against the backdrop of pre-established principles. Parameters are simply the "residue" left once the invariant cross-linguistic principles are factored out, whatever that residue turns out to be. The current lack of a satisfying approach to parameters is something we need to solve – and that's the aim of this paper – but it is certainly not a good barometer of the overall health of P&P. By extension, any value judgement about a particular approach to parameters is not a good barometer of the overall health of P&P.

Once it is clear that P&P is primarily about the idea that most or all of grammar is cross-linguistically invariant, it becomes obvious that Minimalism is an instance of P&P, along with remnant-based approaches (Kayne 1994), GB (Chomsky 1981), cartography (eg. Cinque 1999), nanosyntax (Starke 2002), etc.[1] This is because Minimalism builds on the idea of largely or entirely invariant cross-linguistic principles,

* Adapted from a presentation at the Barcelona workshop on parameters. Many thanks to Carme Picallo for her patience and support. [v009]

both in its early versions (economy theory, Chomsky 1993) or in its second generation (phase-theory, Chomsky 2000).

The question thus stands: given the health of the theory of invariants ("Principles"), can we construct a non-stipulative theory of the residue ("Parameters")? Let me first show you that in trying to resolve this question, we are stuck in a dark and inhospitable place – in part due to the very success of the invariants.

In the early days of P&P, there was plenty of space in the theorertical apparatus to implement variation: Grammars could vary either lexically (perhaps complementisers vary as to whether they induce subjacency effects or not) or in their principles (grammars might vary as to whether they require wh-movement overtly or covertly). As research advanced, that theoretical space open for implementing variation gradually closed down, to the extent that the most promising contemporary approaches lead to a landscape in which there is apparently no space at all left for variation.

The first move in that direction, a standard move by now, was to eliminate parametric variation from grammar itself, and restrict it to the lexicon. According to that line of thinking, principles are invariant across languages, but they are exquisitely sensitive to the grammatical properties of lexical items. The second move, was the rise of fine-grained representations – ie. cartography, the functional sequence, etc. As years went by, results piled up showing that the ingredients of syntax are smaller and more numerous than classically thought, and hence syntactic representations are bigger and more fine-grained than classically thought. To almost everybody's surprise, the order in which those new ingredients ("phrases", "projection", "functional categories") occurred in syntactic representations turned out to be also largely or entirely invariant across languages. This path of research is quickly leading in the direction of one feature per terminal, and invariant content and order of phrases across languages. This is a spectacular success for the invariant part of grammar ("principles"), but it just as spectacularly shrinks the theoretical space available to express variation: under that view, both the content and the order of features is invariant cross-linguistically. Not only are grammatical principles invariant, but the features and underlying representations they operate on are also invariant.

This is a barren landscape for a variation-theorist – everything has become invariant. We cannot even say anymore that variation is lexical: since lexical items are made out of grammatical "features", saying that variation is lexical amounts to saying that variation will be variation in features. And this clashes with the road leading us to features being invariant in their content and order in the functional sequence. At this point, it would look like we broke our last tool for expressing variation – the only escape being to invent parochial features amounting to "I want to move" or "I am different than the other language" – such as "EPP" features or "edge" features.

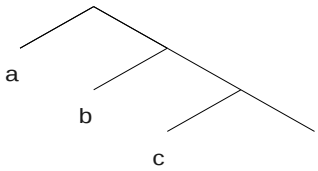
Not everybody lives at the end of that road (yet), but the further down the road you live, the more desperate the variation problem looks. And yet, there is a simple way out. No

1 Depending on whether the "Principles" in "Principles and Parameters" are implicitely assumed to be inviolable principles only, some versions of Optimality Theory are also instances of P&P.

matter how much invariance you are led to accept in your principles, representations and features, there is a simple and elegant solution to the parameter problem.

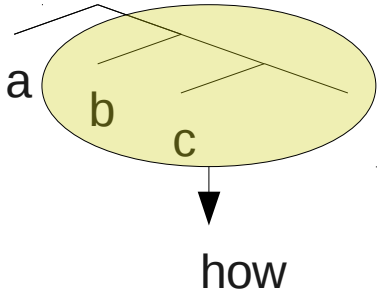
That solution builds on the idea of phrasal spellout. Assume an underlying syntactic structure of the type:

(1)



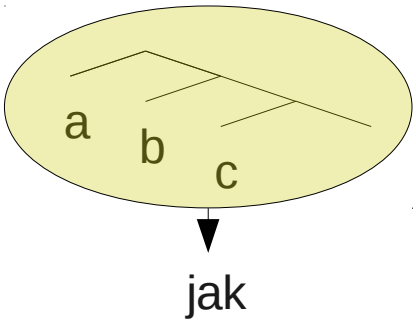
The idea of phrasal spellout is that an entire (sub)constituent such as for instance [b [c]] in the structure above can be spelled out by one lexical item, eg 'how' in English:

(2)



Given this technology, developed in the nanosyntax framework independently of variation, lexical items come in various “sizes”: they spellout either bigger or smaller constituents. This opens the possibility that in the next language we look at, the counterpart of 'how' spells out a slightly different amount of structure; for instance, the Slovak 'jak' might be:

(3)



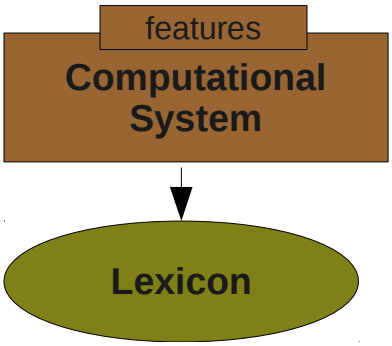
At this point, we have language variation without diacritic markers such as strength of features: all grammatical processes involving the 'a' layer, aP, will affect the Slovak 'jak' but not the English 'how' – or more generally Slovak wh-phrases but not English wh-phrases.

The conjecture I am exploring is that such “size differences” are enough to express all cross-linguistic syntactic variation. What we thought of as “parameters” are just differing sizes of lexical items. Here, I restrict myself to the theoretical side of this

claim: detailing the logic of the above reasoning and showing how it leads to various types of grammatical variation.

At first sight, it looks like there is a catch however. To see it, let's start by looking more closely at the notion of phrasal spellout. The motivation for it runs something like this (see nanosyntax work for a more detailed walkthrough): as syntactic representations become bigger, their terminals become more fine-grained, until they reach the point of being “sub-morphemic”, ie smaller than individual morphemes. Syntactic trees with even moderate amounts of functional projections have long passed the “submorphemic terminals” point. If terminals are smaller than individual morphemes, it follows that morphemes cannot feed syntax: they are too big, too coarse, they do not provide the right granularity of ingredients to build syntactic trees. Rather, it is only after some steps of derivation that a constituent large enough to correspond to a morpheme is created. It thus follows that the lexicon comes strictly after syntax and lexemes correspond to entire phrasal constituents.[2]

(4)



And this is where the catch comes: if the lexicon is strictly after syntax, the lexicon comes too late to ever influence the course of syntax. And therefore, the size of the constituent spelled out by eg. 'how' or 'jak' will never be able to influence the working of the syntactic computational system. If this were so, parameters could not be reduced to the size of lexical items after all.

> R. Kayne: I object to the idea that “phrasal spellout follows from submorphemic terminals”. One could equally well view the situation in terms of a morpheme-sized terminal surrounded by several projections headed by null morphemes, hence dispensing with phrasal spellout.
>
> Starke: Actually, no: even if you do that, you don't escape phrasal spellout. Once the details of the approach you suggest are worked out, the null morphemes idea turns out to be a variant of phrasal spellout. Let's take a concrete example to make the discussion clearer. Take for instance the two synthetic forms of the past tense in French, “il chant-ait” and “il chant-a”. Both are past tense, both are spelled out as a single phoneme. But they differ in their “aspectual” properties in complex

2 Here the architecture remains neutral on whether the features feed syntax from the “outside” or whether they are part of the computational system itself, and also on whether they are differentiated already (“labelled”) or whether that comes later. The point is rather that only atomic features are available at the beginning of a computation. Grouping of features into lexical items strictly follow syntax.

ways that can be informally summarised as “imperfective” and “perfective”. Since tense and aspect are different syntactic projections, I would conclude that a morpheme such as the French past tense 'a' spells out a phrasal constituent, ie a constituent containing at least the two terminals T and Asp. You on the other hand would phrase things in slightly different terms: 'a' spells out one of the terminals, say T, and co-occurs with a null perfective morpheme in Asp, 'ait' also spells out T, but co-occurs with a null imperfective morpheme in Asp. The crucial question is: under your description, how do we ensure that the flavor of T spelled out as 'a' necessarily co-occurs with the flavor of Asp spelled out by the null “imperfective” aspect and cannot co-occur with the flavor of Asp spelled out by the null “perfective” aspect ? (Mutatis mutandis for “ait”, of course). This co-occurrence is automatic in phrasal spellout, but is not captured by your null morpheme approach. So a “null morpheme” approach needs to be supplemented by a mechanism which ensures that the right (null) morphemes occur with the right overt morpheme. And once we do that, spelling out one (surface) morpheme will involve a mechanism spanning over an entire stretch of terminals: the terminal with the morpheme being spelled out, and all the adjacent terminals populated by null morphemes whose values need to be “synchronised” with that realised terminal. In effect, you will have recreated phrasal spellout in your system (or “spans” or “stretches” as some call them). The equivalent of phrasal spellout is thus unavoidable once terminals become submorphemic.

Moro: So the difference between this and generative semantics would be that the hierarchy here is fix and independently motivated?

Starke: The most fundamental architectural claim of generative semantics was that semantics comes before syntax. Much of the rest of the discussion followed from that assumption. Since phrasal spellout (or nanosyntax in general) does not adopt this claim, there is a fundamental difference with generative semantics right at the outset. That said, there are obvious similarities between modern syntax and some aspects of generative semantics. In our case, lexical decomposition as practiced in generative semantics is a historical antecedent to some forms of phrasal spellout. Interestingly though, if you read through the technical details of how lexical decomposition was done by generative semantics, they remain heavily tied to the notion of terminals and shy away from phrasal spellout per se. So even in this domain, the difference is clear.

Boeckxx: Distributed Morphology also has the “too late” problem you were starting to discuss.

Starke; Actually, it doesn't. It is important to distinguish post-syntactic phrasal spellout as it is done in Nanosyntax, from “late insertion” as it is practised in Distributed Morphology (XXX), Cardinaletti & Starke 1993, or originally in Otero 197X, den Besten 197X. All these “late insertion” approaches have (at least) two lexica, one before syntax, feeding the computational system, and one after syntax, spelling out the result of the computation. In contrast, the essence of the “phrasal spellout” approach is that there is no lexicon before syntax. There are

only individual features before syntax. So the issue is not so much “is there a late lexicon after syntax”, but rather “is there an early lexicon before syntax, feeding syntax?”. Everybody except nanosyntax says “yes, there is an early lexicon before syntax” (and perhaps another afterwards). Nanosyntax stands alone in claiming that “no, there is no lexicon before syntax” and hence it also stands alone with this new problem on its hands: the lexicon comes too late to be a supplier of parameters, whatever the format of parameters is.

Luckily, there is a simple solution to this “too late” problem, and in fact, that solution is already included in the Nanosyntax framework. It comes from idioms and semi-regular morphology, so let's look at that, as it will not only solve our new problem, but it will also give us tools for the discussion of variation.

Idioms are *prima facie* an important source of support for phrasal spellout. Within the traditional approach, there is no easy way to handle multi-word idiomatic expressions, as witnessed by the clunkiness of the existing attempts at handling idioms while at the same time confining spellout to terminals. Under phrasal spellout, idioms are natural: they are cases in which a relatively high-level constituent has been stored. The traditional example of “kick the bucket” can now be rendered as the lexicon storing an entire VP, or the modern-day equivalent of a VP (eg. a syntactic layer above AspP).

Kayne: Could you say something else about discontinuous idioms of the type “give somebody a piece of your mind”, where in English you have the indirect object that’s completely free? How does that interact with your theory of spellout?

Starke: Yes and no. Yes in that a traditional solution to such facts carries over unchanged to the phrasal spellout view of idioms: there is a level of constituency at which [give a piece of your mind] is a constituent excluding the indirect object, and that is the lexically stored constituent. The indirect object is then compositionally added to this constituent. On the other hand, looking at idioms in any detail will quickly reveal that there are many facts and regularities about gaps that we have little or no understanding of for the moment. So I am reluctant to invent explanations for the few facts we do know, before we get a better picture of the overall domain. For instance, there are unnoticed facts in French showing that you can insert quantifiers into some idioms, and hence there is a gap available in the middle of the idiom, but it is only available to the type of quantifiers that correspond to the type of nouns you have in the idiom. That means that you have a gap in the idiom but you also have some regularity about how the gap can be filled. And before we have a generalization about that kind of fact about gaps in idioms, I am reluctant to start inventing a theory of gaps in idioms – we just don’t know enough about what the facts are.

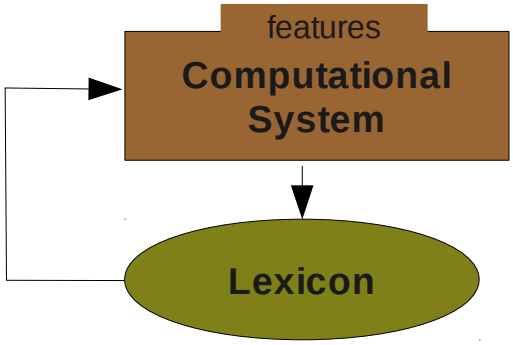
There are many interesting technical and empirical issues to address about storing idioms as phrasal constituents, but only one of them is directly relevant to our concerns here: put simply, multi-word idiomatic expressions are made out of regular words, with their regular allomorphies and quirks of lexical insertion. Those words making up the idiom are therefore themselves the result of spellout operations at lower hierarchical

levels of the syntactic structure (eg. the lexical insertion of “bucket” in “kick the bucket” or of “took” in “took to the cleaners”). We thus have a series of lower-level spellout operations (“kick”, “the”, “bucket”) and one higher-level spellout operation identifying the whole VP/AspP as corresponding to the lexical entry of the idiom.

Given this setup, notice that the VP/AspP-level spellout operation must know about the outcome of the previous lower-level spellout operations. It is only if the lower-level operations chose “bucket” over “jar”, “horse” or “plate” that the idiom will be applicable and hence spellout of the higher constituent must somehow “remember” the result of the lower-level spellout operation.

This means (inter alia) that the architectural schema in (4) above must be modified to add the equivalent of a feedback loop after spellout:

(5)



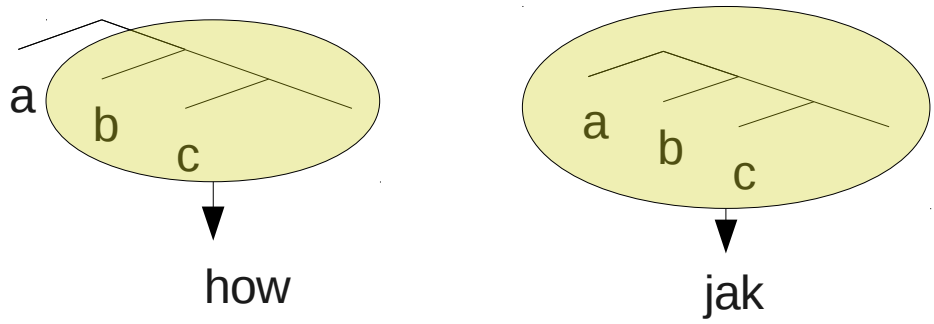
This way the choice of “bucket” over “jar” will be visible to the next computational cycle, and the idiom “kick the bucket” can be correctly restricted to cases where “bucket” was spelled out earlier.

As a byproduct, we have now solved our “too late” problem: given the feedback loop from spellout back into the syntactic computational system, syntax does have access to prior lexical choices. Lexical choices can therefore in principle affect further computation. We are in business again: there is a logical sense in which spelling out a syntactic structure with “how” may lead to different consequences than spelling out a syntactic structure with “jak”, given the different lexicalised structures of “how” and “jak” in (2-3).

In fact, there are at least 3 different ways in which the “size” of a (the syntactic structure of) a lexical item can be a parameter, ie. affect computation. Let's go from the simplest to the most involved.

1. Suppose that a structure such as (1) is lexicalised differently in two languages, for instance as in (2) versus as in (3), both repeated here:

(6)



the a layer, aP, will be “eaten up” in one language and hence unavailable for use by independent lexical items, whereas it will be available for such use in the other language. As a result, one language will have some visible constructions targeting aP whereas the other language will lack such constructions.

To make things concrete, here are a couple of concrete illustrations, simplifed for the exposition. Consider for instance the following indefinites in English and French:

(7)

someone	quelqu'un
something	quelque chose
somewhere	quelque part

Although the English and the French series share many properties, they curiously differ as to whether they enter into the “or other” construction:

(8)
someone or other (fell down)
something or other (fell down)
?He must have put this somewhere or other

French has the “or other” construction, as in:

(9)
Il a bien du le mettre à un endroit ou un autre
He has well must it put in a place or an other
“He must have put it in some place or other”

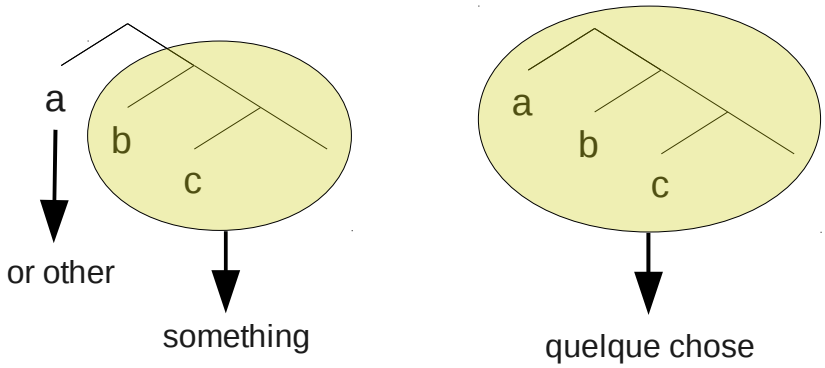
But the indefinites systematically refuse to enter that construction:

(10)
* quelqu'un ou un autre (est tombé)
* quelque chose ou un(e) autre (est tombé)
* Il a bien du le mettre quelque part ou un(e) autre

This English/French asymmetry can now be expressed by a size difference between English and French indefinites: if the “or other” construction attaches to aP, and French indefinites spell out abc while English indefinites spell out only bc, then aP is available

in English and “or other” can attach to it (presumably followed by movement of the indefinite), but it is unavailable with French indefinites, as illustrated in (11):[3]

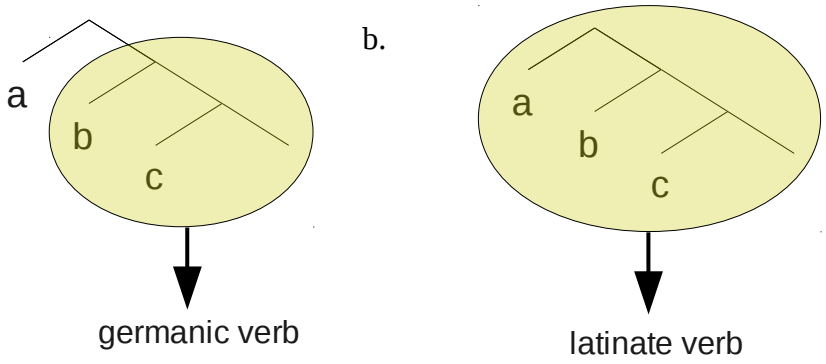
(11)



Regardless of the empirical plausibility of this particular example, this shows that cross-linguistic differences can be expressed by simple size differences. In other words, at least some “parameters” are expressible in terms of structural size.

Here is another example of the same logic, again offered for illustrative purposes. The germanic verbs in English can be found with a few constructions which are not available to the latinate verbs of English: verb-particle constructions, resultative constructions. Again, such a situation fits into the same pattern: if latinate verbs spellout a larger syntactic structure than germanic verbs, the germanic verbs will leave some layer of structure available for further use while latinate verbs will “eat out” those layers:

(12) a. b.



As before, if particles, resultatives, etc target aP, it follows that germanic verbs will be compatible with particles, resultatives, etc while latinate verbs will not. Extending this reasoning cross-linguistically, if the verbs of say Italian or French are not found in particle constructions and do not have resultatives, we would conclude that the Italian or French verb spellout the larger structure as in (12b).

3 Readers familiar with Nanosyntax may object here that the technical definition of spellout in Nanosyntax derives the “superset principle” as a theorem and hence the French indefinites should be able to shrink to accommodate the “or other” construction. If we were to pursue this analysis of indefinites, we would thus need to treat French indefinites as “unshrinkable”, in a way reminiscent of the R-state adjectival passives in Starke (2006).
There is would in fact be natural: these indefinites are clearly composite expressions, ie. idioms composed of “quelque” and “chose”, “un”, etc. Technically they would thus be lexical items referring to other lexical items (“pointers”, in technical terms), and such cases are known to be unshrinkable.

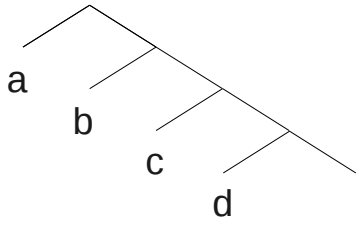
Again, we would have a case of a “parameter”, ie the presence vs absence of classical resultative constructions in English vs Italian, reducing to a simple size effect: the verbs of Italian spellout a slightly larger syntactic structure than the germanic verbs in English.

This reasoning extends to another familiar case: often, some language is described as “lacking some functional projection” which is present in another language, a situation which has led to controversies about whether all functional layers are always present but somewhat silent, or whether they can be genuinely absent. Consider the situation we just saw however: if all verbs of Italian (or French) spell out the bigger structure (12b), and some other language has verbs spelling out the smaller structure (12a), in such a situation, aP will never be “visible” in Italian (or French) but will be visible in other languages. In this case, it will thus appear as if Italian or French “lack a functional projection” which is present in other languages. Again, a familiar case of language variation reduces to the differing sizes of lexical items in different languages.

2. Size differences trigger another type of syntactic effect: movement differences. Let us start with what we could call “spellout driven movement”, before addressing more classical movements such as wh-movement. Finding selective triggers for movement, such that there is movement in one language but not the other, is a notoriously difficult task.

Consider a situation like the following, our syntactic tree is:

(13)

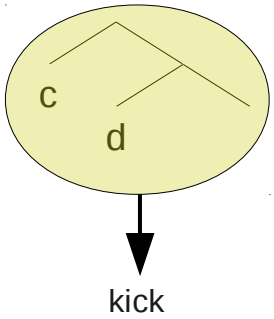


and we have two lexical items to spell it out:

(14) a. kick <--> [[c] d]
b. ed <--> [[a] b]

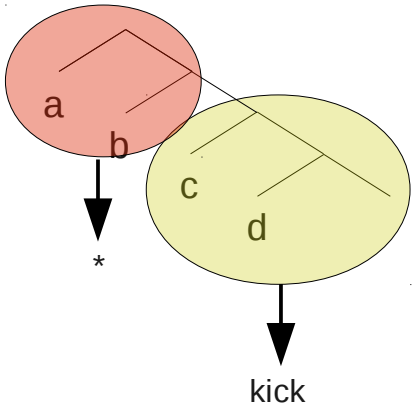
Assume we came to the stage of the derivation in which we have built cP:

(15)



This constituent can be spelled out with the lexical entry (14a), as “kick”. Compare this to the situation in which we have built the tree up to aP:

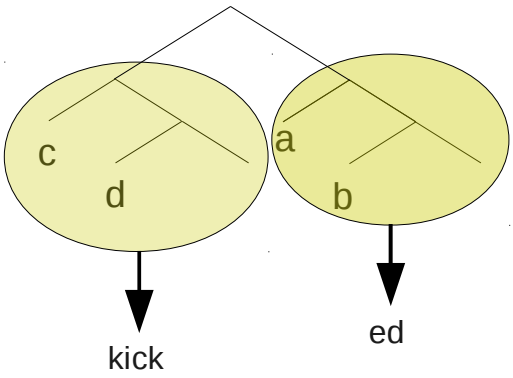
(16)



Here we have a problem: this tree cannot spellout. There is no single lexical item that covers abcd, so we need to resort to the two lexical items covering ab and cd respectively. As before, the lexical item (14a) matches the constituent [c [d]] and presents no problem. The lexical item (14b) on the other hand cannot be used: it matches a constituent [a [b]], but there is no such constituent in the structure, ie a constiuent made up of ab to the exclusion of anything else.

If this structure is to be spelled out, something must be done to save it. I propose that this kind of situations is the source of one type of movement: last resort movement driven by the need to spellout. In this case, [c [d]] moves out as a last resort, so as to create the configuration:

(17)



Now the structure can be spelled out: as before, [c [d]] corresponds to “kick” and now [a [b]] matches the lexical (14b) and hence spells out as “ed”, yielding “kick-ed”.

We have now created a situation in whch movement is triggered without ever having to say that there is a trigger or any special movement-related ingredient. Movement happens because you have to create a configuration that is adequate for spell-out.

Note that this style of movement trigger is not limited to morphological entities. The same logic applied high up in the syntactic tree will trigger movement of large syntactic constituents. For instance a syntactically complex complementiser, perhaps spelling out

ForceP and FinitenessP in Rizzi's 1997 system, will yield movement of the entire clause around the complementiser, so as to create a configuration in which [force [fin]] is a constituent matching the lexical entry of the complementiser.

This technology in fact predicts an interesting class of movements: movements that swap the order of two constituents, no matter how big, and which have no detectable semantic or classically syntactic triggers. Such movements are remarkably similar to the movements often postulated in the remnant movement literature, and it is an interesting conjecture that those remnant-like movements have resisted an analysis in terms of classical triggers precisely because they are “spellout driven” in the above sense.

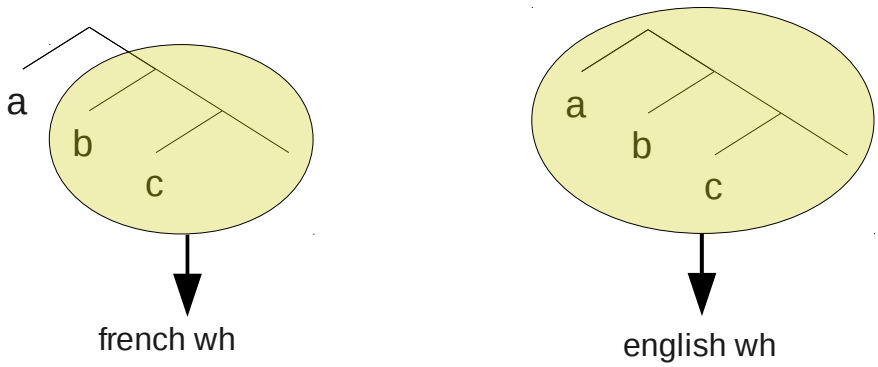
As before, there is a lot more to say on this topic, among others how to derive the difference between triggering a “cyclic”-like movement (specifier to specifier) versus remnant-like (complement to specifier within an fseq), but here I limit myself to illustrating our core point: parameters, including movement parameters, can be done cleanly, without hacks such as EPP features or feature-strength, once lexical items correspond to various “sizes” of syntactic structures.

3. Finally, let us turn briefly to classical movements, such as wh-movement. Again, I leave a detailed discussion for a separate article, only illustrating the basic logic here.

How can we express the fact that some grammars require wh-movement (of the first wh element), such as English, and some grammars don't, such as French? As is well-known, French-style grammars still show locality effects even in cases in which the wh-word stays in situ. (What is less well know is that the locality effects associated with wh in situ are partially different than those of overtly moving wh – see Starke 2001 for a detailed discussion – but this need not concern us here, as we concentrate on the cases in which the locality effects are the same).

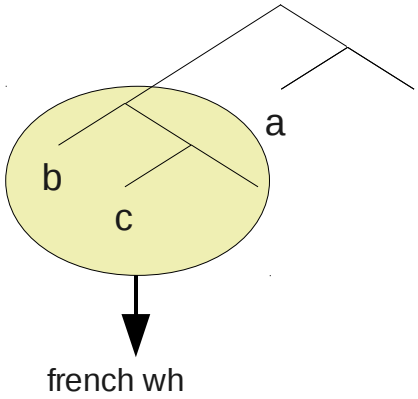
The locality facts indicate that there is movement in both cases (and the difference in the locality facts suggests that this is not merely an issue of timing, ie. early vs late movement). I would like to suggest that this is again a size difference. Assume the representations (2-3) for wh-elements, now transposed to English versus French:

(18)



Now assume further that French has a null morpheme spelling out aP. The first consequence is that bP will move over aP, by the logic of spellout-driven movement discussed above:

(19)

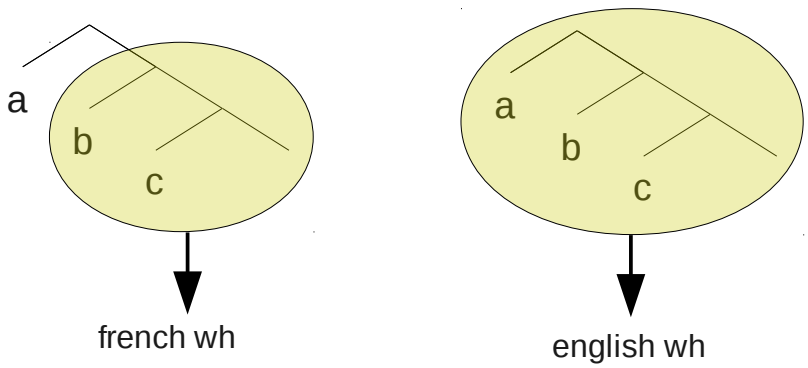


Assume now that aP is the layer targeted by wh-movement. Since aP is contained in the wh-words of English and hence aP remains a constituent with bP and cP, English will have audible wh-movement. Since aP is not contained in the wh-words of French, French will have wh-movement of the null morpheme spelling out aP, thereby providing the twin consequence of locality effects and wh-in-situ.[4]

It thus turns out that both types of cross-linguist variations can be expressed in terms of lexical elements spelling out bigger or smaller syntactic structures: the presence or absence of a construction or functional projection in one language but not the other, and the presence or absence of overt movement in one language but not the other. We have finally opened the way for a clean theory of parameters, one without technical notions invented only to notate variation.

Conclusion.

I have shown that “parameters”, i.e. cross-linguistic variation, can be expressed in terms of lexical elements spelling out bigger or smaller subconstituents of the syntactic structure being built by the computational system:



4 Notice this reasoning does not require anything like the lexical integrity principle, at this stage.

The yellow oval represents the lexically stored element, the black tree represent the structure being built by the computational system and waiting to be spelled out. In such a situation, I have illustrated above that grammatical processes moving aP will affect bigger lexical items (the second type), and grammatical processes populating aP will be available with the smaller lexical items (the first type).

After three decades of Principles & Parameters tradition, this is to my knowledge the first explanatory theory of (the format of) parameters – as opposed to notational diacritics marking loci of variation. In this theory, "parameters" reduce to the size of structure that lexical items spell out. Of course, being the only principled game in town is a comfortable position, but it remains to be seen if in this case it is also a correct position.

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Languages quite often have a variety of negative markers (e.g. English not, non-, and un-), which take scope in different positions (e.g. sentence negation vs constituent negation). In a comparative study of negative markers, De Clercq (2013) has identied four different categories of negative markers based on their functions, semantics, scope, and differences in stackability.Â Towards an elegant solution to language variation: Variation reduces to the size of lexically stored trees. Ms., TromsÃ¸ University. Zimmer, Karl (1964). 1. Given that there is variation in clause types, is there similar variation in nominal, adjectival, adverbial and prepositional domains?2. Some questions arise regarding the privileged status of clauses (verbal extended projections). For instance, why can only clauses be used on their own? And is there an equivalent to V2 or V-final in subordinate clauses in other categories?3. Can the cross-categorial parallels be extended to (sub-)morphemic structure (Caha 2009; Starke 2011)?4. Can all types of nominals be analysed as parallel to clauses?Â Starke, Michal. 2011. Towards an elegant solution to language variation: variation reduces to the size of lexically stored trees. Ms. University of TromsÃ¸ (available at http://ling.auf.net/lingBuzz/001183). Szabolcsi, Anna. Language variation and change is an important research paradigm today and there many books on the subject as well as a journal with this term as their name. Introduction. The following presentation is intended to give students an idea of what this lecture series will be about.Â Schematically these three phases correspond to the beginning, middle and end of an S-curve which is frequently used as a visualisation of language change (see next slide). n Labov proved his theories on language variation and language change by investigating (in an anonymous manner) the English of various employees in New York department stores. Here he chose stores with differing social status. 2. LEXICAL VARIATION â€¢ A lexical variation is to use a linguistic element instead of other without making changes in the meaning of words or phrases. Example: Perhaps â€“ Maybe Complete the chart with the possible lexical variations of the following words Milkshake Rubbish Freeway Autumn Stone Biscuit Cooker Engine Trousers Vacation Post French Fries. 3. All languages change over time and vary according to the place and social setting.Â In other words we simply say I played, you played, he/she/it played, we played and they played and make no adjustment to the ending of the verb. This contrasts quite markedly with the way past tenses are expressed in many other European languages.