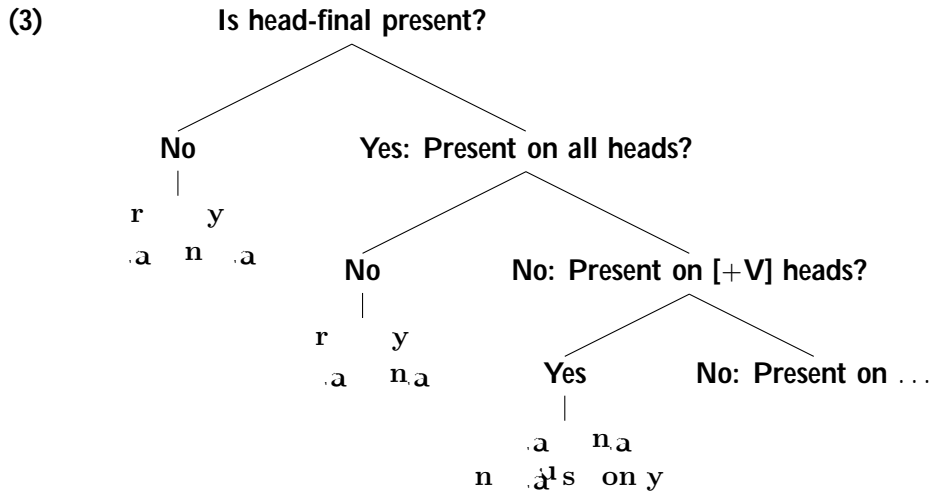


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Roberts (2012) develops the idea of parametric hierarchies in more detail. A good example of such a hierarchy is that determining word order/linearization. The upper part of this hierarchy is presented in a preliminary way in (3):



Here the term **is a cover term** for a more technical notion, whose precise nature need not concern us here. It can be reduced to a complement-movement feature, following the general approach in Kayne (1994) or to a PF Head Parameter as discussed by Richards (2004) and Sheehan (to appear).

A very important aspect of the approach put forward by Roberts and developed by Biberauer (2011), Branigan (2012) and Biberauer & Branigan (2012) is the idea that the hierarchies are not prespecified by UG, but instead are seen as emergent properties, arising from the interaction of markedness conditions (ultimately originating in "third-factor" principles optimising the acquisition process), a highly minimal underspecified UG and the Primary Linguistic Data (PLD). Two such conditions in particular are at work (although of course we do not exclude the possibility that there are others):

- (4) a. **F^f TUR^f E ONO (FE):**
 Given two structural representations R and R' for a substring of input text S, R is less marked than R' i R contains fewer formal features than R'
- b. **NP^f G^f N^f R S T ON (IG):**
 If a functional head F sets parameter j6A632(n39)1.7903oreser

The definition of FE given here is taken from Roberts & Roussou (2003:201), while IG originates in Roberts (2007:275).

Looking again at the word-order hierarchy in (3), and assuming either that head-final orders involve “roll-up” movement of complements triggered by a formal feature of a class of functional heads, or that the “final” value of the Head Parameter requires a special feature, consistently head-final order is one degree more marked than consistently head-initial order.¹ Importantly, all intermediate types are more marked than either of these.

The highest position in the hierarchy, then, conforms fully to both FE (since there is no feature) and IG (the absence of the feature is generalised). The next highest position is more marked in relation to FE, in that the feature is postulated, but still maximally unmarked in relation to IG in that the feature is fully generalised. In this sense, IG leads all the relevant functional heads to “point the same way.” All lower positions in the hierarchy are relatively marked in relation to FE (as the feature is postulated) and in relation to IG (as the feature is not fully generalised).

As already mentioned, IG and FE are grammatical principles, but rather acquisition strategies, which may be motivated by a general conservatism on the part of learner’s use of cognitive devices. Mobbs (2008, in progress) suggests that this is a reflection of a non-language specific optimisation principle. It follows from this that the distinctions among the various types of parameters as presented in (2), derive from markedness, which in turn emerges from the conservatism of the learner.

As (2) implies, true macroparameters sit at the top of the hierarchy. As we move successively “downwards”, the systems become more marked, the parameters become meso, then micro, then nano. Parameters in lower positions on the hierarchy have a longer description (the conjunction of all the higher “nodes”), and, in this sense, are intrinsically more complex. It is also plausible to think that these parameters are further along a learning path, as the least-marked values (the highest, macro ones) represent the acquirers’ initial hypotheses, and assume the least amount of “knowledge” on the part of the acquirer; in fact, following Biberauer (2011), Branigan (2012) and Biberauer & Branigan (2012), we could assume that non- or less category-specific parametric choices (i.e. macro- and mesoparametric settings) are those automatically

¹ The existence of the Final-over-Final Constraint (FOFC) supports the idea that head-final and head-initial orders are not equivalent. FOFC can be informally stated as follows:

- (i) A head-final category cannot have a head-initial category as its immediate structural complement in a singl(r)1.3.75903(r)1-1.91144(r)0.408413(e)]TJ 29(l)-423.904(c)5hin5791(,)-328(e)13.80109(t)

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“chosen” by the acquirer based on early “ignorance”, which may or may not be subject to subsequent refinement.²

Most important for our present purposes, the hierarchies make predictions about diachrony. First, grammatical systems instantiating “lower” parameters are diachronically closer to one another than those in the higher reaches of the hierarchy. Second, if we think of language acquisition as involving the acquirer moving “down the hierarchy”, driven from relatively unmarked hypotheses to more marked ones by the PLD which forces them to postulate ever more fine-grained parametric distinctions, and if we assume, following Lightfoot (1979, 1991), that language change is driven by reanalysis in language acquisition, then, it follows—all other things being equal—that languages will “drift upwards” in the hierarchies. Both of these predictions are relevant to the discussion that follows.

With this much background, we can now turn to the discussion of the history of English.

3 The “V-to-T” parameter in Early Modern English

It is well-known that lexical verbs could appear in higher clausal positions in

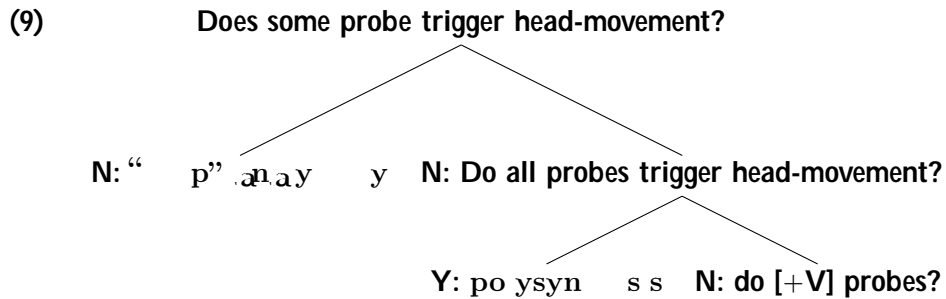
- c. menythe this pryste
 'What does this priest mean?'
 (1466-7: Anon., from J. Gairdner (ed), 1876,

possible morphological trigger for V-movement becomes clearer.

Now it is time to consider in detail how the verb-movement parameters fit into a parametric hierarchy.

4 A parameter hierarchy for V-movement

Roberts (2012) proposes a parametric hierarchy determining word structure, which has the following form at the highest levels:



Assuming that an extra feature is needed to trigger head-movement (which follows from the approach to head-movement sketched in the previous section), the highest option is maximally unmarked in relation to both FE and IG (cf. (4) above): for head-movement to occur in the system outlined in § 3, a higher head must (i) locate a lower head on its extended projection bearing at least one probable (i.e. valued) formal feature and (ii) itself bear a superset of the formal features located on the goal. If formal features of the relevant type (V-related for a V-oriented probe, D-related for a D-oriented probe, etc.) are

Here we see that a negative setting of the V-to-T parameter does not rule out the possibility of verbal elements appearing in T since auxiliaries (which we take to be first-merged in *v*) may constitute a class of verbal elements that

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matrix Cs, is more marked than a full V2 West Germanic-style V2 system (see § 4 for further discussion).⁸ Strikingly, the range of inversion options taken

SVCs arguably involve lexicalisation of *v* without V-movement, with the “light”, serialising verb instantiating *v*. To the extent that they systematically lack inflection and also do not affect the shape of the lexical verbs they co-occur with, they plausibly instantiate components of a system lacking verbal formal features, i.e. the maximally unmarked system falling out from the “N” option defined by the top of the V-movement hierarchy given in (10). In systems where they do exhibit and/or trigger inflectional variation, we expect them to feed the negative option under the right branch of (12), viz.:⁹



Also characteristic of creoles, both English-lexifier and others, is the presence of immobile, invariant tense-mood-aspect (TMA) particles. These are, for example, found in Jamaican Creole:

- (17) a. *did a*
 John P ST PRO eat your bammy
 ‘John was eating your bammy.’ (Durreleman-Tame 2008:33)
- b. *did jos a go*
 s/he P ST R^fTRO PRO PROSP do it
 ‘S/he was just about to do it.’ (Durreleman-Tame 2008:34)
- c. *wi mos (h)afi*
 S/he will must have-to take that
 ‘S/he will be obliged to take that.’ (Durreleman-Tame 2008:30)

Since these are non-inflecting elements which also do not affect the form of the lexical verbs they co-occur with, the acquirer receives no evidence signalling the presence of verbal formal features, either on the lexical verb or on the TMA particles. If this is correct, Jamaican Creole-type systems will necessarily instantiate the “N” option at the top of the V-movement hierarchy in (10), i.e.

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Having outlined various V-movement-related parametric options, it remains to show how they may be incorporated into a hierarchical structure. Consider (18), which combines (10-12) and (16), in this connection:

(18)

allow acquirers to distinguish, for example, the “Y” and “N” options under v/Aux-to-T.

5 Nanoparameters in the English auxiliary system

In terms of the definitions given in (2), V-to-T movement-regulating (11) is part of the mesoparametric part of the hierarchy (as would be the parameters governing the V-movement part of V2), while the parts of the hierarchy concerning auxiliaries are microparameters. Additionally, the contemporary English auxiliary system also has many examples of variation restricted to individual lexical items, i.e. nanoparameters. One well-known case is possessive/modal *have*, which differs across the main varieties of English as regards its behaviour under negation and inversion:

- (19) a. I don't have any money. (US, “advanced” UK)
 b. I haven't got any money. (most UK; earliest attestation mid-18thC)
 c. I haven't any money. (conservative N. England, Scots)

It is noteworthy that perfect *have* never shows *do*-support and causative *have* always does, across all these varieties. So we need to distinguish three types of *have*: the modal/possessive type, which has the variants in (19a) and (19c), i.e. it shows “auxiliary syntax” in some varieties but acts as a main verb in others; the perfect *have*, which always shows auxiliary syntax in all varieties we are aware of, and finally the causative *have*, which is always a main verb. In most varieties of British English, we find (19b): here there is no possessive *have*; instead possession is expressed by what is historically the perfect tense of *be* in this variety, so *have* always has auxiliary syntax since this is in fact perfect *be*. There are, however, varieties in the Southern United States where this form of *have* has been regularised so that it appears without *do* (as in *I have a car*) and shows *do*-support in the relevant contexts (*I don't have a car*).

There is also variation concerning *might*. One observation is that British and American English differ regarding the availability of *do* in VP-ellipsis contexts, as in (20) (cf. Kayne 2005):

- (20) A: Will John come to the party?
 B: He might *^{US}(do).

British English tolerates non-finite *do* as a VP pro-form here, while American English does not. Note that this is not the *do* of *do*-support, with which it can co-occur in some varieties, giving forms like *do*.

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South-Western dialects of England also allow auxiliary *do* in positive declarative sentences, with what appears to be a habitual reading:

- (21) a. Then he *do* *up* the various joints what you *do* *an* .
b. We *do* come back then and we *do* have a glass or two of cider,
and then we *do* go and have a bit of breakfast, come out again
and then we *do* have another drink before we *do* start o .
(Ihalainen 1991:154)

Furthermore, there are varieties (in the same general region, but slightly more geographically widespread), where *do* appears in the protasis of conditionals:

- (22) a. If the boss *do* see that you was a bit pushing, .. he would ...
b. If you *do* buy up a load of peat in them days, it used to cost
you ten shillings. (Ihalainen 1991:156)

But the most intricate and interesting variation arguably concerns modals. Here we see some fairly clear cases of recent and ongoing chan

item-specific change affecting modals, all of which have taken place in the past two hundred years.

See Warner (1995), Denison (1998) and the references given t

of and in relation to other modals in the context of conditionals). Where such items are frequent in the PLD, it seems plausible that the number of formal features encoded by the lexical item concerned is less relevant

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We contend, then, that our taxonomy of parameters, related to the hi-

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