7 Germanic Word Order and the Format of Surface Filters*

Joan Maling and Annie Zaenen

One of the most familiar features of Germanic languages is the position of the finite verb:

The finite verb must be the second immediate constituent of the S in which it occurs.

We will call this the Verb-second Constraint (V/2).¹ V/2 is perhaps most familiar as a characteristic of main clauses in German and Dutch. It also applies to embedded tensed clauses as well as main clauses in Icelandic and Yiddish. With some minor qualifications concerning the placement of adverbs, this is also true of other Scandinavian languages; however we have not investigated the syntax of these languages deeply enough to know if the V/2 position is basic and the adverb preposed, or vice versa. Only in English has V/2 been lost, leaving only traces, for example, in the inversion of subject and auxiliary required after fronted negative adverbs² (but not in direct wh-questions, according to our hypothesis). We believe that V/2 is an important typological characteristic of the Germanic languages. Our preliminary study of this constraint has led to a variety of theoretically interesting questions which we will illustrate here with reference to Icelandic. The proper formulation of V/2 in Icelandic has implications for the theory of filters in syntax in two ways: first, it provides evidence on the proposed format of filters, and secondly, it provides counter-evidence to a proposed universal filter.

This paper is organised as follows: we will first motivate the need for V/2 in the grammar of Icelandic and discuss briefly our account...
of (1) direct \textit{wh}-questions, (2) Left Dislocation and (3) embedded sentences with extracted subjects. In the second half, we turn to the question of how this constraint should be stated and its implications for the theory of filters.

1. The V/2 Constraint and Its Consequences in Icelandic

In Icelandic, the unmarked word order in tensed declarative clauses is SVO, as illustrated in (1). The finite verbs are in bold type.

(1) Hún \textit{sagði} mér að hún \textit{hefði} unnið að brúarsmíði í sumar.  
\textit{She said [to me] that she had worked at bridge building summers.}

Icelandic also allows Topicalisation\textsuperscript{3} to occur freely in embedded clauses, as illustrated in (2).

(2) a. Hún \textit{sagði} að í sumar \textit{hefði} hún unnið að brúarsmíði.  
b. Ég \textit{held} að smalann \textit{muni} tröll taka á morgun.  
\textit{I think that the-shepherd-[acc] will trolls take tomorrow.}

When Topicalisation applies in embedded clauses, the subject and finite verb must be inverted; if no inversion occurs, the sentences are ungrammatical, as shown in (2'):

(2') a. *Hún \textit{sagði} að í sumar hún \textit{hefði} unnið að brúarsmíði.  
b. *Ég \textit{held} að smalann \textit{tröll} \textit{muni} taka á morgun.

The same is true, of course, in main clauses. This fact is easily accounted for by assuming that the same principle (V/2) governs word order in both main and embedded clauses. This assumption has interesting consequences for the syntactic analysis of Germanic languages, and for linguistic theory as well; these consequences are discussed below, as we turn to our account of two constructions which fall outside the V/2 principle: \textit{wh}-questions and Left Dislocation.

1.1 \textit{Wh}-fronting

While Topicalisation in embedded clauses triggers inversion, \textit{wh}-fronting in embedded clauses does not, as shown by the contrast in the word order of embedded clauses between (2) and (3):

(3) a. Hann \textit{spurði} hvaener hún \textit{hefði} unnið brúarsmíði.  
\textit{He asked when she had worked at bridge building.}  
b. Hann \textit{spurði} hvørn tröll \textit{myndu} taka á morgun.  
[acc]  
\textit{He asked who trolls would take tomorrow.}

If SVI applies in the embedded clauses, then the sentences are ungrammatical as illustrated in (3'):

(3') a. *Hann \textit{spurði} hvaener \textit{hefði} hún unnið að brúarsmíði.  
\textit{He asked when she had worked at bridge building.}  
b. *Hann \textit{spurði} hvørn \textit{myndu} tröll taka á morgun.  
\textit{He asked who trolls would take tomorrow.}

We can account for this difference by assuming that the derived structure of indirect questions and embedded Topicalisations are as shown in the diagrams in (4):

\begin{itemize}
  \item a. \textit{Wh}-fronting  
  \begin{itemize}
    \item S
    \item \textit{Wh}
    \item S
    \item COMP
  \end{itemize}
  \item b. \textit{Topicalisation}
  \begin{itemize}
    \item S
    \item \textit{TOPIC}
    \item S
  \end{itemize}
\end{itemize}

The facts then follow if \textit{S} (and not \textit{S}) is the domain of the V/2 Constraint. We assume that \textit{wh}-fronting involves Chomsky-adjunction of the \textit{wh}-word to \textit{S} as shown in (4a). Support for this comes from the fact that in all Germanic languages which allow \textit{wh}-words to co-occur with the complementiser, this is the observed order. This is possible in OE and ME, OlSc. in Swedish, and in some dialects of Dutch. Not only can the \textit{wh}-words occur together with \textit{that} in these languages, but the \textit{that}-clause following the fronted \textit{wh}-word behaves as one constituent as shown by the Dutch and Swedish examples in (5):

(5) a. Piet heeft gevraagd \textit{wanneer} en Marie heeft gezegd \textit{waar}
\textit{dat we elkander gaan zien.}

b. Jan zag zij gisteren.
John saw she yesterday.
Gisteren zag zij Jan.
Yesterday saw she John.

This indicates that the word order in declaratives and wh-questions reflects a single generalisation, and implies that the V/2 Constraint applies at the S level in order to include the fronted wh-word in its domain.

But our analysis of Icelandic accounts for V/2 in embedded clauses by assigning different derived structure to wh-questions and Topicalisations, such that the fronted wh-phrase is outside S while the Topicalised constituent remains under S.

(8) a. Ég spurði hvenær [s hún hefði sêð Jón].
I asked when [s she had seen John].

b. Ég heldi að [s í gær hún sêð Jón].
I think that [s yesterday has she seen John].

Assume that main clauses are derived in parallel fashion; then the non-embedded counterparts to the sentences in (8) have the derived structures shown in (9):

(9) a. Wh-question

b. Topicalisation

Then direct wh-questions (but not Topicalisations) are an exception to the V/2 Constraint since they are verb-initial at the level of S. (Remember that there is no Subject-Verb Inversion in indirect questions.)

However another generalisation about the position of the tensed verb will capture all the facts quite naturally: V/2 order applied to declaratives (and embedded clauses) but V/1 order applied to all direct questions, both wh-questions and yes-no questions. The
domain of both word order constraints is S and not $\bar{S}$, and the same Subject-Verb Inversion rule applies in both wh- and yes-no questions, putting the verb in S-initial position.

This generalisation has several interesting consequences. First, the difference in word order between wh-questions and Topicalised sentences in English is explained by the fact that English does not have a V/2 Constraint, but does have a Subject-Aux Inversion rule. Secondly, the fact that Topicalisation and direct questions cannot co-occur in the same S is explained by the conflict in word order frames. Topicalisation would make it impossible to respect the V/1 frame for direct questions.

(10) *[John [s saw she yesterday]]?

Assuming that the domain of the word order frames is the topmost S in an S-over-S derived structure, then V/2 and V/1 cannot both be satisfied simultaneously.

Our analysis claims that the word order in wh-questions and yes-no questions reflects a single generalisation, whereas the word order in declaratives and wh-questions does not. We predict that the word order in declaratives will change independently of the word order in wh-questions. This prediction is supported by the diachronic evidence from within Germanic, since this is exactly what happened in English. While V/2 was not an absolute rule in OE, the tendency was for the finite verb to be in second position in main clauses. This tendency was lost for declaratives as illustrated in (11a). In wh-questions, however, the verb still directly follows the wh-phrase in what has traditionally been considered second position.5

(11) a. John she saw yesterday.
b. Who did she see yesterday?

But as we have suggested, this can also be considered ‘first position’ at the level of S. The word order for questions in Germanic has always been V/1 at the level of S (this includes wh-questions in our analysis), whatever the position of the verb in declarative main clauses (see e.g., Behaghel, 1932). In fact, in the very oldest records the verb tended to be clause-final (or at least later than second position) in declaratives, but not in wh-questions.

1.3 Topicalisation and Left Dislocation

Let us now return to the derived constituent structure of Topicalised sentences. Many analyses of fronting rules in the recent literature, e.g. Emonds (1976), Bowers (1976), Löwenstamm (1977), attempt to collapse wh-fronting with Topicalisation as two instances of COMP-substitution. But such analyses cannot account for the word order facts in Icelandic without completely ad hoc restrictions on SVI or surface filters having the effect of preventing SVI from applying in embedded clauses just in case COMP contains a wh-phrase. This will not only be true for Icelandic, but also of Yiddish, where V/2 applies to embedded clauses.

The word order facts also bear on another proposal concerning the structure of Topicalisation. Chomsky (1977) ‘On Wh Movement’, gives the same derived constituent structure to Topicalisation and Left Dislocation as shown in (12), and distinguishes them only by the fact that Wh Movement has applied in the case of Topicalisation, moving a wh-pronoun into COMP-position, and subsequently deleting it there. For this Wh Movement analysis of Topicalisation there is no direct evidence, but it is supposed to explain the fact that Topicalisation obeys island constraints, whereas Left Dislocation does not, as observed by Ross.

(12)

In Chomsky’s current framework, all constructions that obey island constraints are analysed as instances of Wh Movement.

An example of Left Dislocation in Icelandic is given in (13).
(13) Smalinni, ég held að tröll muni taka hann, á morgun.
Shepherd-the [nom], I think that trolls will take him tomorrow.

We see that the Left Dislocated constituent does not count for the Verb-Second Constraint. This is also true of German and Dutch, as was pointed out by van Riemsdijk and Zwarts (1974). Our analysis for Left Dislocation in Icelandic is exactly the same as for those languages: namely, the Left Dislocated constituent is not a part of the S, but instead is base-generated under some loosely connected node6 as shown in (14), where S is a root S.

(14) Left Dislocation:

```
   E
  /   \
 L.D.  S
```

This structure predicts that in a declarative, inversion after Left Dislocation is ungrammatical, which is the case, as shown in (15):

(15) *Smalinni, held ég að tröll muni taka hann, á morgun.
The shepherd think I that trolls will take him tomorrow.

When, as in Chomsky’s analysis, Left Dislocation and Topicalisation have the same structure, it is not possible to account for the difference in word order: for Left Dislocation the domain of the Verb-second Constraint has to be the S-node in (12), whereas for Topicalisation, the domain must be S. One might attempt to link the difference to the presence of some feature [+wh], since this is, under Chomsky’s analysis, the only distinction between Left Dislocation and Topicalisation. But this use of features gives the wrong result, as can be seen by looking at embedded questions. Embedded questions must have the feature [+wh], but there is no inversion inside S, that same feature (+wh) would have to trigger inversion in the case of Topicalisation.

There are many systematic differences between Topicalisation and Left Dislocation in Icelandic which argue against collapsing them.

For example, Topicalisation is common in embedded clauses, but Left Dislocation is impossible. The many differences noted by van Riemsdijk and Zwarts (1974) for Dutch are true of Icelandic as well. However since this question is not directly relevant to the theory of filters, we simply summarise the differences in table (16). The only criterion which needs explanation is the restriction on dummy þáð. Since dummy þáð occurs only in S-initial position in Icelandic, it is incompatible with Topicalisation, but of course, can occur as the initial constituent after the Left Dislocated element in the structure shown in figure (14).

(16) Topicalisation

<table>
<thead>
<tr>
<th>Can occur in embedded S?</th>
<th>yes</th>
<th>no</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contains a resumptive pronoun?</td>
<td>no</td>
<td>yes</td>
</tr>
<tr>
<td>Initial C followed by complete S?</td>
<td>no</td>
<td>yes</td>
</tr>
<tr>
<td>Initial C counts for V/2?</td>
<td>yes</td>
<td>no</td>
</tr>
<tr>
<td>Case of initial NP?</td>
<td>varies</td>
<td>nominative</td>
</tr>
<tr>
<td>Can initial C be any nontensed C?</td>
<td>yes</td>
<td>no</td>
</tr>
<tr>
<td>Can initial C be indefinite?</td>
<td>yes</td>
<td>no</td>
</tr>
<tr>
<td>Can initial C be part of an idiom?</td>
<td>yes</td>
<td>no</td>
</tr>
<tr>
<td>Can initial C be reflexive/reciprocal?</td>
<td>yes</td>
<td>no</td>
</tr>
<tr>
<td>Can dummy þáð occur?</td>
<td>no</td>
<td>yes</td>
</tr>
<tr>
<td>Initial C followed by interrogative?</td>
<td>no</td>
<td>yes</td>
</tr>
<tr>
<td>Can initial C be followed by imperative?</td>
<td>no</td>
<td>yes</td>
</tr>
<tr>
<td>Obey's island constraints?</td>
<td>yes</td>
<td>no</td>
</tr>
</tbody>
</table>

1.4 Embedded Clauses with Extracted Subjects

We have argued that V/2 is a constraint on all tensed declarative clauses in Icelandic, that wh-questions as well as yes-no questions have V/1 word order, and that Left Dislocation is accounted for by analysing it as shown in (14). There remains one clause type to be
They claim that trace theory thus explains the cross-linguistic correlation. The crucial assumption here is that an independently motivated rule of Subject-Pronoun Deletion will apply to the structure referred to in filter (18), converting (20a) into (20b):

```
(17) a. Hver heldur þu æð [s — se kominn til Rejkjavik]? Who think you that — was come to Rejkjavik?
b. þetta er maðurinn, sem þeir segja æð [s — hafi framið glerinn]. This is the-man that they say that — has committed the-crime.
c. þetta sverð heldur konungurinn æð [s — se galdrasverð]. This sword thinks the-king that — is a-magic-sword.
```

We have argued elsewhere (Maling and Zaenen, 1977, 1978) that such sentences can be explained by counting the trace left by Wh Movement or other extraction rules as the first constituent for the V/2 Constraint. Note that this explanation implies a distinction between the traces left by 'extraction rules' and those left by NP Movement rules, since the latter do not count for V/2, as we have shown in Maling and Zaenen (1978). The distinction between these two rules classes goes back at least as early as Ross. Bresnan's (1976) framework of Realistic Grammar makes exactly this prediction for trace theory. Another point of interest in sentences like those in (17) lies in the observation that Icelandic lacks the 'Fixed Subject Constraint', even though personal pronoun subjects are obligatory. Hence Icelandic provides a counter-example to the surface filter shown in (18), which Chomsky and Lasnik (1977) proposed as a linguistic universal.

```
(18) *[s that [np e] ...] unless S or its trace is in the context:
[np np — — ...]
(= C&L (68))
```

Chomsky and Lasnik restate as shown in (19) a cross-linguistic correlation originally proposed by Perlmutter (1971):

```
(19) The filter (68) is valid for all languages that do not have a rule of Subject-Pronoun Deletion, and only these. (= C&L (71))
```

thus erasing the trace left by any rule which has extracted the subject, and leaving filter (18) with nothing to reject. Their assumption is that '... deletion removes a category and its contents' (p. 453) whereas movement rules leave a category and a trace behind.

Now in Icelandic, wh-questions, relative clauses, clefts and Topicalisations all allow extraction of subject NPs immediately adjacent to the COMP æð 'that': in fact, deletion of æð is only marginally possible and is certainly no better in the case of extracted subjects. But since personal pronoun subjects are obligatory in Icelandic, there is no independently motivated Pro-drop rule which can be used to account for the grammaticality of subject extraction. Moreover, Icelandic is not the only Germanic language which lacks the Fixed Subject Constraint. So does Old English (as noted by Allen 1977), as well as most dialects of Dutch and Norwegian; on the other hand, English, Danish and Swedish all obey the Fixed Subject Constraint. In Maling and Zaenen (1978) we suggest that the correct cross-linguistic correlation is between violations of the FSC and having dummy subjects which are not always present in surface structure. But we also show that violations of the FSC cannot be attributed to the application of an independently motivated Dummy Pro-drop rule in the manner suggested by Chomsky and Lasnik, since the dummy subject is not present at any stage in the derivation of such sentences. We show furthermore, that postulating an ad hoc trace deletion rule will not work in Icelandic. Presumably such a trace-deletion rule would be postulated under analogy with a rule
deleting dummy subjects (for if there are no constraints on postulating trace-deletion rules, then filter (18) has no explanatory value whatsoever). We argue that the existence of such a dummy-subject-deletion rule in Icelandic is dubious; but assuming that it could be motivated, then a trace-deletion rule will quietly remove the offending trace in (20a) without going through an intermediate stage with dummy subject. However, this will not work. Note that those clauses with extracted subjects in (17) also violate the V/2 Constraint, since the embedded clauses are verb-initial rather than V/2. Yet these are clauses where one would expect V/2 order. If a nonsubject NP is extracted from an embedded clause, then V/2 is the only grammatical order, as illustrated in (21):

(21) a. Hverjum heldur þu að [s Ölfur hafi hjálpað ——]?
    who-dat. do you think that Olaf has helped
b. *Hverjum heldur þu að [s hafi Ölfur hjálpað ——]?

Only in the case of extracted subjects is the verb in clause-initial position. The explanation is, we think, clear: the trace of the extracted subject must count as filling first position in the embedded clause. If the traces left by extraction rules are visible to surface filters, then these clauses will not violate V/2, and we can maintain V/2 as a generalisation about Icelandic word order in tensed clauses. This solution leads to a contradiction for anyone who wants to maintain the universality of filter (18): deleting subject traces will not work because the very traces which violate filter (18) are needed to satisfy the V/2 filter. Clearly the grammar of Icelandic cannot contain both surface filters simultaneously. Since V/2 is so much more intuitive and simple, surely it is the filter of choice. For a more complete discussion of the role of V/2 in Icelandic, see Maling and Zaanen (1978).

The picture, as we see it, is thus as follows: Icelandic declarative sentences have the tensed verb in second position, whereas direct questions have the verb in first position. The difference is linked to the ‘direct speech act’ that the sentence is supposed to perform: statements are V/2; requests for information are V/1, as are orders (i.e., imperatives), which we have not discussed here.10 Indirect questions are, of course, not requests for information.

2. The discussion above demonstrates clearly that V/2 is a real generalisation about Icelandic word order, and that any apparent counter-examples can be accounted for in a straightforward and insightful way. We now turn to the problem of how the grammar will affect V/2.

2.1 V/2 can be achieved in different ways; we will discuss two possibilities. First, that V/2 is a syntactic ‘conspiracy’ and second, that it is a surface filter. According to the conspiracy view, V/2 is not really a part of the grammar, but rather some kind of metaposition. The verb ends up in second position because the rules ‘conspire’ to get it there when they apply in the right way. To make this conspiracy work, it is obviously necessary to make use of rule conditions: obligatoriness, contextual dependencies and rule ordering. The main rules to be considered in this regard are Topicalisation, SVI and pað-insertion. Let’s assume the usual formulations of Topicalisation and SVI, and assume that pað-insertion inserts a dummy pað in sentence-initial position if nothing precedes the verb. The relevant fact about Icelandic is that dummy pað does not undergo SVI; this is illustrated by the sentences in (22):

(22) a. pað var mikill snjör á jörðinni.
    There was much snow on the-ground.
b. I gar var (*pað) mikill snjör á jörðinni.
    Yesterday was (there) much snow on the-ground.
c. Vat (*pað) mikill snjör á jörðinni?
    Was (there) much snow on the-ground?
d. Hvað var (*pað) á jörðinni?
    What was (there) on the-ground?

Consider first the interaction of Topicalisation and SVI: it is clear that the application of just one of these two rules will give ungrammatical declarative Ss; either both rules must apply, or neither. Therefore we need to impose both rule ordering and obligatoriness. Since dummy pað occurs only in sentence-initial position, Topicalisation cannot apply if pað-insertion has applied. It will not do to simply prevent SVI from applying twice in a given clause, because impersonal passives are generated with empty subject nodes, and hence pað must be inserted in such sentences even though SVI has not applied.

It is clear that there are several ways of stating and ordering these three rules to obtain the right results, but they all require extensive use of rule conditions.
As observed in Williams (1977, 1980) this type of complexity in the transformational component can be avoided by associating word order templates directly with utterance types. A straightforward way to do so is the use of positive surface filters. The most important of these is V/2 formulated in (23). (See note 13 below.)

(23) \[ s \ C \ V \ldots \] where \( C \) is any constituent, and \( V \) is the finite verb.

Then the three transformations above can be stated simply, can apply optionally and in any order. Any output which doesn’t meet the canonical form given in (23) above will be filtered out. We assume that the relevant S node in a Topicalised structure such as (4b) will be picked out according to some version of the A-over-A Principle, defined in terms of immediate dominance (cf. Sag (1976)), or other notion that will correctly choose the highest S if Topicalisation is formulated in terms of Chomsky-adjunction to a base-generated S-node. The ungrammatical strings shown in (24) will of course be generated by the grammar but will be filtered out.

(24) a. \[ s \ V \ldots \] b. \[ s \ C \ C \ V \ldots \]

(24a) will be generated if only SVI applies; we assume that it is also the base-generated structure for impersonal passives, and either Topicalisation or það-insertion must apply in order to produce a grammatical sentence. (24b) will be generated if Topicalisation applies but SVI doesn’t, or else if both það-insertion and Topicalisation apply. A further interpretive rule will throw out the case of það-insertion plus a definite NP (\[ \text{það} \ V \ NP \ldots \]); this rule will be needed in any case.

The only problem is that not all rule conditions can be eliminated with this approach: það-insertion still has to apply at the end of the cycle, to prevent it from feeding SVI, and thus generating the sentences in (22b,d), which are ungrammatical even though they satisfy the V/2 filter (23).

2.2 There are three ways to avoid this use of ordering. The first is to assume that það is not inserted to fill the subject node, so that SVI will not apply to it: það might instead be inserted as a sister to the subject node. Note that in our framework það does not function to cover improperly-bound subject traces since we assume that cyclic NP Movement rules do not leave traces.

The second alternative: extrinsic ordering of SVI with respect to það-insertion in Icelandic could also be avoided by assuming that Icelandic is VSO in underlying structure, because under this assumption there is no need for a rule of SVI, and hence no ordering problem. If both það-insertion and Topicalisation apply, the resulting sentence will be filtered out by the V/2 filter. There are two problems with the VSO analysis of Icelandic: first, it makes the implausible claim that the underlying order is that of questions rather than declaratives, and secondly, the Topicalisation of subject NPs will not create an island, whereas the Topicalisation of any nonsubject NP does.

(25) Hvar heldur þú að Egill haft séð Ólaf?  
    (nom.)
*Hvar heldur þú að Ólaf haft Egill séð?  
    (acc.)

Where think you that Egil has seen Olaf?

Note that the VSO analysis of Icelandic does not solve the problem of filter (12) that we discussed above. If V/2 is a surface constraint, it needs the trace between the COMP-node and the V; in other words, the order has to be V/2 at the end of the embedded cycle.

The third way to avoid extrinsic rule ordering is to investigate the possibility of making a principled distinction between transformations that move a constituent, and rules which insert specified lexical items. We suggest that the theory of grammar order such insertion rules after all movement rules. Then the fact that það-insertion applies after SVI will be a consequence of the theory rather than an extrinsic ordering condition. This seems to us to be the most plausible approach to avoiding extrinsic rule ordering in the grammar; however, one needs to see how this suggestion generalises to languages such as English, where dummy there is a good input to some movement transformations. It may be that in such languages dummy-insertion is simply a node-filling operation. It has been proposed that empty nodes can be moved around by transformations just as easily as filled ones (cf. for instance Breckenridge, 1975b). Then at the end of the cycle a kind of adjustment rule applies that can insert dummies in empty subject nodes.11 The kind of adjustment that needs to be made is language-specific: in Icelandic,
the surface structure must be adjusted to the canonical form of
tensed clauses, namely \( [C V \ldots] \). In English the requirement is that
there be an overt subject in that-clauses (and most but not all tensed
clauses; cf. Bresnan, 1972). Hence the adjustment rule for English
will insert a dummy there into empty NP nodes directly dominated
by \( S \) (i.e. subject nodes). Such adjustment rules precede the applica-
tion of surface filters, and have the effect of saving a certain
number of otherwise legitimate derivations whose only problem is
not having produced an acceptable surface configuration for that
language.

We conclude that stating \( V/2 \) as a surface filter greatly simplifies
the transformational component of the grammar, by allowing rule
conditions to be eliminated. Moreover, it has the advantage of
capturing this generalisation about word order directly, whereas the
consistency approach has to relegate it to a meta-level. Since the \( V/2 \)
Constraint is an important part of the linguistic knowledge of
the native speaker, it seems preferable to state it directly.

3. However, the addition of surface structure constraints to linguistic
theory raises the problem of how to constrain the constraints
themselves. As is well known from discussions in the literature, from
Jonathan Swift (Gulliver's Travels, Part III, Ch. V) to David
Perlmutter (1971), and most recently in Chomsky and Lasnik
(1977), filters are a very powerful grammatical device. It is necessary
to constrain them in some way, to prevent them from being able to
do everything, and hence explain nothing.

Chomsky and Lasnik have taken up the interesting line of
research first suggested by Perlmutter (1971); they have shown that
surface filters can be used to restrict the power of grammars in other
ways, specifically by eliminating rule conditions altogether. They
also make a first attempt to restrict the possible format of filters.
They tentatively propose (pp. 488–9) two characteristics of surface
filters which we believe to be untenable (although we agree that
filters should be 'local'):

1. that filters deal only with properties of the complementiser
   system;
2. that filters are stated negatively rather than positively.

We shall consider each of these in turn. It is not clear what it means
to be 'a property of the COMP system'. The strong interpretation of

it would be that filters only apply to items actually in COMP
position, or at least adjacent to COMP position. While many
proposed filters do meet this characterisation, the \( V/2 \) constraint
does not. It can, of course, be reformulated so as to mention COMP,
for example as shown in (26):

\[
(26) \quad [S COMP [S C V \ldots]]
\]

where a COMP node is assumed to be present in root declaratives
when the filter applies. But this seems to be a weakening of the notion
'property of the COMP system'. Other candidates for syntactic
surface filters are not so easily reformulated. Consider the filters for
the order of clitic pronouns in Romance languages, in particular the
version proposed by Perlmutter for Spanish. Reformulated to
mention COMP, it would look as shown in (27):

\[
(27) \quad COMP [S NP se II III \ldots]
\]

Obviously the internal ordering of the clitic pronouns with respect to
each other is not a property of the COMP system; nor is it clear that
the position of the clitic sequence within the sentence should be so
considered.

We suspect that there are word order constraints which are good
candidates for surface filter analysis and which have nothing to do
with the COMP, e.g., obligatory pied-piping could be accounted for
by a surface filter \(*[P \, t] \).

The second characteristic of filters that Chomsky and Lasnik
propose is that they be stated negatively rather than positively. All
of the filters they considered were of the format

\[
(28) \quad *[x \, \varphi_1 \ldots \varphi_n], \text{ unless } C, \text{ where:}
\begin{align*}
a. \quad & x \text{ is either a category or is left unspecified} \\
b. \quad & \varphi_i \text{ is either a category or a terminal symbol} \\
c. \quad & C \text{ is some condition on } (x, \varphi_1, \ldots \varphi_n) \\
& (=C&L (184))
\end{align*}
\]

Unfortunately, as far as the distinction between positive and
negative filters goes, this format is emptied of all possible empirical
content by allowing \( unless \)-conditions on filters. If \( unless \)-conditions
are allowed, then every positive filter can be reformulated into a
negative filter. For example, we stated \( V/2 \) as a positive filter in (23).
Without *unless*-conditions, the alternative to a positive filter is a possibly infinite set of negative filters as shown in (29):

\[
\begin{align*}
\{ & *[S V X] \\
\{ & *[S C^n V X] \text{ for } n \geq 2 \}
\end{align*}
\]

(29)

The number of negative filters necessary will depend on assumptions about such questions as (i) when rules are to be collapsed (e.g. are PP-fronting and NP-Topicalisation two rules or one?), (ii) whether a fronting rule can apply more than once per cycle, and (iii) whether certain adverbs can be base-generated in S-initial position (as has been argued by Kuno, 1971). Whatever the answers to these questions, it is likely that sequences of at least three preverbal constituents can be generated in Icelandic, obviously two can be. By comparing the negative format in (29) to the positive one in (23), it is clear that the set of negative filters is less economical than a single positive filter. Moreover, it simply misses the generalisation.

If, however, *unless*-conditions are allowed, then the positive V/2 filter can be reformulated as a single negative constraint as shown in (30):

\[
\begin{align*}
\{ & V \text{ . unless in the context } [S C \text{ } \ldots] \\
\{ & +\text{finite} \}
\end{align*}
\]

(30)

From this example, we see that certain syntactic generalisations can best be captured by positive filters. Moreover, the positive filter allows the generalisation to be stated without the use of *unless*-conditions. So on empirical grounds, we would like to propose that it is better to allow for positive filters; but as is clear from the previous discussion, the issue does not have any real empirical content as long as the theory does not exclude or at least severely restrict the use of *unless*-conditions and other devices that allow the reformulation of positive filters into negative ones (or vice versa). For example, V/2 could be stated in a double negative form as in (31):

\[
\begin{align*}
\{ & *[S C \text{ } \ldots] \\
\{ & +V \\
\{ & -N \\
\{ & +\text{ins} \\
\}
\end{align*}
\]

(31)

where (31) presupposes that there is only one tensed verb per clause.

Unless such devices are well-motivated on independent grounds, they contribute nothing to our understanding of the role of filters in grammar. For similar reasons, it is necessary to exclude devices that allow reformulation of non-local phenomena into local ones.

Let us assume that the theory can be constrained such that there is an empirical difference between positive and negative filters. Is it in that case desirable to limit the format of filters in such a way that only negative filters are allowed, forcing a reanalysis of the data presented above so that either no filters are used, or else the infinite set in (29)? Our initial answer is no; a transformational account of V/2 may well be possible, but as is clear from our discussion, we think that the word order constraint presented here is a good candidate for a syntactic filter. However, it is conceivable that some meta-theoretical principle(s) would point to a different answer. The most common of these principles to be invoked is based on the probable mechanisms of language acquisition. Since very little is known in this area, only very tentative remarks can be made. We would, however, like to point out the following, which also points to a negative answer to our question about the format of filters. It is known that the manipulation of negations presents complications in almost all learning processes. With respect to the problem at hand, we can ask two questions:

1. Will the child, when presented with linguistic evidence of the type we have described, come up with a positive or a negative rule (filter)?

2. Will a negative rule, or a positive rule be easier to handle, i.e., will it be easier to judge whether a sentence is grammatical or not when it must be checked against a positive or a negative rule?

A random selection from the voluminous literature on the subject (see e.g. Johnson-Laird and Wason, 1977, for information) reveals the following studies. A paper by Donaldson (1959) describes the behaviour both of teenagers and adults when asked to construct rules to match objects. The task could be performed with logically equivalent sets of positive rules, negative rules or mixtures of both, but the subjects were explicitly told that the use of a positive rule 'cost more' than the use of a negative one. In spite of this instruction, the subjects did not eliminate positive rules; and when they used negative rules, they tended to construct redundant rule systems.
Another study (Evans, 1972) shows that when conditional rules are given, and subjects have to draw inferences from them, the score on valid inferences drops dramatically when the antecedent is negative (i.e., rules of the form 'if not p, then ...'). This seems to point to the conclusion that negative rules are more difficult to work with. While it is not clear how these findings and many others of a similar kind carry over into linguistics and the learning of language, it is implausible that our 'unconscious' intellectual manipulations are diametrically opposed in this respect from the conscious ones. This suggests that research strategies that try to restrict the format of filters (or any type of linguistic rule) to negative statements without being absolutely forced to do so by the data and/or important theoretical considerations, are methodologically mistaken. It would force us to translate linguistic generalisations into a form that makes it a priori difficult to explain their acquisition.

4. We have shown that the format of filters proposed in C&L (1977) is not well motivated on either theoretical or empirical grounds. More positively we would like to suggest that one use of filters in syntax is linked to word order frames associated with direct speech acts. For Germanic languages, we have suggested that a V/I filter is associated with requests for information and that a V/II filter is associated with declaratives. In the case of German and Dutch, this V/II filter is restricted to main clauses.

Notes

* We are indebted to Joan Bresnan, Ellen Prince and Henk van Riemsdijk for comments and discussion, and especially to Håskuldrur Thóraínsson for the Icelandic data and discussion thereof. An earlier version of this paper was read at the Amsterdam Colloquium on 7 April 1978; this paper remains essentially as written in 1978, and has not been revised in light of more recent developments in syntactic theory e.g. in Chomsky's paper in this volume. Preparation of this paper was supported in part by NSF Grant BNS 78-16522 to Brandeis University.

1. The precise formulation of V/II depends on certain assumptions about the nodes AUX and VP, assumptions which determine whether the finite verb will itself be an immediate constituent of S. If there is no VP-node, then the finite verb will be the second immediate constituent of S. However, if there is a VP-node, then V will not be an immediate constituent of S unless it is raised into AUX. Alternatively, V/II could be reformulated to require that the finite verb directly follow the first immediate constituent of S.

2. These remnants of V/II need further study.

3. We will use the term 'Topicalisation' to refer to the fronting of any major sentence constituent (except wh-phrases) which does not leave behind a pronominal copy. We leave open the question of whether such fronting processes are one rule or more than one. Maling (1980) shows that in addition to Topicalisation there is a minor fronting rule which fronts past participles, predicate adjectives and certain adverbs including verbal particles. This type of 'Stylistic Inversion' is characteristic of Icelandic and Faroese as opposed to the other Scandinavian languages. Unlike Topicalisation, it is clause-bounded, extremely common in embedded clauses, and restricted to subjectless clauses of various kinds. See Maling (1980) for a fuller characterisation of the difference between these two fronting rules.

4. For another view on Right Node Raising and constituent structures, see Abbott (1978).

5. The complication of do-support is irrelevant to the position of the finite verb.

6. We adopt Ann Banfield's (1973) notation E for the nonrecessive initial node (E for expression). 

7. At first glance, sentences like (i) pose a problem for the extension of this analysis to English, because they appear to be cases of Topicalisation out of direct wh-questions.

(i) Yesterday, did you visit first?

However, we think that such sentences are best analysed as cases of Left Dislocation with deleted resumptive pronoun. Note that the Dutch and Icelandic translations of such sentences have an obligatory pronoun then:

(ii) a. Gisteren, wie heb je eerst bezocht?
   b. *Ik, hier wie heb ik eerst bezocht?
   *Yesterday, who did you visit then?

(iii) a. *Gisteren, wie heb je eerst bezocht?
   b. *Ik, hier wie heb ik eerst bezocht?

The same is true of sentences with initial locative phrases:

(iv) a. In Parijs, wie heb je eerst bezocht?
   b. *Ik, hier wie heb ik eerst bezocht?
   *In Paris, who did you visit there?

(v) a. *In Parijs, wie heb je bezocht?
   b. *Ik, hier wie heb ik bezocht?

If our analysis of such sentences is correct, then it is clear that the appearance of the resumptive pronoun is not the defining characteristic of the difference between LD and Topicalisation in English. That the presence or absence of a pronoun is not universally linked to the difference between LD and Topicalisation is clear from the discussion of the Italian cases in Causer (1977).

These examples show that the Left-Dislocated element need not be a NP; a variety of phrasal categories, including certain clauses and at least locative and temporal PPs are possible. Our initial hypothesis is that the LD element must be pronounalisable by a one-word proform in the accompanying S.

(vi) a. *To John, I gave the book to him.
   b. John, I gave him the book.

This requirement would explain why locative and temporal PPs are possible LD elements: precisely because they have suitable proforms, there and then.

8. This is not totally true in English, as was pointed out to us by Ellen Prince. Her corpus from Tertk's Working includes the following examples:


(i) An old preacher down there, they dug up under the grave where his wife was buried. (Studs Terkel (1974), Working, p. 44)
(ii) One woman I had called early in the morning, she had just gotten out of the hospital. (Ibid, p. 41)

See E. Prince (1978, 1979) for further details. It is not clear that the observation carries over to Icelandic and Dutch. We have been unable to find convincing examples, but the question deserves further study.

9. Perlmuter pointed out that Dutch is a counter-example to (19); therefore he proposed only a one-way implication: languages with subject-pronoun-deletion allow the sequence 'that V'... See Malin G. and Zien (1978) for a discussion of Dutch and the proposed correlation.

10. In fact, the notion 'direct speech act' is not totally adequate. Searle would consider the following sentence to be a non-declarative direct speech act:

(i) I request that you leave immediately.

But the syntactic form is that of a declarative in the languages under consideration. We are tempted to see this as an inadequacy in the distinctions made in theory of speech acts. How this theory has to be articulated is not our concern here. It suffices to observe that indirect speech acts are not relevant for the distinction that we want to make, and that our distinction comes close to the notion of direct speech act as it is made on independent grounds; e.g. Searle (1975).

11. It may not be possible to order dummy-insertion rules at a uniform point in the grammar for all languages. In English, there-insertion appears to be cyclic, since subject gaps created by extraction rules cannot be filled by there; moreover, if the rule of Subject-to-Object Raising exists, then there-insertion must apply at the end of the cycle, when the empty node is null subject, in order to account for sentences like (i):

(ii) I expect there to be a problem.

(Dummy subjects occur in other untempered clauses as well, e.g. 'There being a problem...'). In Icelandic, if there is no rule of Subject-to-Object Raising, then had-insertion cannot either be cyclic or just optional at the end of the transformational component. The picture is more complicated in Danish, in that some but not all subject gaps created by extraction rules may be filled by the dummy der:

(ii) Jeg kan ikke forestille mig, hvem (der) kan lide den slags musik?
I can’t imagine who (there) could like that kind of music!

(iii) Hen er de digte, som lærene spurgte os, hvem vi troede, (der) havde skrevet dem.

Her are the poems that the teacher asked us who we thought had written them.

(iv) Hvem tror politiet, (der) begik forbrydelsen?
Who do the police think committed the crime?

(v) Flere mennesker kører Volvo end [der] køree Porsches.
More people drive Volvos than drive Porsches.

(vi) En mand som (der), ikke drikker ...
A man that (who) doesn’t drink ...

This use of der varies somewhat from dialect to dialect, but appears to be extending. All dialects accept (and even prefer) der in sentences (ii)-(iv), and reject comparatives with nullified subject gap as in (v). Only nonstandard dialects accept the sequence som der in relative clauses as in (vi), but this does suggest that in some languages, dummy insertion may have to apply at the end of the transformational component rather than cyclically. (We are grateful to Wera Hikko Brand for discussion of the English facts.)

13. This idea was presented orally by Williams in a talk at Harvard in the autumn of 1977 during the period our paper was being written. The written version of Williams paper (Williams, 1980) only became known to us two years after our paper was finished. As the interested reader can verify for himself there are important differences between the way Williams (1980) uses utterance types in English and our positive surface filter for Icelandic. One basic idea however, is common to both approaches, namely that such templates can be used to eliminate rule ordering and the necessity for obligatory rules.

References


Allen, C. (1977), Topics in English Diachronic Syntax, Unpublished PhD dissertation, University of Massachusetts, Amherst


Behaghel, O. (1932), Deutsche Syntax: eine geschichtliche darstellung, IV. Carl Winters Universitätsbuchhandlung, Heidelberg


Breckenridge, J. (1976a), ‘The Post-Cyclicity of ex-insertion in German’, CLS 11, 81-91


Bressan, J. (1972), Theory of Complementation in English Syntax, Unpublished PhD dissertation, Massachusetts Institute of Technology


Maling, J. and A. Zaenen (1977), ‘Filters and Trace in Icelandic’, paper read at VIII meeting of the North Eastern Linguistic Society, Amherst, Massachusetts.


