Edge-Based Model-Theoretic Syntax

A Study of (Mostly) English Object Structure

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Epigraph

Lucien Tesnière (1959: 42)

"Distinct from logic, distinct from psychology, syntax has to search for its own law only in itself. It is autonomous." [1]

Preface

When one initially examines some area of the syntax of a natural language (hereafter: NL), it often seems to manifest what can only be called *descriptive chaos*. For instance, expressions which seem to have parallel meanings and standard syntactic structures nonetheless manifest contrastive syntactic behavior in a variety of ways. An example:

(P1)a. It impressed me/all the committee members that Quentin was deranged.

b. It struck me/all the committee members that Quentin was deranged.

c. Quentin impressed me/all the committee members as being deranged.

d. Quentin struck me/all the committee members as being deranged.

The two main verbs appear to have parallel psychological meanings, to occur in distinct parallel syntactic frames, that of (P1a, b) and (P1c, d), with each frame requiring some type of object. One is thus naturally puzzled to observe that those objects behave contrastively, e.g. with respect to the Complex DP Shift phenomenon or with respect to Right Node Raising: [1]

(P2)a. Quentin impressed as (being) deranged ~ all the committee members. [2]

b. *Quentin struck as (being) deranged ~ all the committee members.

c. Quentin may have impressed as (being) deranged and he certainly impressed as (being) strange ~ all the committee members.

d. *Quentin may have struck as (being) deranged and he certainly struck as (being) strange ~ all the committee members.

There might be some impulse to dismiss these contrasts, to set them aside as probably unreal, or as merely some lexical fact of little or no significance. In general, I believe any such impulses contribute negatively to the project of uncovering the grammatical truth. Rather than ceding to them, one can and I will systematically consider a distinct possibility: the facts are as they seem to be because despite the real superficial similarities in the structural features of cases like (P1), they manifest as well less than glaring but perfectly genuine differences in grammatical structure.

The thought that seeming grammatical chaos like that in (PP2) is in fact a symptom of some ungrasped structural regularity is supported because there are other contrasts between the two verbs, equally unexpected a priori: [3]

(P3)a. It was me that Quentin immediately impressed as (being) deranged. [4]

b. *It was me that Quentin immediately struck as (being) deranged.

c. the one who Quentin impressed several friends of as (being) deranged

d. *the one who Quentin struck several friends of as (being) deranged

(P4)a. Jerome, impressing whom as clever is not easy,...

b. *Jerome, striking whom as clever is not easy,...

Here too, the verb impress has greater constructional freedom than strike for no recognized reasons.

What follows argues inter alia that a range of ideas which can be well motivated from various domains of English object facts, many distinct from those in (P1)-(P4), provide simple and justified solutions to the question of how to characterize the manifold differences manifest between the uses of impress and strike in (P1)-(P4), differences which have here only been partially documented. These ideas will involve rejecting the notion that an English phrase of the form [V + DP] invariably involves a grammatical relation properly characterized as a *direct object*. Rather, at least three distinct relations will be claimed to occur in such a structure. Hence what appear to be from one point of view anomalies in the behavior of direct objects will emerge as nonanomalous, as regularities stated on the distinct relational types. And it will be argued that these relational types as well as others play a fundamental role in explicating the notorious problems of characterizing English double object (ditransitive) constructions as well as in illuminating a host of others from possible passivization targets to Visser's Generalization.

Notes to Preface

1 Throughout I take such nomenclature to involve names of *constructions*, not of any sort of rules.

2 The possibility of Complex DP Shift of the object of impress in such cases was noted in Wasow (1981: 305, note 6).

3 Bowers (1993: 626-627) observed various differences between impress/strike structures and proposed to structurally distinguish the phrases they occur in along lines developed in Bach (1979). Whatever the (non-)virtues of Bowers' approach, however, it cannot be regarded as mainstream Barrel (A) theorizing.

4 In apparent conflict with (P3a), Stowell (1981: 354) cited (i), which for me is fine, as ungrammatical.

(i) *The people who John impressed as very intelligent were rather naïve.

The significance of this judgment contrast is hard to evaluate without more data about the way Stowell's variant of English treats the object of impress. But I stress that the analysis of the structures proposed in this work provides a simple way to distinguish an NL (possibly Stowell's) in which impress *fails* to contrast with e.g. strike in just the way it does in e.g. Wasow's and the present writer's variant of English. The idea would be that whereas the latter permit a 3 object found with impress to revalue to a distinct relation, Stowell's dialect does not and hence treats impress much more in the way strike is treated in both variants. The issue is discussed in section 11 of Chapter 8.

Edge-Based Model-Theoretic Syntax

Chapter 1 Introduction

1.1 Concept Barrels

An NL grammatical framework can be thought of as an abstract *barrel* containing linguistic concepts and principles applicable to constructing accounts of particular constructions. For example, the long dominant barrel representing the various *generative transformational grammar* frameworks emanating from the work of Noam Chomsky has included relevantly the concepts subsumed in (1.1), not of course all at the same time: [1]

(1.1) **Elements of the Chomskyan Generative Syntactic Barrel**

{abstract case, atomic node labels, atomic traces, binding principles based on c-command (principles A, B, C), c-command, complex node labels composed of sets of feature(s) (specifications), configurational definitions of grammatical relations (see (2.4) of Chapter 2), constituent structure trees, copy traces, derivations, economy principles, empty nodes, feature checking, greed, last resort, lexical entries, lexical rules, phrase structure rules, procrastinate, reanalysis, relativized minimality, subjacency, theta roles, the A over A principle, the case filter, the chain condition, the cyclic principle, the doubly filled comp filter, the empty category principle, the extension condition, the head movement constraint, the least effort principle, the minimal distance principle, the minimal link condition, the minimality condition, the opacity condition, the principle of full interpretation, the principle of recovery of deletion, the projection principle, the specified Subject condition, the structure preserving hypothesis, the superiority condition, the θ-criterion, the tensed S condition, the visibility condition, the Wh Island constraint, transformations, X-bar theory}.

Hereafter, I refer to the ideas of (1.1) as *Barrel (A)*. It seems correct to identify Barrel (A) with what Culicover and Jackendoff (2005) call *mainstream syntax*. But nothing hinges on that.

One can have reasonable confidence that adopting a barrel actually containing the ideas requisite for a correct account of a given NL construction will *ultimately* yield its right description. But if a barrel fails to contain the appropriate elements, no matter how much time and effort is devoted to choosing diverse combinations of its elements, refining and explicating them, a right description will, evidently, never emerge. As time passes and work assuming that the right answers lie somewhere in a particular barrel fails to yield proper descriptive accounts, it becomes plausible to suspect that the correct and

necessary concepts are simply not found in it; the degree of plausibility of such a negative conclusion grows as the time involved does.

Since work on the part of hundreds, perhaps thousands of linguists assuming subsets of the ideas of Barrel (A) has now proceeded for half a century, absence of insight and descriptive failures on NLs which have been extensively studied in its terms (especially English, surely the principal target of such work) must cast into doubt the correctness of Barrel (A) itself. Much of the rest of this work can be taken as an argument, though mostly an *implicit* one, for the failure of Barrel (A) ideas to provide reasonable levels of insight into English object structure. As far as I can see, almost none of the facts dealt with in this work could be argued to have received an adequate account in Barrel (A) terms.

Whether one accepts that conclusion about Barrel (A) or not, almost none of its devices beyond nodes and node labels will be exploited in the present work for descriptive purposes or taken as objects for theoretical discussion or criticism. For better or worse, the present study of certain aspects of English grammar is based on a sharply different collection of concepts, assumptions and principles than those represented by the array of ideas in (1.1). The account here is developed in terms of a distinct conceptual barrel overlapping only minimally with Barrel (A). Some of its distinctive syntactic aspects or at least related ones are spelled out in such works as those of (1.2):

(1.2) **Works Characterizing Relational Frameworks Related to that of this Study**

Aissen (1987), Johnson and Postal (1980), Perlmutter (1983b), Perlmutter and Rosen (1984), Postal (1985, 1986, 1989, 1990a, 1990b, 1992a, 1992b, 1996, 1998, 2004: Chapter 1), Postal and Joseph (1990).

I sketch out some general features of a personally current version of these ideas in sections 1.2-1.6.

1.2 Languages and Grammars

One deep difference between the current work and most of that which appeals to Barrel (A) ideas involves *foundational* assumptions about NL. Barrel (A) work has mostly developed in a framework which assumes that linguistics is essentially a psychological/biological study of the mechanisms which permit NLs to arise in human children. I do not accept this view, which I consider a tapestry woven of numerous confusions and false assumptions; principal among these is a confusion between NL and knowledge of NL, which are simply distinct things. This is just a special case of the fact that X and knowledge of X are always distinct; consider wine and knowledge of wine, the former drinkable, the latter not.

Consequently, any study of knowledge of NL cannot be a study of NL (just as e.g. a study of knowledge of logic cannot be a study of logic). It is not my intention to argue any of these complex issues here; see Katz (1981, 1984, 1990, 1996, 1998, 2004), Katz and Postal (1991), Langendoen and Postal (1984), Postal (2003a, 2003b, 2004, Chapters 11, 13). I simply stress that I understand grammatical study to be concerned with the characterization of NL, not with the characterization of knowledge of NL nor with any mechanisms which yield such knowledge. And without a fairly deep understanding of NL, the task of characterizing knowledge of NL is significantly ill-defined, as knowledge of NL is a binary relation of the form 'X's knowledge of Y'.

I view an NL as a set-theoretic object, a class, each of whose members is a set. I use the traditional term 'sentence' to refer to these sets. So an NL is a class of sets, each a sentence. This usage does *not* identify sentences with something relatively trivial like a string of words. Sentences must be assumed to be extremely complicated sets with many different included sets based on various primitives, semantic, syntactic, expressional, etc. Word string structure is just one aspect of the overall set structure.

Given the above, the *grammar* of a specific NL, K, is a system which specifies the membership of the class of sets which is K. Here is a further fundamental departure from Barrel (A) ideas in which it has always been assumed that a grammar of an NL must be some type of *generative* or *computational* device, a *proof-theoretic* system, a collection of *operations*, some type of *Turing machine*, as in the following statement from Barrel (A)'s initial stage:

(1.3) Chomsky (1959: 137)

> "Since any language L in which we are likely to be interested is an infinite set, we can investigate the structure of L only through the study of the finite devices (grammars) which are capable of generating its sentences."

As Postal (2004: Chapter 6) noted, no argument was then presented for claim (1.3) nor has any been presented in the subsequent decades. As discussed in Postal (2003b; 2004: Chapter 13), more recent assertions by Chomsky and followers that grammars *must* be Turing machines or computational devices instead appeal to a spurious notion called *conceptual necessity*; again there is no argument for the conclusion.

Given the absence of any necessity to view an NL grammar as a proof-theoretic system, adopting such a view requires a substantive (subject matter based) justification of the sort which has never been

provided. Consequently, there is no rational pressure to adopt the Turing machine view. While that does not of course in itself justify adopting a different view, this is a reasonable choice for several reasons.

First, adopting the model theoretic view, which appeals fundamentally for an account of the nature of NL grammars to the basic semantic notions of logic, potentially eliminates from linguistic theory any need to characterize, formulate and justify the complex systems of generative rules and the metaprinciples governing their interactions, which have always characterized Barrel (A) notions of grammar and which must be a fundamental part of Barrel (A) theorizing.

Second, there are unrefuted arguments in the literature that adequate NL grammars *cannot* be proof-theoretic; see Langendoen and Postal (1984), Postal (2004: Chapter 6), Pullum and Scholz (2001, 2005, 2007). I will not discuss these matters further here. These historical facts mean that far from there being some rational pressure to accept the view that NL grammars are generative, there is, arguably, to the contrary, at least some rational pressure to reject that view.

My assumption then is that proper grammars of NLs characterize them in the way that axiom systems in formal studies specify the membership of the collections they deal with. The crucial notion is *model-theoretic satisfaction*. Roughly, the specific instantiation of this approach I adopt can be characterized as follows. Grammatical theory characterizes a priori a vast class, call it *Universal Sentence*, of sentence-like objects, via specification of a collection of primitives including atoms, various relations, etc. It is then assumed that each NL is a subcollection of Universal Sentence. Such subcollections are defined by axiom sets, or, essentially equivalently, a single axiom consisting of conjoined subaxioms. Each axiom is a formula to which truth conditions can be assigned. The membership in a particular collection is determined to be all and only those elements of Universal Sentence which model-theoretically satisfy the particular axiom collection defining it, that is, for which all of the axioms are true. In other terms, the NL K specified by a grammar G (K) (which is a fixed axiom set) consists of all and only those members of Universal Sentence which are models of G. Under this view, a necessary condition for an object x to be a sentence of K, that is, to be grammatical in K, is that x be a member of Universal Sentence; any object not in Universal Sentence is claimed not to be a sentence in *any* NL. The sufficiency condition is that x satisfy all of the axioms of G(K). A sufficient condition for an object x included in Universal Sentence *not* to be a sentence of K is that it fails to satisfy at least one axiom of

G(K). The conceptual development below in sections 1.3, 1.4 and 1.5 should be considered as a basic part of an attempt to construct a substantive view of the collection Universal Sentence.

It can be assumed that some of the axioms defining individual NLs are common to the grammars of all NLs; these are principles of universal grammar; at the syntactic level, arguably some version of a principle embodying the valid content of Ross's (1967 [1986]) *Coordinate Structure Constraint* would be such. Others are NL-particular; these are rules of specific NLs. A number of these are encountered below, e.g. principles allowing passivization of phrases of the type of the second objects of English ditransitives only under very strict conditions or, in some dialects, not at all. However, the logical functioning of principles of universal grammar and rules in this view is identical. Both simply represent conditions which members of Universal Sentence either satisfy or fail to satisfy. Satisfaction or nonsatisfaction has exactly the same consequence regardless of the generality of the axiom involved. One pleasant consequence of this view is that it actually makes only a limited difference for a particular description whether some axiom is universal or not. And even if one states an axiom as an NL particular constraint, little changes if it can be shown that it is universal or is a theorem of some other axiom which can be taken to be universal. In the latter case, one can simply erase it. Of course, the general search for maximum simplicity and generality always leads one to hope that any needed principle is universal. Likewise, the discovery that an axiom stated as a universal can at best be NL-particular does not require any vast grammar reformulation.

A final remark about the contrast between proof-theoretic (generative) and model-theoretic views of NL grammars. In model theoretic terms, linguistic theorizing is concerned directly with the properties of linguistic objects, sentences and collections of sentences. Linguistic principles quantify over these and their elements. On the contrary, the history of generative grammar reveals that overwhelmingly theorizing has involved assumed properties of rules and grammars. While there are principles in Barrel (A), e.g. the so called binding principles, which quantify over sentence elements, most of the theoretical substance of Barrel (A) involves second order principles whose terms denote elements of rules and grammars, e.g. the cyclic principle, etc. But quantification over rules, grammars and their component elements can only yield testable linguistic consequences indirectly at best, by virtue of complicated chains of reasoning. Often it is debatable whether claims about systems of rules can be shown to *have* actually testable consequences at all for sentences and collections thereof.

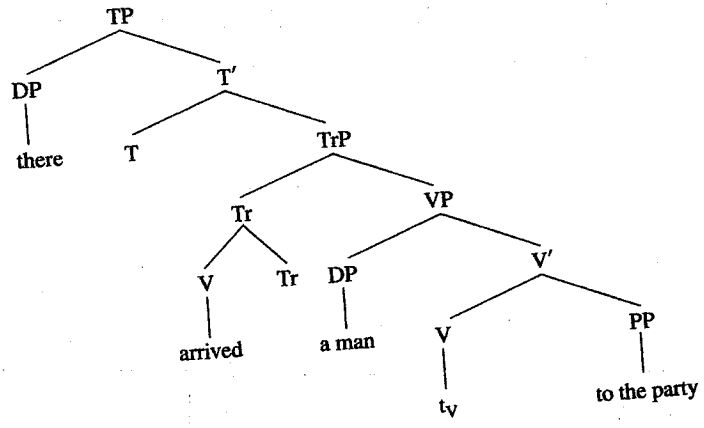
The relevance of these remarks for the present work is that the variety of proposed principles which it contains must all be understood in the model-theoretic terms just described...*none* of them is a generative principle which 'constructs' sentences, none is an operation which takes an input and yields an output, etc. Some of the informal *terminology* adopted is, nonetheless, compatible with this overwhelmingly more common way of talking about NL, but should not thereby be misunderstood. It is in all cases a mere façon de parler. When e.g. on multiple occasions I speak of some DP as having been *passivized*, there is no implication that there is some generative/Turing machine element (or sequence of such) which carries out an operation of passivization. Similarly, when I state in relational terms, as I do throughout, that some DP has *advanced* to a distinct relation or *demoted* to some distinct relation, there is no implication of any generative operations of advancement or demotion. Likewise, when I write that some phrase has *raised*, there is no postulation of any raising operation, etc. At stake in such cases are simply relations between different types of structures, relations of a sort clarified in what follows. Moreover, while for convenience I adopt this type of terminology common to proof-theoretic approaches to grammar, all actual rules and principles are stated in nonconstructive terms appealing to the model-theoretic account of linguistic structures sketched above.

While various orderings can be defined on NL sentence structures, none of them in my view has anything to do with the sort of orderings found in generative treatments. One group of consequences of these assumptions is that standard notions like that of rules 'applying', or of one 'applying before/after' another, or of sets of rules 'applying' in a cyclic or noncyclic fashion are simply undefined and can in principle play no more role in the present conception of grammar than they could, for example, in a conception of the function of Peano's Axioms in number theory. There is in model-theoretic terms no notion of the *derivation* of a sentence, derivation being an inherently proof-theoretic notion. The only notion of 'application' for a rule or principle in the current view is this. Taking any rule R as an implication of the form 'A materially implies B', R *applies* to any structure S if and only if R's antecedent A is satisfied by S. That determines that S is well-formed only if it satisfies B as well.

1.3 Linguistic Trees

In a work on NL syntax, the nature of syntactic objects is fundamental. Syntactic theorizing has for half a century been dominated by appeal to the notion of (*linguistic*) *tree*, hereafter L-tree. Consider an example:

(1.4) Collins (1997: 16)


TP
DP
T′
there
T
TrP
Tr
VP
V
Tr
DP
V′
arrived
a man
V
PP
tV
to the party

Although one might casually speak of (1.4) as an L-tree, this informal usage is potentially misleading. It threatens, as McCawley (1998: 47-48) warned, to confuse L-trees with entirely different objects, namely, *diagrams* of L-trees. Illustration (1.4) is a diagram. A diagram of an L-tree is a picture composed of lines and various sorts of symbols appearing at the end points of lines. An L-tree though is, as clear in any formalization of the idea, a *set*. While there can be and are slightly distinct formulations, it is substantively standard to think of an L-tree as in (1.5):

(1.5) **Definition**

An L-tree is a 5-ary set {Nodes, Node Names, Labelling, Mother, Linear Precedence} where:

(i) Nodes is a nonempty set of primitives called *nodes*,

(ii) Node Names is a finite nonempty set (disjoint from Nodes) of primitives called *node labels*,

(iii) Node Labelling is a relation (in fact, a function) in Nodes X Node Names,

(iv) Mother is a relation (in fact, a function) in Nodes X Nodes.

(v) Linear Precedence is a relation in Nodes X Nodes.

That is, an L-tree is a 5-ary set of sets. So viewed, the linguist's notion of phrase/constituent structure tree, just partially characterized in terms of L-trees, falls into a broader class of objects called *graphs*, studied in a branch of mathematics called *graph-theory*; see e.g. Berge (1973), Chartrand (1977), Gould (1988) and Harary, Cartwright and Norman (1965) for basic works on this topic.

A standard definition of the notion graph is:

(1.6) Gould (1988: 3)

"A graph G = {V, E} is a finite, nonempty set V of elements called vertices/points/nodes together with a set E of two element (pairs) of V called edges/lines."

Because of the Mother relation, L-trees are a subtype of graph called a *directed graph* (*digraph*). Whereas in a graph per se the edges are just pairs of nodes, in digraphs they are *ordered* pairs. The Mother relation provides the relevant ordering for L-trees.

Unfortunately, most of the development of Barrel (A) has taken place with little or no exploitation of, or even serious recognition of, links to graph theory. [2] This is probably due to the combination of Chomsky's extraordinary personal dominance of Barrel (A) theorizing with his early and long continuing concentration on *strings*, the most elemental aspect of sentence structure, and a notion formally marginal to graph theory. [3, 4]

The *reciprocal* of any binary relation U is the relation √U such that √U (b, a) holds if and only if U (a, b) does. The reciprocal of the Mother relation, √Mother, is the *Daughter* relation. These are respectively often called *immediately dominate and immediate constituent of*. The more general *dominate* relation is the *logical ancestral* of Mother, and links nodes which are elements of chains of immediately dominate (Mother) relations. The ancestral relation of a fixed relation is not simply defined; see Quine (1958: 215-217), Boolos (1998: especially 248-251). But very roughly, if V is any relation, the ancestral of V is that relation which holds between two elements *a* and *b* if *a* is *b*, or *a* bears V to *b*, or *a* bears V to some *c* which bears V to *b*, or..... Familiar instances of ancestrals include kinship relations...e.g. *ancestor of*, which is the ancestral of the parent relation. Note though that ancestrals are defined in such a way that everyone is their own ancestor. It is possible to define a narrower relation (obviously more in accord with actual usage of the word <u>ancestor</u>) in which this is not true, but the simpler term is used in formal studies for the more general one. The notion *sister*, common in discussion of L-trees, refers in present terms to nodes which share a mother node. Sister is of course reflexive, symmetric and transitive, hence an equivalence relation.

Naturally, there are various further formal conditions which the sets in (1.5) must meet to qualify as L-trees; these have been expressed in terms of various axiom systems, including those of Kaplan (1995: 10), McCawley (1968: 37-8; 1998: 46), Partee, ter Meulen and Wall (1993: 437-444), Rodman (1977), Sampson (1975: 1), Zwicky and Isard (1963) and Zwicky (1985). The common content of these relevant to the present discussion can be expressed as follows:

(1.7) **Axiomatic Conditions (Informally Stated) Further Defining L-Trees**

(A) Axioms about the Mother relation

1. Rootedness: there is a node without a mother, called a *root*;

2. Root Uniqueness: there is only one root;

3. The Single Mother Condition (term probably first used in Sampson, 1975): no node has more than one mother. This means that there is a unique mother/daughter *path* (sequence of nodes) up the tree from any (nonroot) node to the root. I return to this condition shortly.

(B) Axiom linking the Mother Relation and the Linear Precedence Relation

4. Relation Exhaustiveness and Disjointness: any two distinct nodes are in the ancestral of Mother or of Linear Precedence. Every pair of nodes in an L-tree is found in one of the relations and no pair is found in both.

(C) Axiom Requiring Labelling

5. Every node has a label.

One can now be explicit about how (standard) L-tree *diagrams* like (1.4) relate to the sets which are L-trees. The lines in such diagrams represent *ordered pairs of nodes*, pairs defining the Mother relation. More precisely, the higher endpoint of each line represents a node in the tree which is the mother of the node represented by the lower endpoint. Nodes are thus represented pictographically by line endpoints. A node label at the point of intersection represents an instance of one value of the Node Labelling function, that holding between the pictured node and associated member of Node Names. The nodes so indicated are called *nonterminal nodes*, which are thus pictographically indicated by appearing at the juncture of distinct lines. A node name at the end of an unintersected line represents a so-called *terminal node*. Terminal nodes represent lexical elements. The Linear Precedence relation is represented in L-tree pictures by the linear order of terminal and nonterminal node representations. [5]

Nothing in principle prevents L-tree diagrams in which two or more distinct lines all intersect at *both* their endpoints. Such 'parallel' lines never appear in actual L-tree diagrams though, for a good reason. Given what such diagrams represent, namely, L-trees, a multitude of 'parallel' lines cannot represent anything distinct from one such line alone. Since each line represents an ordered pair of nodes and no more, pictures of L-trees with 'parallel' lines are just redundant representations of L-trees with single lines.

1.4 Edge Extended Linguistic Trees

However, while diagrams of L-tree with 'parallel' lines would be useless, I maintain that linguistic structure pictures with 'parallel' lines are a proper representation of fundamental aspects of syntactic structure. This view entails rejection of the idea that L-trees are an adequate account of that structure. Because L-trees are so familiar and ubiquitous, it is appropriate to introduce what I consider a more adequate view of syntactic structure pedagogically by taking L-trees as a starting point, and enriching them in certain ways. The first enrichment permits mapping each L-tree into a distinct formal object I will refer to as an *Edge-extended L-tree (EEL-tree)*. To describe this mapping, it is necessary to expand the primitives underlying L-trees to include a further nonempty set called *Edges*, which consists of primitive elements called *edges*. The set Edges is disjoint from Nodes (and from Node Names). The inuitive idea is that each edge has two associated elements called its *Endpoints*, each of which is a node, one called its *Head* (node), the other its *Tail* (node). A mapping between edges and nodes will be

determined by two further additions, the *Tail Function*, which assigns each edge a unique member of Nodes, its *tail*, and the *Head Function*, which assigns each edge a unique node, its *head*. [6] One could, as an alternative to the Tail and Head functions, recognize a single mapping, called the *Incidence Function* in graph-theoretic discussion, which associates each edge with a unique ordered *pair* of nodes.

EEL-trees are essentially a subtype of what various graph theory presentations call *Multigraphs*; see e.g. Gould (1988: 6-7). [7] What crucially differentiates EEL-trees from L-trees is just that which differentiates multigraphs from graphs generally: they include a set of primitive edges, which, though uniquely linked to pairs of nodes, are not defined as pairs of nodes.

Given the formal character of EEL-trees, the relation between them and diagrams or pictures representing them is partly different from that obtaining with L-trees; in particular, lines in EEL-tree diagrams can be direct representations of edges, not of ordered pairs of nodes. It follows that a diagram of an EEL-tree with 'parallel' lines is not necessarily otiose in the way that a diagram of an L-tree is. Because, a priori, nothing precludes a multitude of distinct edges from having the same tail and head nodes. I claim that in fact this is a crucial aspect of NL sentence structure. Anyway, one can now speak of *Parallel* lines without quotes since the notion is trivially definable formally for multigraphs, hence for EEL-trees.

I provide the definition of this concept as well as that of a range of others relevant to talking about EEL-trees. I refer to the relations involved as *purely structural*. By that I mean idiosyncratically to denote relations between edges which are independent of node labeling, edge labeling and the relations between edges called Sponsor and Erase, introduced presently.

(1.8) **Definitions of Various *Purely Structural* Relations Holding Between Edges**

a. Edges A and B are *attached* if and only if they share at least one endpoint. Trivially, every edge is attached to itself.

b. Edges A and B are *disjoint* if and only if they are not attached.

c. A nonempty set of edges V is *connected* if and only if for any φ in V there is a distinct element of V to which φ is attached.

d. Edge A *overlaps* Edge B if and only if A and B have the same head node.

e. Edge A is a *neighbor* of Edge B if and only if A and B have the same tail node.

f. Edges A and B are *parallel* (term from Harary, Norman and Cartwright, 1965: 6) if and only if they overlap and are neighbors.

g. Edges A and B *kiss* if and only if they overlap but are not parallel.

h. Edges A and B are *colimbs* if and only if they are neighbors but are not parallel.

i.. Edge A is a *branch* of Edge B if and only if A's tail node is identical to B's head node. Reciprocally, B is a *support* of A; that is, *Support of* is $\sqrt{}$*Branch*.

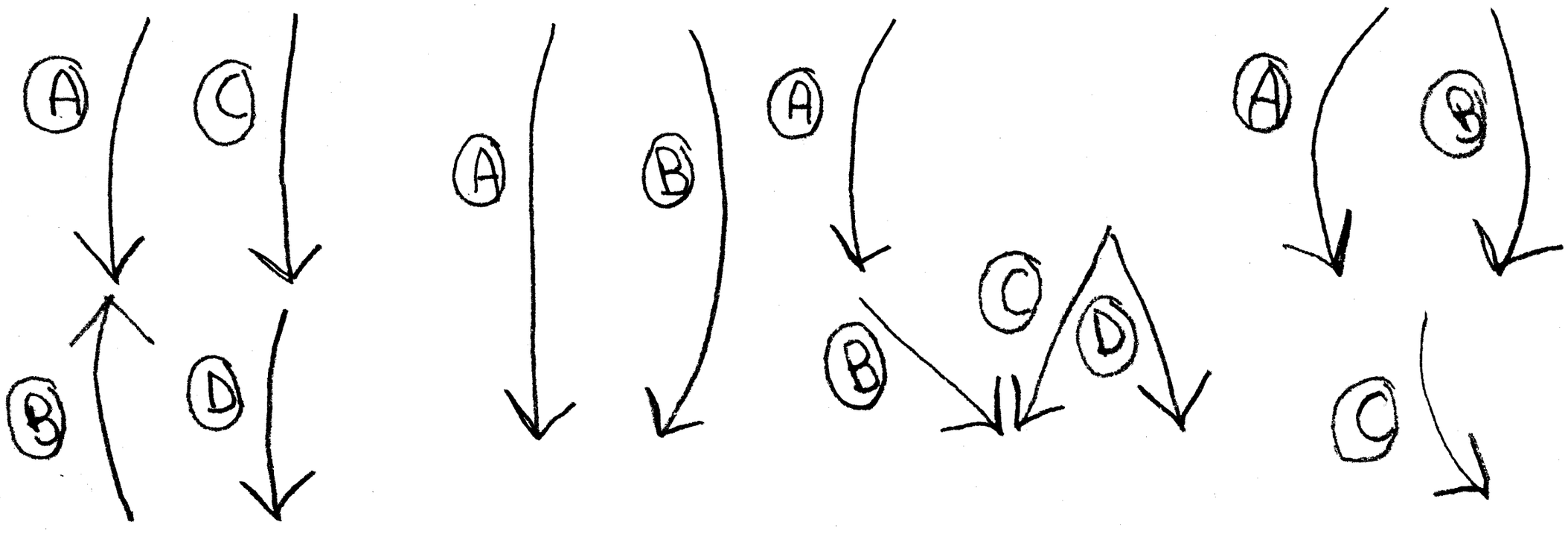
j. A sequence of edges $A_1 \ldots\ldots A_n$ form a *circuit* if and only if for all i such that $1 \leq i \leq n$, Branch (A_{i+1}, A_i) and Branch(A_1, A_n). The special case where n = 2 is a *bicircuit*.

Evidently, each edge is parallel to itself; the Parallel relation is reflexive as well as symmetrical. Likewise, each edge overlaps itself and is its own neighbor, the overlap and neighbor relations also being both reflexive and symmetrical. Moreover, Parallel, Overlap and Neighbor are all logically transitive and hence qualify as equivalence relations. Kiss, Colimb and Branch are irreflexive; but Kiss and Colimb are symmetrical and transitive. Branch, which is in a sense the edge correspondent of the Mother relation for nodes, is neither reflexive, symmetrical nor transitive. But it is not irreflexive. In the degenerate case where edge A is a *loop*, that is, an edge whose head node is identical to its tail node, then A is a branch of A and a support of A. Or, in different terms, a loop is a *unicircuit*.

All of the relations defined in (1.8) of course have ancestrals, which often permit compact statements of linguistic generalizations. It is thus useful to have a standard terminology for the ancestral of a fixed linguistically relevant relation. Hereafter, for any relation between edges ν, I will freely refer to its logical ancestral as *R*-ν. Thus the ancestral of Branch is R-Branch, etc.

The relevant edge relations defined in (1.8) are diagrammatically representable as in:

(1.9)



A is attached to B
C is attached to D

d.

A is disjoint from B

e.

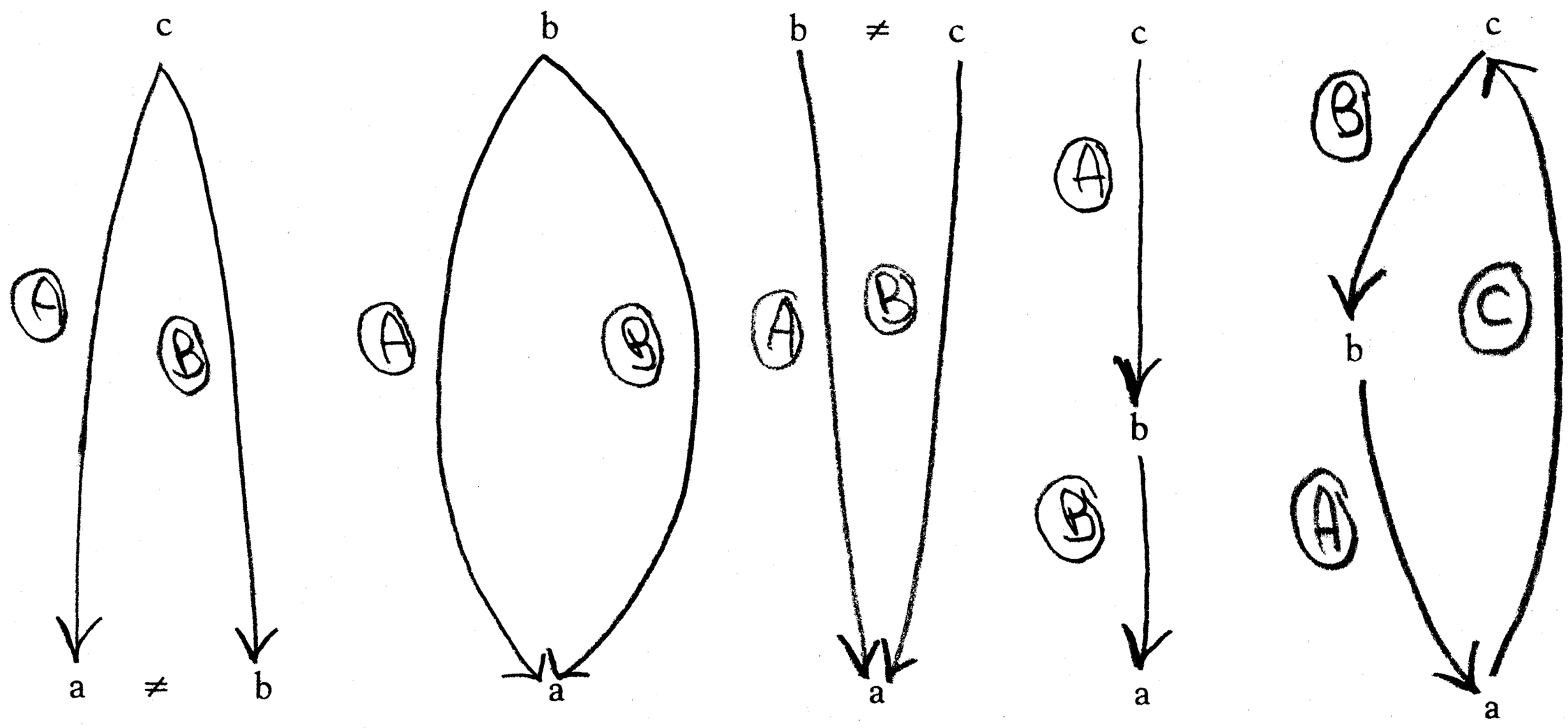
A, B, C, D are connected

f.

A, B, C are disjoint

g.

h.



A and B are colimbs
A and B are neighbors

A and B are parallel
A and B are neighbors
A and B overlap

A and B kiss
A and B overlap

A is a support of B
B is a branch of A

A, B, C form
a circuit

Being richer structures which include all the elements of L-trees, EEL-trees permit one to say anything about syntactic structure that the former could. Under common assumptions, particularly those of Barrel (A) work, the extra richness provides no further descriptive content or value and would hence, via Okham's Razor, have to be excluded. However, when certain of those assumptions are rejected, the additional structure is far from unmotivated.

Before explicating the claim about the reality of parallel edges, I introduce a further enrichment of the formal basis of syntactic structures by recognizing an additional nonempty set, *Edge Name*, disjoint from all of Nodes, Node Name and Edges, of primitives called *edge labels*, and a further function, called *Edge Labelling* which assigns each member of Edges a member of Edge Name. For convenience and consistency with past relational work, I hereafter for the most part refer to a labeled edge as an *arc*. Diagrammatically, arcs will be represented by single arrows with the head denoting the head node of the edge defining the arc represented. Obviously, all the definitions of edge relations in (1.8) turn into equivalent definitions for structural arc relations. [8]

An issue arising here as in any system with labels concerns their structure. Are they required to be *atomic*, that is, unanalyzable primitive symbols, or can they have an internal structure? [9] In most past relationally oriented work, including that in relational grammar (hereafter RG), Johnson and Postal (1980) and all my previous work derivative from the latter, edge labels have been exclusively atomic. But I deviate from that here and adopt a view from Johnson and Moss (1993, 1995). I will take the members of Edge Name to be *sequences* of one or more primitive symbols, representable when precision is relevant as $<L_1, L_2, \ldots, L_n>$. I do *not*, though, exploit complex edge labels in the way Johnson and Moss did, namely, to represent the distinct relations represented by strata in RG terms.

Terminological points: I will freely refer to arcs as L_1 *arcs*, where L_1 is the first element in a complex label. I will *never* refer to an arc as an L_n *arc*, where L_n is any element of a complex label other than the first. Rather, I will state in such cases that the arc has L_n *quace*. So there is a deep asymmetry between the status of the elements in edge label sequences, with only the first element corresponding to the role of atomic elements in previous work. Mostly, I freely speak equivocally about the labeling of arcs by saying an arc has edge label X, where X might be indifferently some atomic label or a nonunitary edge label sequence. In general, context eliminates any possible ambiguity.

Given edge labels as sequences of atomic labels, the issue arises as to constraints on the maximum number of atomic labels in any sequence. I do not know if the full edge labels of what are called Central arcs (see (2.117)) need ever have label sequences with more than two elements. But to embed some of the ideas in Postal (2004: Chapter 1) in present terms, it would be necessary to have certain arc types which relate to Central arcs by a kind of agreement have more than two. Such issues will not concern me further in this work.

The use of the term 'quace' indicates that I utilize complex edge labels in this work to reconstruct a notion introduced in Postal (2004: Chapter 4) under that terminology. Complex labels permit a vast simplification of the earlier account, formulated in a view with only atomic edge labels. That development was in fact a conceptual nightmare deserving to be ignored. But the quace idea as presently reconstructed plays an important role in several phenomena discussed in detail in following chapters. It is used to specify in a precise way that an arc which belongs to one relational category, e.g. direct object, may have some properties of another category, e.g. subject.

Several terminological additions facilitate that sort of discussion. Relevant edge label sequences will have either one or more atomic elements. As already indicated, the first (or unique) atom defines the basic relational category of an arc. But in the case of a unique atom, that label also defines the quace of the arc. More explicitly:

(1.10)a. **Definition: *Quace Marker***

A sequence of labels $<L_1,...L_n>$ is a *quace marker of arc* A if and only if $<L_1,..., L_n>$ is the full edge label of A.

b. **Definition: *Closed (Quace)***

Arc A has *closed quace* L_q if and only if A's quace marker is $<...L_q>$.

c. **Definition: *Quirky Quace/Straight Quace***

Arc A has *quirky quace* L_t if and only if A's quace marker is $<L_1, ..L_t, ... >$, where $L_t \neq L_1$

and *straight quace* L_q if and only if it has L_q quace but no quirky quace.

These definitions determine that an arc whose edge label is a single atomic label L has closed L quace, as does one with a multiple element quace marker if that sequence's last element is L. An arc has quirky quace L_q if and only if L_q is a quace marker member other than the initial element, and straight quace L_q if and only if L_q is the initial and final element.

On the basis of the characterization of edge labeling, one can introduce the notion of arc equivalence in (1.11a), and for completeness that in (1.11b):

(1.11)a. **Definition: *W(eakly)-Equivalent***

Arc A is *W(eakly)-Equivalent* to B if and only if the edge label sequences of A and B intersect in their first element.

b. **Definition: *F(ully)-Equivalent***

Arc A is *F(ully)-Equivalent* to B if and only if A's edge label sequence is identical to B's edge label sequence.

My impression is that definition (1.11a), is widely appealed to.

The formal extension to EEL-trees I have described permits an important historical and substantive comment about the Barrel (A) linguistics based on L-trees. With respect to EEL-trees, this linguistics assumes that it makes sense to posit, and is important to recognize, node labeling as a crucial element of syntactic structure but takes there to be no corresponding edge labeling. Call this the *naked edge claim*. Underlying it is the view that the only basic nonlinear order relation among nodes is that defining constituency. Under this assumption, since every edge would jointly represent the same relations, no more and no less than Mother and Daughter, labelling them would be pointless. However, I regard the naked edge claim as entirely unfounded, a judgment partially supported by the fact that there is, as far as I know, no argument for it anywhere. Arguably, the issue of edge labeling has for the most part simply been begged in Barrel (A) linguistics. The baselessness of the naked edge claim is supported differently by all that follows, which appeals to edge labeling at almost every point. Indeed the linguistic analysis in this work, as that in relational approaches generally, could not exist without edge labeling.

The reason for that is simple. In both traditional grammar and many modern subvarieties, one speaks informally of *grammatical relations*, like subject, direct object, predicate, etc.. These notions do not correspond to node labeling in L-trees, in the way that e.g. noun, verb phrase, etc. do. For, while phrases are inherently e.g. DPs or not, it makes no sense to say of a fixed phrase merely that it is e.g. a subject. Consider:

(1.12) Valerie hoped that Gregor would marry her.

While it is uncontroversial that both <u>Valerie</u> and <u>Gregor</u> are subjects, just as both are nominals, the former statements are incomplete in a way the latter are not. One needs to add the information that

Valerie is a subject *of the main clause*, perhaps a subject of the verb hoped, or the verb phrase containing it, while Gregor is a subject *of the complement clause*, perhaps of the verb would, etc. Unlike such categorical notions as Noun, DP, Verb Phrase, etc., then, which involve no issue of 'Noun/Verb Phrase of what?', Subject is relational; it involves the pairing of nodes. That is one reason why a simple posit of further labels like Subject as members of Node Name and an assignment of them to nodes fails to represent the relevant sentence structure associated with the notion Subject.

Just as one can consider the labeling of nodes a way to assign phrases to specific categories like Noun, one can though consider the labeling of edges a way to assign *pairs* of nodes to specific relations. The specification that an edge E has the edge label $<L_1, \ldots L_n>$ will specify that the head node of E, more accurately the constituent defined by that head node, bears the relation named by L_1 to E's tail node. In the most elementary sense, what I mean by a *relational* approach to grammar consists of nothing more than one recognizing labeled edges, now arcs, as an independent component of syntactic structure. The slogan like idea characteristic of early RG work (e.g. Perlmutter, 1983: ix-x) that 'grammatical relations are primitive and not defined' (contra e.g. Chomsky's (1965) definitions of subject and direct object) really amounted to no more than a (to be sure at the time partially inchoate) recognition that the characterization of grammatical relations involves edges which are not equivalent to pairs of nodes, and a labeling of those edges. The slogan could better be stated as: syntactic structure involves arcs, not just naked edges with labeled nodes.

One can express this a bit differently. Past RG talk of grammatical relations is really discussion at the level of syntactic formalism *interpretation*. The underlying formalism should be thought of as involving labeled edges with head and tail nodes; the interpretation is that the head node (more accurately, the constituent it defines) of an edge E bears in the intended interpretation of the formalism the grammatical relation denoted by E's initial edge label atom to E's tail node.

Imagine a slightly different history in which the formalism underlying L-trees had not been one of the standard ones but rather the expanded one permitting EEL-trees recognizing primitive edges and edge labels and their associated functions. It would then have minimally been necessary to add to the usual axiom sets characterizing EEL-trees a further axiom *excluding* parallel edges, that is, edges with identical head and tail nodes, something like (1.13):

(1.13) ***Hypothetical* Axiom Excluding Parallel Edges**

If two edges have the same tail node, then they have distinct head nodes (are colimbs).

This would have been required to exclude structures which the linguistics based on L-trees, that is, Barrel (A) linguistics, obviously assumed play no role in syntactic structure. Of course, such a proceeding, positing edges and then banning parallel edges, would have been pointless under the given substantive assumption, since it is achieved simply by not positing primitive edges and accepting the formalism of L-trees. I bring it up only to situate the current view in a broader perspective which includes the usual assumptions about L-trees as a substantive special case.

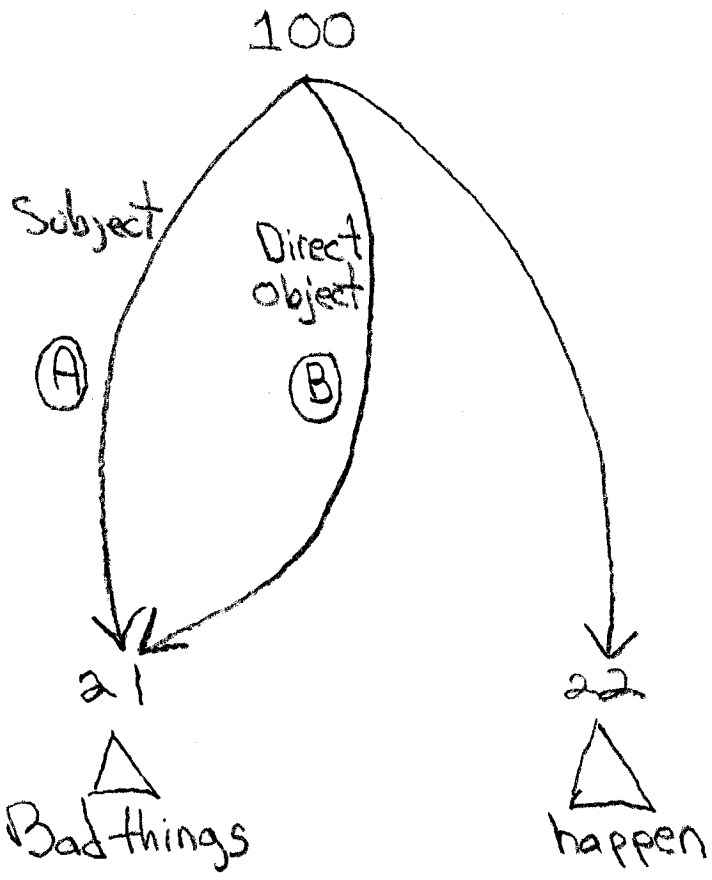
Why should one posit a richer graph-theoretic framework in which parallel labeled edges are possible? Most of the rest of this work as well, obviously, as much in the preceding relational literature (see the references in (1.2)) can be taken as an answer. But, in short, one good reason to assume parallel arcs is that for certain types of grammatical relations a single phrase has the possibility of bearing more than one to the same larger constituent. The simplest case known of one type is probably that of *unaccusative* clauses, a concept returned to repeatedly in what follows; for references relevant to this key idea see note 6 of Chapter 6. This follows if, as is justified, these are taken to involve a direct object which surfaces as a subject.

Take (1.14) as a minimal example:

(1.14) Bad things happen.

In terms of EEL-trees, this situation is *partially* representable by having a node representing the nominal phrase <u>Bad things</u> head two distinct parallel arcs, one labeled 'Direct Object' (or its simpler coding, see below), the other labeled 'Subject' (or its simpler coding), as in (1.15):

(1.15)


100
Subject
Direct object
A
B
21
22
Bad things
happen

This diagram introduces a number of conventions followed in all following representations. Numeral symbols at arrow junctures represent nodes; such numerals will though usually be *suppressed*. Arcs are represented by single arrows. Simple labels on such arrows represent edge labels. In (rare) cases where edge labels involve multiple atoms <L_1, ..., Ln>, these will be written as: L_1/,.../L_n. Labelling of nodes, while allowed for, is not given. Triangles at the heads of arcs indicate grammatical elements whose (unprovided) internal structure is not of direct current interest. Circled letters to the left of arcs are diagrammatic names of those arcs permitting convenient reference to them; they correspond to nothing in the formalism.

I say that the linguistic situation is only *partially* provided in such a representation, because nothing I have specified offers an evidently requisite notion of *ordering* among the relations, hence among the arcs. So even granted that it is correct that the phrase Bad things is *both* direct object and subject of the unaccusative clause in (1.14), these two distinct statuses must inevitably be distinguished by more than their sheer relational difference. The object relation is relevant for the semantics, argument/predicate relations, etc.; the subject relation is relevant for word order, verb agreement, interaction with raising phenomena, etc. Thus a viable account must allow, beyond parallel arcs, some formal way of *ordering* the arcs A and B. I will return to this, arguing that the mechanism which provides this information also provides the solution for other clear needs which a multitude of labeled edges alone, even including parallel ones, cannot.

Evidently, my parallel arc characterization of the unaccusative clause situation shows that invocation of such arcs is a partial alternative to the appeal to *phrasal movement* in mainstream Barrel (A) linguistics. That view seeks to overcome the limitations of syntactic description via *single* L-trees by associating the same sentence with a sequence of distinct L-trees.

As already touched on, one axiom which every formal account of L-trees incorporates in some form is called the *single mother condition*. In current terms, the content of this idea this might be formulated as:

(1.16) **The Single Mother Condition**

If edges (arcs) A and B have the same head node, A and B have the same tail node.

But I reject any analog of (1.16). [10]

One obvious reason is that (1.16) is incompatible with straightforward edge-based accounts of *raising* phenomena. Consider e.g. (1.17):

(1.17) Sandra made/figured/?reasoned there out to be eleven rats in the nest.

Here there is an element, the DP there, which shows grammatical signs of being in both the main clause, whose verb is one of make/figure/reason, and in the complement clause. The argument for *main clause* status is that there precedes the particle out, clearly an element of the main clause, one selected or categorized for by the main verb, etc. Changing the verb, even to one like believe or prove, which occur in the same overall construction but which preclude a particle, yields sharp ungrammaticality. And substitution of an arbitrary particle for out has the same consequence:

(1.18)a. Sandra believed/proved there (*out) to be eleven rats inside.

b. Sandra made/figured/reasoned there (*down /*off/*up) to be eleven rats inside.

The argument for subordinate clause status of there in (1.17) involves its relation to the material which follows out, an infinitive based on be and a following indefinite nominal. This is one of the few types of following material possible with an instance of there like that in (1.17);

(19) Sandra figured there out to exist a new kind of rat/remain several rats inside.

Most infinitival types yield hopeless ill-formedness:

(1.20) *Sandra figured there out to have bitten her several new rats/eaten the food the young rat/have escaped the oldest rat.

The difference between the good and bad cases correlates fully with the goodness or not of full clauses with there as subject and the relevant post out infinitivals:

(1.21)a. for there to be eleven rats inside

b. for there to exist a new kind of rat

c. for there to remain several rats inside

(1.22)a. *for there to have bitten her several new rats

b. *for there to have eaten the food the young rat

c. *for there to have escaped the oldest rat

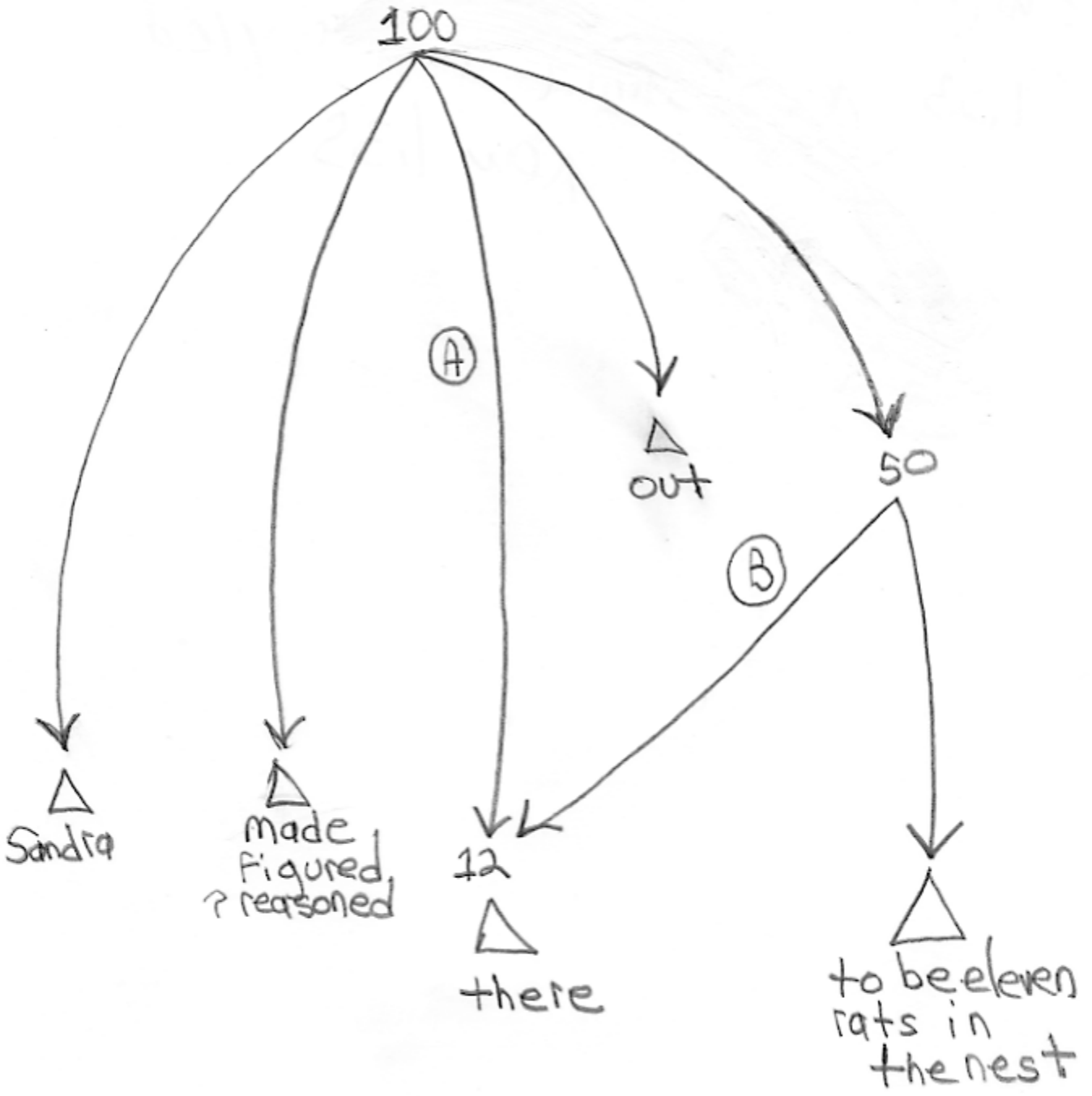
In short, one encounters the kind of relations between there and the following infinitive in cases like (1.17) which define single clauses, more precisely, which in a single clause relate an expletive there subject to its possible predicates. This argues that even in (1.17), there is the subject of the predicate formed by the infinitive.

Hence, apparently paradoxically, there is in one sense both in the main clause and yet also in the complement. In Barrel (A) linguistics, such a situation cannot be represented in a single core structure, that is, in an L-tree, precisely because of the single mother condition. If the arguments that the element is in two different constituents are accepted, the resulting description must at best involve appeal to a sequence of L-trees and the notion of transformational movement. [11] One posits two distinct L-trees; in the 'first', an occurrence of there would be in the subordinate clause; in the 'second', such an occurrence would appear in the main clause, the relation between the two mediated by an operation called *phrasal movement*.

A little discussed feature of that approach is its enormous redundancy…while the *differences* between successive L-trees may capture the facts motivating the movement posit, the *similarities* between them redundantly say the same thing, e.g. that the infinitive is a constituent of a certain type in a constituent of a certain type. But the formalism inherently requires this to be an element of both L-trees. When one considers the full grammar of reasonably complex sentences which may involve multiple instances of the sort of facts motivating movement in Barrel (A) terms, that is, a multitude of successive L-trees, the redundancy in an average derivation (sequence of L-trees) is staggering. This fact may be obscured because linguists working in Barrel (A) terms rarely write out even substantial subparts of full derivations.

With the abandonment of the single mother condition, nothing in the EEL-tree framework precludes saying that the single element there is a constituent of both the subordinate and main clauses; it can correspond to the head node of two distinct edges, one whose tail node is in the subordinate clause, the other whose tail node is in the main clause, as in partial structure (1.23):

(1.23)


100
A
out
50
B
Sandra
made
figured,
? reasoned
12
there
to be eleven
rats in
the nest

Visibly, this kind of multigraphic representation permits the invariant features of the sentence, those having nothing to do with the dual constituency of there, to be given only once. However, as with the parallel arc description of uanccusative clauses, the account is only partial. Again the issue of *ordering* the distinct edges with the same head node arises. Here the relevant elements are distinct edges A and B; these share a head node but are not parallel, so they necessarily accord with the single mother condition. Rather, A and B have distinct mothers, nodes 100 and 50 respectively. Missing minimally is a proper way to distinguish these; for instance, A, whose tail node defines the main clause, is relevant to the statement of word order between there and out in the main clause. The other arc, B, in the complement clause, is irrelevant to that word order but is relevant to the statement of relations between complement subject and predicate. So far, no mechanism for distinguishing these arcs, as with distinguishing the parallel arcs relevant for the unaccsuative analysis in (1.15), has been presented.

While I reject the single mother condition, for reasons which include its incompatibility with structures like that of (1.23), some *proper* consequences of that condition still need to be captured. For instance, despite the presence in (1.23) of nonparallel overlapping arcs, no collection of arcs in (1.23) forms a circuit. And I posit that this, unlike the single mother condition, instantiates a genuine property of NL structures:

(1.24) **The Nocircuit Condition**

If K is a subcollection of arcs in a metagraph, then K is not a circuit.

If one thinks of the intended interpretation of arcs, (1.24) is well-founded. For the idea is that inter alia arcs define constituency relations between the constituents determined by their head nodes and those determined by their tail nodes. The NoCircuit Condition says inter alia that no element is a constituent of itself. It requires minimal familiarity with syntactic discussion to recognize that, regardless of framework, such a condition is uniformly assumed. No direct analog of (1.24) is needed as an axiom in any system which incorporates both the requirement that a digraph be rooted and that the single mother condition hold, since theorems from the conjunction of those conditions exclude circuits. But having rejected the single mother condition, one must independently preclude circuits.

1.5 Beyond Edge Extended Linguistic Trees: Metagraphs

I turn to remedying the lack of arc ordering discussed in connection with (1.14) and (1.17). The remedy appeals to the concepts *Sponsor* and *Erase* from Johnson and Postal (1980) and subsequent

work in so-called *arc pair grammar*, a term not used here. These relations were there introduced as binary relations between arcs, each subject to its own restrictive axioms.

Actually, the system of Johnson and Postal (1980) developed a notion of *arc* in a more complex way than that advanced here. Specifically, it posited finite sequences of integers, called *Coordinates*, associated with each arc. This approach was common to RG work. The coordinates were intended to permit the stratification of sets of neighboring arcs into levels, defined by shared coordinates. In retrospect, this uselessly complex approach was misguided. And its unnecessary complexity was not only that due to coordinates. While appeal to the latter persisted through e.g. Postal (1986, 1990, 1992a), it was eliminated in Postal (1996, 2004), and coordinates play *no role* in the current development.

The assumptions I adopt are these:

(1.25) **Basic Characterizations of *Sponsor* and *Erase***

a. Some arcs have no Sponsors (formally, are not the second arguments of any pair of arcs in the Sponsor relation). Such arcs are called *Initial*.

b. *Sponsor Uniqueness*: no arc has more than one sponsor. [12]

c. *Sponsor Irreflexivity*: no arc Sponsors itself.

d. *Erase Uniqueness*: no arc has more than one eraser.

e. *Erase Irreflexivity*: no arc Erases itself. [13]

While the *reciprocals* of Sponsor and Erase are taken as unique relations in (1.25b, d), this is not true for the relations themselves. Nothing is taken to bar one arc from sponsoring multiple arcs nor to bar an arc from erasing more than one arc. Both Sponsor and Erase are logically intransitive, asymmetric, irreflexive relations.

The principle in (1.25d) that no arc has more than one eraser is sufficiently fundamental to edge based linguistics that I will reformulate it in another way, utilizing a format *which will be standard for the many other conditions which follow in this study*:

(1.26) **The Unique Eraser Condition**

If A erases C and B erases C, then A = B.

A few remarks are needed about the format of (1.26), valid for all that follows. The *seemingly* unbound *arc variables*, here A, B, C, should be understood as bound by universal quantifiers defined over the

universe of all a priori defined arc structures. Each invisible universal quantifier has maximally wide scope, except for the others. The relative scope of multiple otherwise wide scope universal quantifiers to each other is arbitrary. So (1.26) can be regarded as an abbreviation for a more precise expression of the form (1.27), where permutation of the initial quantifier positions is irrelevant.

(1.27) (∀A)(∀B)(∀C)(if A erases C and B erases C, then A = B)

In contrast, if condition formulations require other quantifiers (existentials) or universals whose scope is *not* characterized as I just did, they would appear explicitly in the condition statements. Later chapters repeatedly appeal to the formal restriction on structures in (1.26) as the basis for the ungrammaticality of various expressions. It is, arguably, the most fundamental principle of metagraphic linguistics invoked systematically invoked in accounting for grammatical distributions.

The intuitive interpretation of the Sponsor relation is that it provides a *nonstructural* ordering among arcs, meaning again by 'nonstructural', one independent of the association of edges and nodes, hence independent of Branch, Overlap, Neighbor, etc. The intuitive interpretation of the Erase relation is that the existence of some arcs determines that other arcs are not part of the more superficial representation of an overall structure; see below.

Once Sponsor and Erase are posited as formal elements of linguistic structure, the evolving notion of the latter arguably requires new terminology. For it is then entirely inappropriate to utilize a terminological system incorporating the term 'tree', already abusive usage once parallel edges and nodes with multiple mothers were permitted. Hence one moves from labeled arc multigraphs called EEL-trees to objects I henceforth call *Metagraphs*; these are, modulo some differences in the way arcs are defined, essentially the *Pair Networks* of Johnson and Postal (1980), a terminology not utilized here.

Summing up so far and expanding a bit, metagraphs are characterizable as in (1.28):

(1.28) **Definition: *Metagraph***

A *Metagraph* is a 10-ary set {Nodes, Node Name, Edges, Edge Name, Node Labelling, Edge Labelling, Incidence, Sponsor, Erase, Linearly Precede}, where:

(i) Nodes is a nonempty class of primitives called *nodes*,

(ii) Node Name is a finite, nonempty set of elements called *node labels*,

(iii) Edges is a a nonempty class of primitives called *edges*.

(iv) Edge Name is a finite, nonempty set of symbols called *edge labels*

(v) Node Labelling is a function from elements of Nodes to elements of Node Name

(vi) Edge Labelling is a function from elements of Edges to finite, nonnull sequences of members of Edge Name

(vii) Incidence is a function from elements of Edges to ordered pairs of members of Nodes

(viii) Sponsor is a relation in Edges X Edges.

(ix) Erase is a relation in Edges X Edges

(x) Linearly Precede is a relation in Edges X Edges.

(xi) Nodes, Node Name, Edges, Edge Name are mutually disjoint classes.

(xii) The conditions in (1.24), (1.25) and (1.26) hold.

While for parallelism, I have here referred to the members of Edge Name as edge labels, in the RG and arc pair literature, these were called *Relational Signs* (*R-signs*), since each atomic label functions in the formalism *interpretation* as the name of a grammatical relation. This more mnemonic usage is though not utilized in what follows. Recognition of the Edge Labelling function is an explicit theoretical incorporation of a *denial* of the naked edge view of Barrel (A) linguistics.

I have in (1.28x) taken the relevant primitive linear precedence relation in metagraphs to hold, like Sponsor and Erase, between edges rather than, as in (1.5), between nodes. While not a truly crucial assumption, this innovation is briefly justified as follows. Common word order principles which appeal to a linear precedence relation involve reference to labeled edges. Think of principles like 'subjects precede verbs', 'direct objects precede indirect objects', etc. Given an edge based precedence relation, such generalizations can be stated directly in the maximally simple way, e.g.:

(1.29) If A is a 2 arc and B is a neighboring 3 arc, A linearly precedes B.

Moreover, a linear ordering relation between nodes is easily defined in terms of the arc relation:

(1.30) **Definition: *Node Precedes***

Node a *node precedes* b if and only if a is the head of an arc A and b is the head of an arc B such that A linearly precedes B.

I assume that a key restriction on linearly precede is that it holds only between neighboring arcs.

(1.31) **The Linearly Precede Neighbor Condition**

If A linearly precedes B, A and B are neighbors.

This assumes that all linear ordering relations between nodes heading arcs which are not neighbors are logically entailed by linearly precede pairings existing independently among neighbors.

While the neighbor condition seems very solid, less clear are the conditions on *which* neighboring arcs can stand in this relation. One issue is whether erased arcs can be among them. In general, this is not the case; but simply barring that completely might be too strong. For instance, it would arguably not permit one to say that element X cliticizes on to element Y only if X is contiguous to Y, which is in effect how many cliticization statements are stated. But I will not pursue such issues here, as precedence issues play very little role in the present work.

I refer to the full set of arcs (plus their endpoint nodes) in any metagraph M as *R(elational)-graph(M).* So the R-graph consists of the set Edges plus their labeling under Edge Labelling, as well as the set Nodes plus their labeling under Node Labelling. Each R-graph is of course a multigraph. A more precise specification of the role of the Erase relation can be stated as follows, appealing to the basic graph-theoretic notion of *Edge Deleted Subgraph*, which, for any graphic structure G, is simply a subset of the edges (and their associated endpoints) of G. In the present case, relevant is a subset of an R-graph. One can claim the following. Associated with each metagraph M, more precisely, with R-graph (M), is an object called the *S(urface)-graph*(M). The idea is that an S-graph would represent the syntactic structure of sentences at roughly the same level as the *Surface Structures* of one stage of transformational grammar. S-graphs would be the direct representations of strings of words.

Johnson and Postal (1980) defined the concept S-graph in an extremely elegant manner essentially as follows:

(1.32) **Definition: *S-graph***

For a metagraph M, the *S-graph of* M consists of all and only those arcs in R-graph (M) which are not erased (that is, which are not second arguments of the Erase relation for M).

So S-graph(M) was that edge deleted subgraph of R-graph(M) consisting of all and only the nonerased arcs of R-graph(M). However, notwithstanding the appeal of such an elegant definition, it is unclear whether it is fully viable. The reasons for that are marginal to the current work and I will not linger over them. They relate to the issue that certain branches of deleted arcs which are themselves seemingly not independently deleted should not be parts of S-graphs. Such cases arise particularly in ellipsis structures, where attempts to meet the restrictive condition of (1.32) seem to require vast numbers of arbitrary Erase specifications for R-branches of the arc whose erasure seems to define the ellipsis in a natural way.

I will however not seek any replacement for (1.32); instead I *speculate* that the related problems might be solvable via a condition like:

(1.33) **The Dangling Arc Erase Condition**

If A and any neighbors of A are erased and B_1, ...B_n are branches of A, and $\forall_i$ $(1 \leq i \leq n)$ B_i is erasable by A, A erases B*i*.

The concept *Erasable by arc* A (see (3.39) for the precise definition) denotes the property of not being erased by any arc distinct from A. Hence (1.33) says in effect that each support will erase all of its potentially dangling branches under the conditions specified.

Beyond, condition (1.33b Johnson and Postal (1980) assumed and I maintain that (1.34) holds:

(1.34) An S-graph is:

a. connected

b. rooted

c. contains no overlapping distinct arcs

Hence each S-graph, like each L-tree, is a graph in which any node *n* can be reached from the root via a path of edges from node to node, and in which *n* is reachable in only one way. S-graphs do not have parallel edges, satisfy the single mother condition and have no circuits.

Just as the notion of edge deleted subgraph arguably plays a key role in picking out the surface form of a metagraph via the notion S-graph, it is also a plausible speculation, as assumed in Johnson and Postal (1980), that this notion is basic to characterizing the semantic aspect of metagraphs. The first, possibly only rough cut, can be assumed to be that which picks out from the R-graph of a metagraph all those arcs which have no sponsors, that is, all the initial arcs. Essentially, this idea (or its equivalent in Johnson and Postal, 1980, which appealed to self-sponsoring arcs where the current proposal has unsponsored arcs), was taken to define an object called a *L(ogical)-graph*. It would be a coherent and significant hypothesis if an L-graph, plus the labelling of its nodes, provided, if not the semantic representation itself, at least the essential elements needed to formulate that. This is, however, a topic way beyond the current study and I have little to say about in what follows. In general, semantics issues arise only in the context of scattered particular facts related to specific descriptive issues. One notes though that the notion of L-graph as the basis for semantic structure claims that those syntactic features related to sponsored arcs of all types, should not contribute semantic material to the meaning of sentences.

A technical point arises about the linguistic structures recognized when, in addition to the basic structure of multigraphs, nonstructural relations between their edges such as Sponsor and Erase are posited. The work yielding Johnson and Postal (1980) in effect assumed that posit of the Sponsor and Erase relations, which take arcs as their elements, carried the descriptive framework of metagraphs *beyond the notion of multigraph*. The implicit reasoning was this. Multigraphs involve nodes and edges and quantification over them is quantification having as its domain a universe of nodes, edges, and sets of these. But metagraphs would seemingly involve as well a *higher order* structure of sets of sets (pairs) of edges, requiring as well quantification over such higher level sets, simply because Sponsor and Erase are such higher order sets.

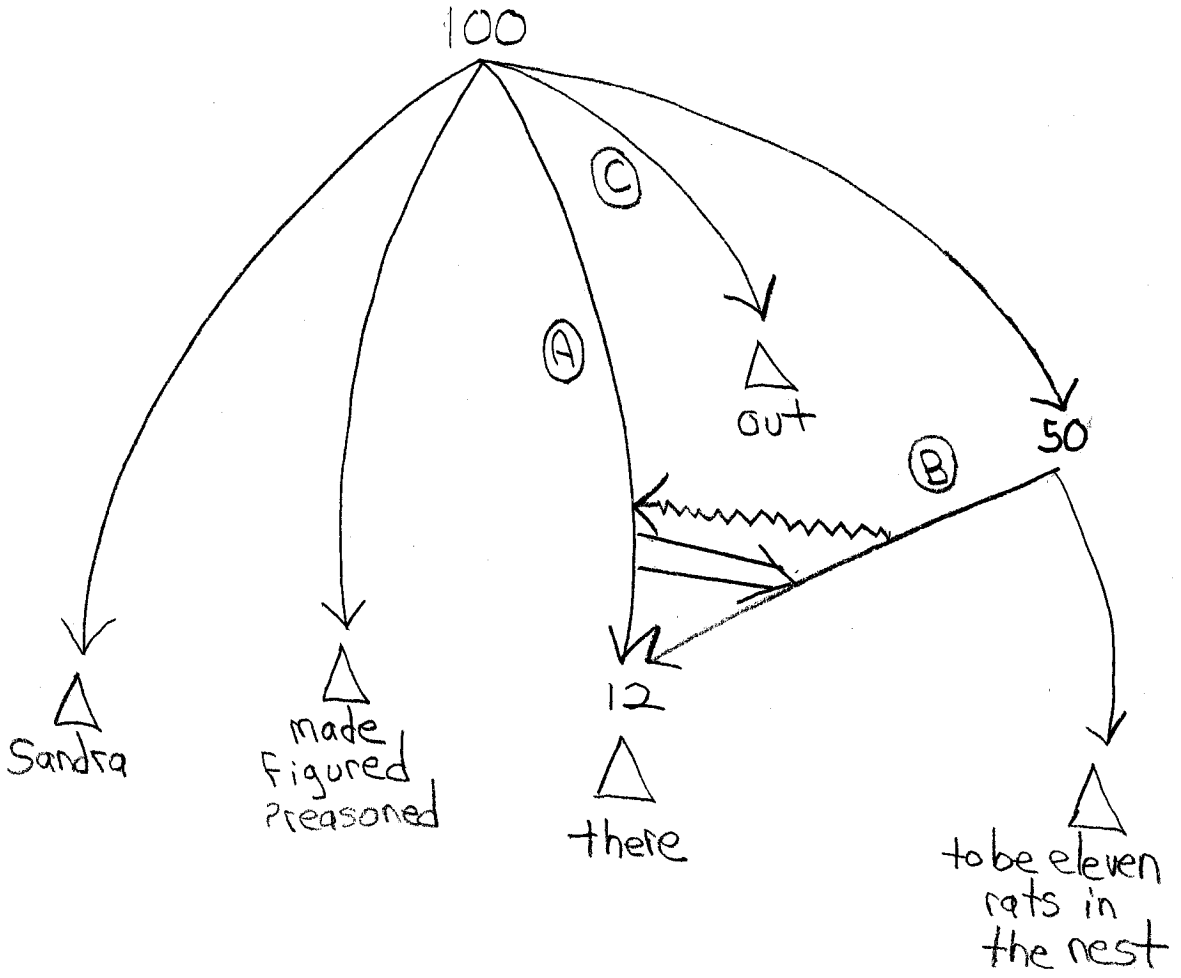
But I am indebted to Geoffrey K. Pullum (personal communication) for indicating that such an assumption about the implications of positing Sponsor and Erase is an error. He pointed out that Engelfriet (1991) provided a of showing *in effect* how any metagraph could be mapped into a formally equivalent structure in which no nonstructural (in the sense of (1.8)) relations between arcs are mentioned.

Engelfriet's construction permits logical construal of seeming quantification over *sets* of sets of edges, as lower order quantification over sets of edges. Engelfriet can then be taken to have shown that, despite initial appearances, recognition of Sponsor and Erase (and Linearly Precede or any further arc relations) need lead to no 'jump' with respect to the logical order of the domains of quantification required in a metagraph based syntactic theory. That leaves a metagraph based view of linguistic structure within the formal world defined by node labeled, edge labeled multigraphs. Regardless of choice of diagram type, metagraphs could be, whenever relevant, regarded as multigraphs, leaving a linguistics based on them within a known and well-studied mathematical (set theoretical) domain.

The multigraphs which Engelfriet's construction would yield in the case of metagraphs are, however, quite unintuitive from the point of view of their intended linguistic interpretation, only obscurely relatable to linguistic facts and associated diagrammatic represention of them would be nightmarish. So this work continues to utilize the sort of diagrammatic representations introduced in Johnson and Postal (1980) in which Sponsor and Erase are represented with special arrow symbols whose heads and tails originate and end at the lines representing arcs.

Returning to (1.17), one can provide a very partial representation of the relevant metagraph which is a more adequate account of structure than (1.23), as in (1.35):

(1.35)


100
C
A
B
out
50
Sandra
made
figured
reasoned
12
there
to be eleven
rats in
the nest

Here, as in all that follows, the Sponsor relation is indicated by a wiggly arrow, whose head appears at the sponsored arc and whose tail appears at the sponsoring arc. The Erase relation is indicated by a double arrow whose head appears at the erased arc and whose tail appears at the erasing arc. The Linearly Precede relation is in general not represented.

Crucial in (1.35) are arcs B and A, whose joint head node 12, and the constituent it defines, in this degenerate case only the word <u>there</u>, are specified to be elements of both the complement clause defined by node 50 and the main clause defined by node 100. Moreover, unlike the earlier representation of (1.17) in (1.23), there is, via Sponsor and Erase, now a formal distinction between the statuses of edges A and B. Since B is erased, (1.35) indicates, via condition (1.33), that B cannot be part of the S-graph of the structure. Since A is not erased, it can and will be. Moreover, since, via condition (1.31), linear precedence is essentially restricted to sisters and in most cases to those in S-graphs, it follows that arcs A and C are relevant for the word order of <u>there</u> and <u>out</u>, while C and B are not. Additionally, via a notion called *Successor*, A is a successor of B, as now clarified.

The relation *Successor* and its reciprocal $\sqrt{}$*Successor* = *Predecessor*, relations between arcs defined in terms of Sponsor, are absolutely central notions of metagraph linguistics, definable as follows:

(1.36) **Definition: *Successor/Predecessor***

A is a *successor* of B (B, reciprocally, a *predecessor* of A) if and only if B sponsors A and A and B overlap.

So these terms denote sponsor relations between arcs sharing a head node. Within (1.35), A is a successor of B, B a predecessor of A. Further, in (1.35) A erases its predecessor. This state of affairs defines one subtype of successor/predecessor relation which will be called *type I*. Another subtype, *type II*, is defined by the reverse situation where a predecessor erases its successor. [14]

(1.37) a. **Definition: *Type I Successor/Predecessor***

Arc A is a *type I successor* of B (B, reciprocally, a *type I predecessor* of A) if and only if A is a successor of B and A erases B.

b. **Definition: *Type II Successor/Predecessor***

Arc A is a *type II successor* of arc B (B, reciprocally, a *type II successor* of A) if and only if A is a successor of B and B erases A.

Since the notion Successor logically allows for a predecessor/successor pair in which neither element erases the other, the two types of successor (1.37) defines are not logically exhaustive. This permits a third subtype, which does exhaust the class:

(1.38) **Definition: *Type III Successor/Predecessor***

Arc A is a *type III successor* of arc B (B, reciprocally, a *type III predecessor* of A) if and only if A is a successor of B and not a type I or type II successor of B.

Hereafter, I systematically abbreviate the complex terms for the three successor types as $successor_I$, $successor_{II}$ and $successor_{III}$ and with parallel notation for predecessor types.

In a $successor_I$ structure, the existence of the successor guarantees the nonmembership of the predecessor in the associated S-graph. In a $successor_{II}$ structure, the reverse holds and the existence of the predecessor guarantees the nonmembership of the successor in the associated S-graph.

As is multiply illustrated in following chapters, description within the current framework involving $successor_I$s is the closest extensional analog of (overt) *phrasal movement* within transformational frameworks. So, what are reasonably described in movement terms in the latter will involve positing $successor_I$ arcs in the present treatment. Viewed from the present vantage point, talk of the (transformational) movement of constituents is an attempt to represent those properties which the $successor_I$ relation captures. But it does this in a framework which (i) lacks primitive edges; (ii) thereby lacks labeling of edges; (iii) thereby lacks parallel edges; (iv) thereby lacks primitive relations (Sponsor, Erase) between edges and (v) insists (without argument) that structures meet the single mother condition.

All relations between arcs in metagraphs in general can be further subcategorized into the key categories of *local* and *foreign*. Local relations hold if and only if the paired arcs have the same tail nodes. Foreign relations hold if and only if the arcs related have distinct tail nodes.

(1.39) **Definitions: *Local(ly)/Foreign***

If A and B are arcs, Ψ is a binary relation between arcs and A Ψ B, then

a. A *Local(ly)* Ψ B if and only if A and B are neighbors.

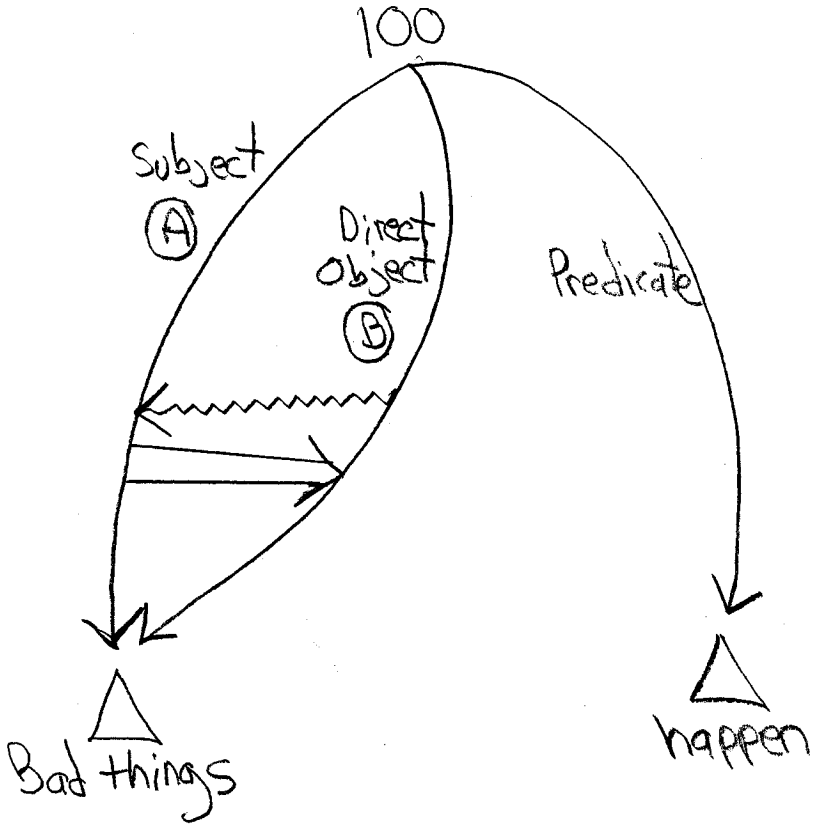
b. A *Foreign* Ψ B if and only if local(ly) A Ψ B does not hold.

The $Successor_I$/$Predecessor_I$ relations linking A and B in (1.35) are thus more precisely Foreign $Successor_I$/Foreign $Predecessor_I$.

It is also sometimes relevant to refer to ancestrals of relations between arcs like Successor. I thus naturally extend the notation introduced for the ancestrals of structural relations between arcs to the

nonstructural reltions Sponor, Erase, and relations defined in terms of them like Successor. Hence the ancestral of Successor will be notated as R-Successor. While Successor is irreflexive, since Sponsor is, R-Successor is not; every arc is its own R-Successor, R-Predecessor, R-Sponsor, etc. Thus even an arc G which has no Sponsor has an R-Sponsor, namely, itself.

Return briefly to the unaccusative case (1.14). This would have a partial metagraph of the form:
(1.40)


100
Subject
A
Direct
Object
B
Predicate
Bad things
happen

Here arc A is a (local) successor$_1$ of B. Such situations correspond to the informal RG usage of *advancement/demotion*, the difference defined by a hierarchy of grammatical relations (see (5.44)). In this case, subject being higher on the hierarchy, and the label of the local successor$_1$ arc, one has an instance of advancement. In general, calling a case advancement or demotion is of mostly terminological significance. But several situations of a different sort are encountered in later chapters.

As in the case of (1.35), the Erase relation combines with the notion of S-graph as an edge deleted subgraph to correctly capture the fact that only arc A is relevant for e.g. word order facts and, given that verb agreement in English involves subjects, relevant to the verbal agreement, given constraints on that limiting agreement determining arcs to those which are not locally erased.

1.6 Anaphora, Arc Relations and Arc Types

The acceptance of parallel arcs and structures violating the single mother condition, especially when supplemented by the nonstructural Sponsor and Erase relations between arcs, opens up descriptive possibilities entirely foreign to L-tree limited linguistics. Most of these are marginal to the core topics of the current volume. But at certain points, it is critical to appeal to certain ideas about anaphora and in various places certain defined arc types must be appealed to. Thus this section briefly lays out certain aspects of a metagraph approach to anaphora depending on the features above and defines various further related metagraph concepts which become relevant in later chapters.

Consider first reflexive expressions like (1.41a):

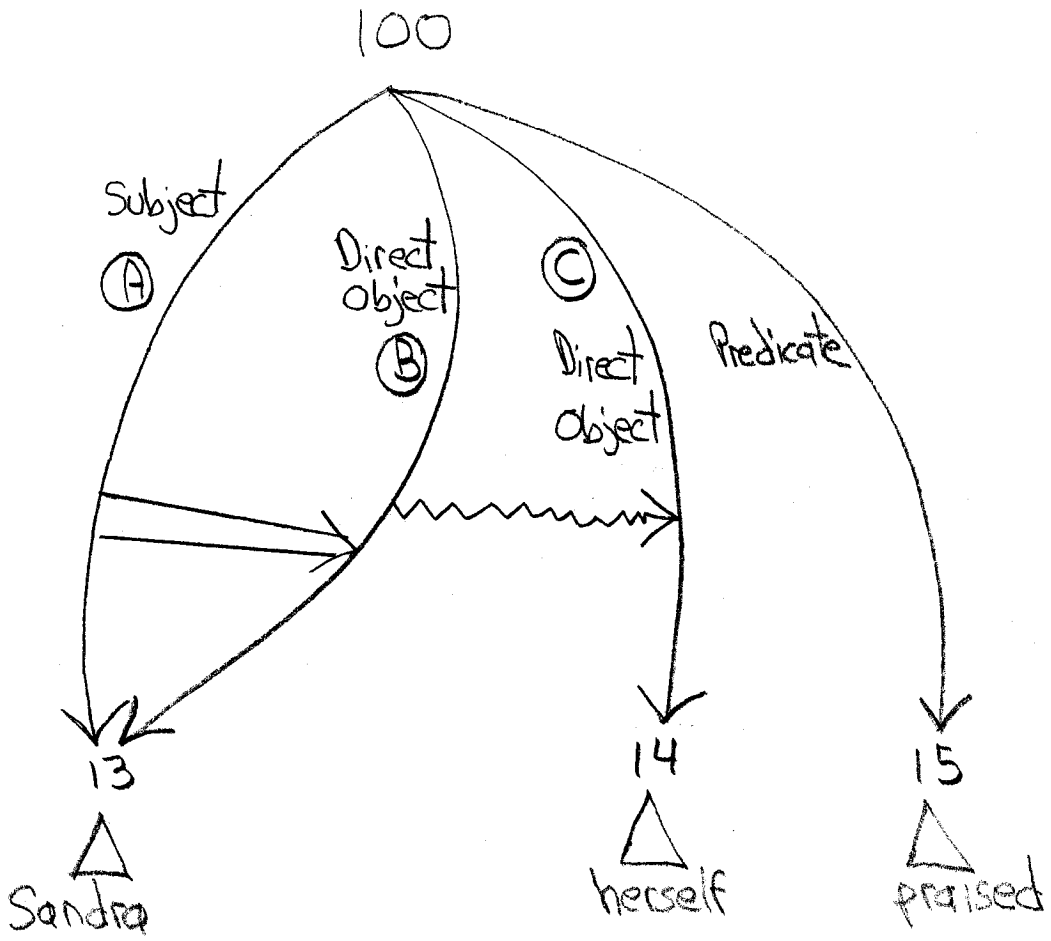
(1.41)a. Sandra praised herself.

b. Every professor praised herself.

In mainstream approaches, one assumes that there is a special semantic relation or set of relations between <u>Sandra</u> and the reflexive pronominal form it antecedes, so-called *coreference*, although it is recognized that this relation holds as well, for instance, in cases like (1.41b), where <u>herself</u> represents the semantic equivalent of a bound variable, while <u>Every professor</u> represents inter alia the quantifier which binds it. This relation is normally represented by a coindexation of the forms related by antecedence relation; see e.g. Fiengo and May (1994), Büring (2005).

But, as considered in Johnson and Postal (1980), metagraphs permit an entirely different approach to such matters. For instance, it becomes possible to represent (1.41a) partially as in:

(1.42)


100
Subject
A
Direct object
B
C
Direct Object
Predicate
13
14
15
Sandra
herself
praised

Here, unlike the previous structures considered, a single node 13, heads two distinct unsponsored arcs, one of which erases the other, while the latter sponsors a third arc representing the same relation as the erased arc. [15]

I will sketch an approach within which there is a defined relation, *Arc Antecede*, holding between C and A in (1.42). The implication is that this relation is the basis for talk of pronominalization and antecedence in general. The concept Arc Antecedence, which must be built up in stages, plays roughly the role that *coindexing* plays in most Barrel (A) work.

First, the sponsor/erase relations involving A, B, C in (1.42) define a fundamental metagraph relation between arcs C and B called *Replace* in Johnson and Postal (1980). A currently reformulated definition of this and a related concept, one taking into account differences between the present framework and that of Johnson and Postal (1980), specifically abandonment of the idea that some arcs have *two* sponsors, is (1.43):

(1.43) **Definition: *Replace/Second***

C *replaces* B if and only if C and B are W-*equivalent* colimbs, B sponsors C and there exists an arc A distinct from C which erases B. In this case, A is said to *second* C.

Recall that colimbs are neighbors with distinct head nodes. I assume that licit seconders of replacers are narrowly constrained. A very strong general constraint might be (1.44):

(1.44) **The Seconder Condition**

If C replaces B and A seconds C, then A overlaps B.

This allows seconders which are initial arcs overlapping other initial arcs, seconders which are successors of the replaced arc and seconders which are predecessors of the replaced arc. The first situation is instantiated in (1.42); the others are realized, I suggest, in what I call *resumptive arc* situations, those involving *copy arcs* and *anticopy arcs*; see below. [16]

In a Replace configuration, there is furthermore a relation between the seconder and the arc it erases, a subset of the Erase relation which links them. Call it *Pronominally Detach*:

(1.45) **Definition: *Pronominally Detach***

A pronominally detaches B if and only if there is a C such that C replaces B, A seconds C and A is *not* an R-branch of C.

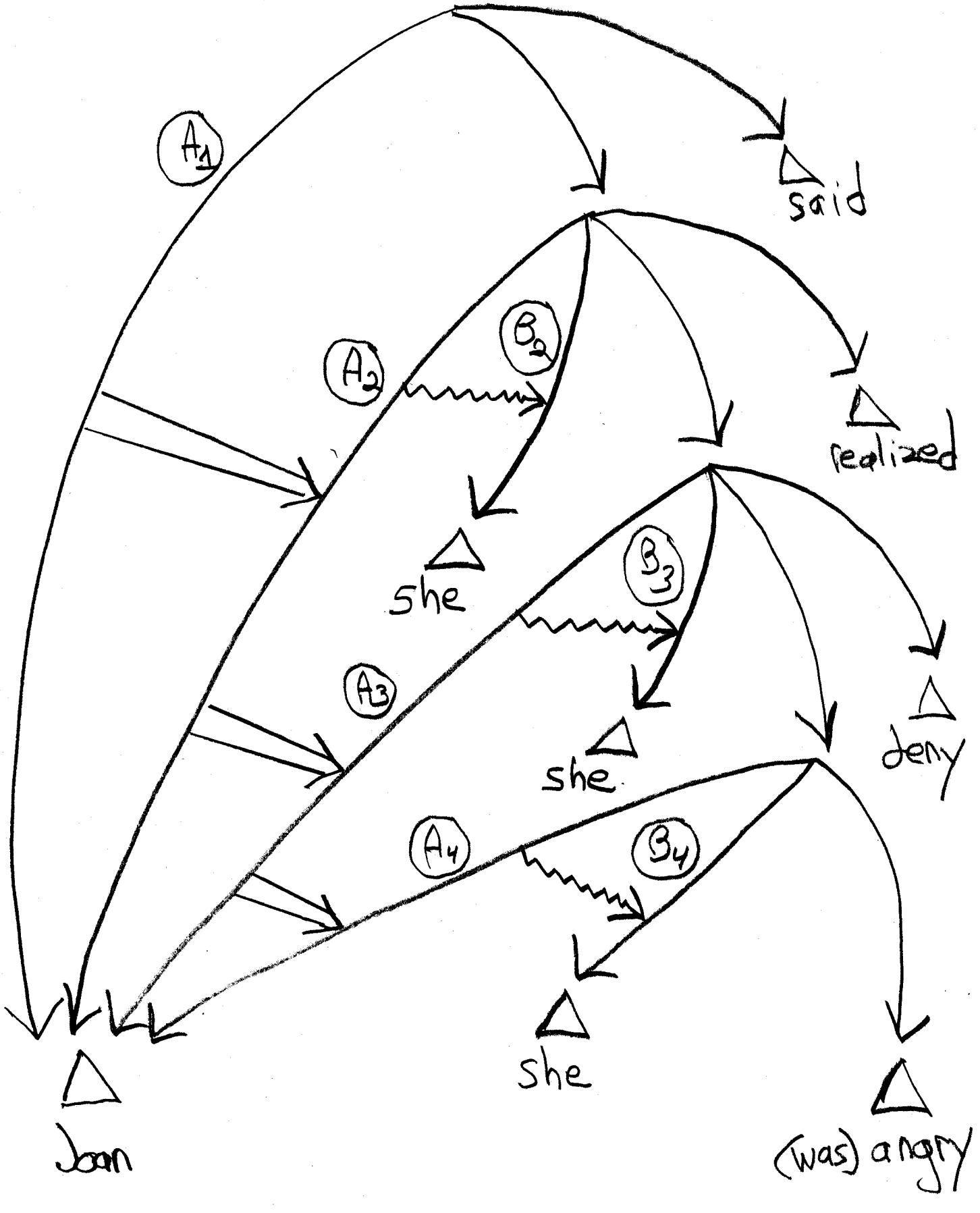
The last conjunct reference to R-branch is intended to permit distinguishing pronominally relevant arcs from the kind of replacers found in the sort of analysis of prepositional phrases (herafter: PPs) sketched in Chapter 3, section 3 and from those relevant to what was called *camouflage* in Johnson and Postal (1980); see Collins, Moody and Postal (2008). In these structures, the seconders of replacer arcs *are* R-branches, in fact, branches, of them. One needs to separate out these latter situations from anaphoric ones, which (1.45) does. In (1.42) then, A pronominally detaches B.

If all cases were as simple as (1.41a), the relation between A and C in (1.42) would itself define the Arc Antecede relation. But the conditional is false. Consider a bit more complicated case like (1.46), where, in standard terms, a single DP antecedes several different pronominal forms.

(1.46) Joan said she realized she should deny she was angry.

This would have a structure like:

(1.47)


A1
said
A2
B2
realized
she
B3
A3
she
deny
A4
B4
she
Joan
(was) angry

Here, for the reading where all four DPs are linked, it is not possible to take A_1 to arc antecede B_3 or B_4 merely on the basis of maximally simple Replace, Second and Pronominally Detach relations. For instance, A_1 detaches A_2 and seconds B_2, which replaces A_2. One wants A_1 to arc antecede B_2. But it should also arc antecede B_3, which does not replace A_2 and is not seconded by A_1, but by A_2, which detaches A_3, which B_3 replaces, etc.. So the need is for a definition determining not only that A_1 arc antecedes B_2, but also B_3 and B_4. The only limit on how many arcs a single arc can arc antecede will be the maximum number of sets of initial overlapping arcs. And over the class of metagraphs, nothing suggests any finite limit on such sets. A kind of recursion should therefore be built into the definition. In present terms, this means appeal to an ancestral, specifically, *R-Pronominally Detach*. For while in (1.46), A_1 only pronominally detaches A_2, which it then R-pronominally detaches, it R-pronominally detaches A_3 and A_4 as well.

I propose then:

(1.48) **Definition: *Primitively Arc Antecede***

A *primitively arc antecedes* C if and only if there is a B which A R-pronominally detaches and C replaces B.

This definition captures, I believe, the core aspect of arc antecedence. However, it is still not adequate as a reconstruction of the underlying idea.

To see that, observe for instance that a structure like (1.46) might be a subpart of one in which e.g. the DP <u>Joan</u> is extracted, e.g. topicalized, or raised. Or it might be a subpart of one in which the rightmost <u>she</u> is. In these cases, in present terms, A_1 or B_4 would have a successor_I. And one would want the former case to be such that the successor_I of A_1 also arc anteceded what A_1 does, and similarly, that any successor_I of B_4 be arc anteceded by anything B_4 is arc anteceded by. There are I believe also instances where arc antecedence must hold between some arc and a replacer of an arc which it primitively arc antecedes. Space precludes going into details.

But to cover all such cases, one can propose:

(1.49) **Definition: *Arc Antecede***

A *arc antecedes* B if and only if there are C, D such that C primitively arc antecedes D and R-sponsor (C, A) and R-sponsor (D, B).

It might be correct to limit arc antecedence to pairs where the arc anteceded arc is a Nominal arc, one whose heads define nominal expressions; see Chapter 2, section 9. But I will not pursue this refinement.

Since R-sponsor, like all ancestrals, is reflexive, it trivially follows that pairs in *Primitively Arc Antecede* are also linked by *Arc Antecede*. Returning to (1.42) then, since C replaces B, A seconds C and pronominally detaches B, A primitively arc antecedes C and arc antecedes it. Hence arguably there is no need for a relation like coreference, nor, except for expository purposes, the indices commonly appealed to notationally to link antecedent and pronoun.

There is then for related reasons no motivation to associate any meaning at all with the reflexive form. For the semantics of such cases is rightly characterized by saying that the same entity, here the semantic structure of Sandra, is the semantic structure of both the subject and object of the verb. Put differently, the meaning of (1.41a) just expresses in one structure the two different semantic functions which that form plays in e.g. in (1.50a, b):

(1.50)a. Sandra praised Mike.

b. Mike praised Sandra.

The relation between Sandra and herself in (1.41a) is then purely grammatical and, reduces to arc antecedence.

To facilitate discussion, one can add to the relational terminology so far a term picking out those arcs which stand in the second argument of Arc Antecede:

(1.51) **Definition: *Pronominal Arc***

B is a *pronominal arc* if and only if there is some A which arc antecedes B.

This makes C in (1.42) and B_2, B_3 and B_4 in (1.47) pronominal arcs. [17] While this seems correct, it does not provide any reconstruction of the difference between nonreflexive pronominal arcs like those in (1.47) and reflexive ones like that in (1.42).

The arc antecedence cases considered so far all have a characteristic property. For each pronominal arc, both its seconder and the arc the latter pronominally detaches are initial arcs. I take this circumstance to define a further idea:

(1.52) **Definition: *Inherent Replace***

B *inherent replaces* A if and only if B replaces A, and both B and A's seconder are initial arcs.
So in e.g. (1.47) all of B_1, B_2, B_3 inherently replace the pronominally detached arcs they replace. Given (1.44), all instances of Inherent Replace must involve overlapping initial arcs. But not all pronominal anaphora involves inherent replacers.

To illustrate, consider a distinct type of reflexive found in e.g. (1.53a-d), whose distinctness from the earlier considered standard type is supported by the lack of analogs to (1.50) seen in (1.53e-h): [18]

(1.53)a. Mike behaved himself.

b. Mike conducted himself poorly.

c. Mike exerted himself.

d. Mike perjured himself.

e. *Mike behaved Louise.

f. *Mike conducted Louise poorly.

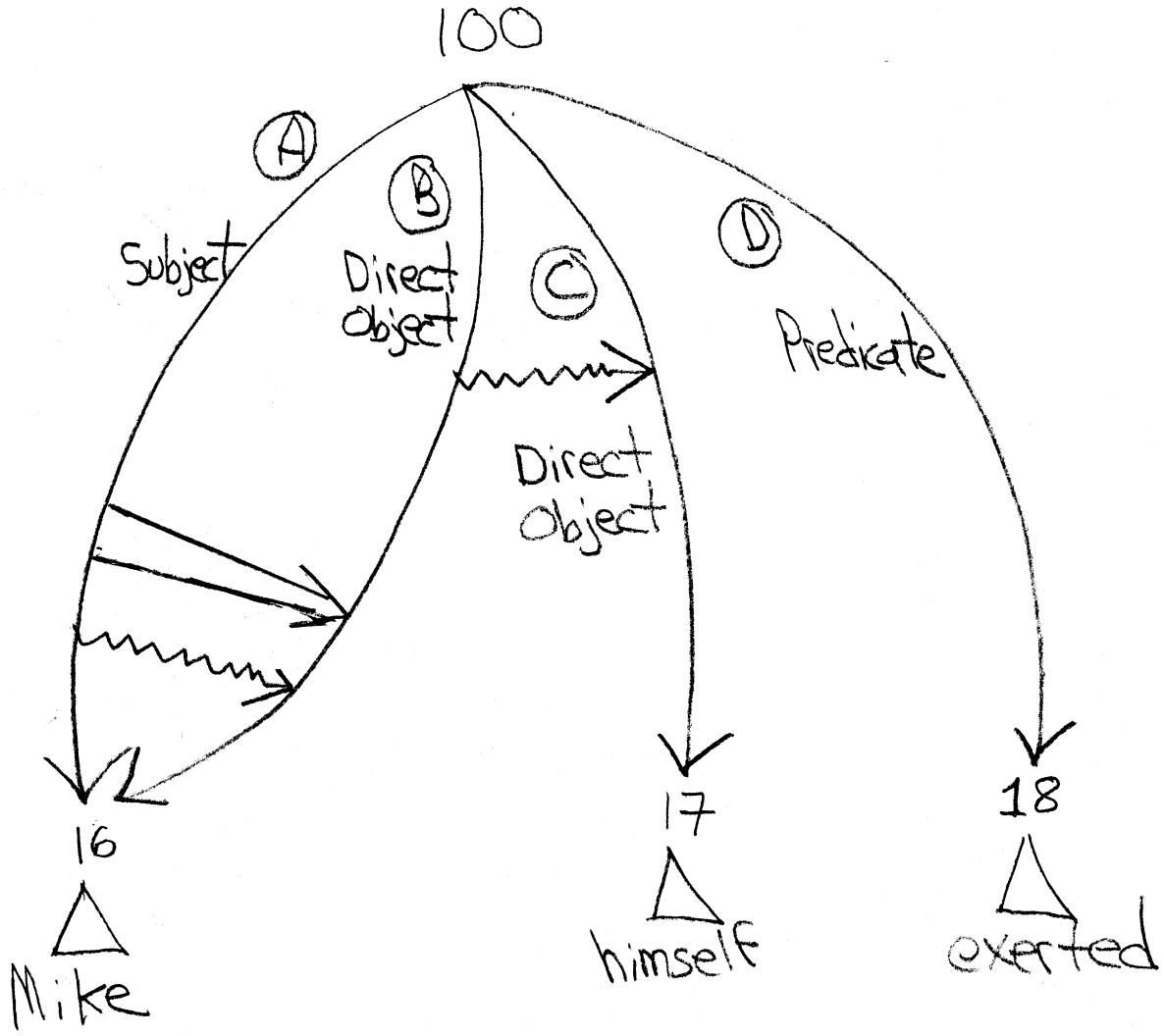
g. *Mike exerted Louise.

h. *Mike perjured Louise.

In so-called *inherent reflexive* cases like (1.53a-d), there is no reason to believe that the reflexive marks the existence of a replaced arc which represents some semantic property. [19]

All these verbs seem from the point of view of their *semantics* to take only a subject argument, which is why suppressing the reflexive from (1.53a) yields no discernable semantic difference. [20] The difference between the standard and inherent reflexive structures is captured by assigning e.g. instance (1.53c) the inherent reflexive type metagraph fragment (1.54): [21]

(1.54)


100
A
Subject
B
Direct Object
C
Direct Object
D
Predicate
16
Mike
17
himself
18
exerted

Representation (1.54) for (1.53c) posits a structure largely but not entirely identical to that underlying the reflexive in (1.41). The difference is that whereas in the structure of the latter, the two nonreplacer arcs involved in the triple of Replace/Seconds/Pronominally Detach pairs are both unsponsored arcs, in (1.54) the nonreplacers in such a triple fom a predecessor$_{II}$/successor$_{II}$ pair. Just as in (1.42), the account of S-graphs guarantees though that the replaced arc cannot be part of the S-graph, yielding a superficial structure parallel to that for (1.41a), despite the distinct roles of the unreplaced object arc. The definitions given determine that in this case, as in (1.42), the reflexive arc is arc anteceded by the subject arc. Structure (1.54) is not only the first case cited of an arc antecedence relation *not* based on Inherent Replace, it is also the first example of a successor$_{II}$.

Arc B in (1.54) is an instance of what I will call an *anticopy* pronominal arc, an arc type which exists in the following network of related concepts:

(1.55) **Definition: *Copy (Pronominal) Arc/Copies***

A is a *copy (pronominal) arc* and B is *copied* if and only if A is a pronominal arc, there is an arc C such that B is a predecessor$_{I}$ of C, A replaces B and C seconds A.

(1.56) **Definition: *Anticopy (Pronominal) Arc/Anticopies***

A is an *anticopy (pronominal) arc* and C is *anticopied* if and only if A is a pronominal arc, there is an arc B such that B is a successor$_{I}$ of C, A replaces B and C seconds A.

(1.57) **Definition: *Resmptive (Pronominal) Arc/Resume***

A is a *resumptive (pronominal) arc* and *resumes* B if and only if A is a copy arc or an anticopy arc and A replaces B.

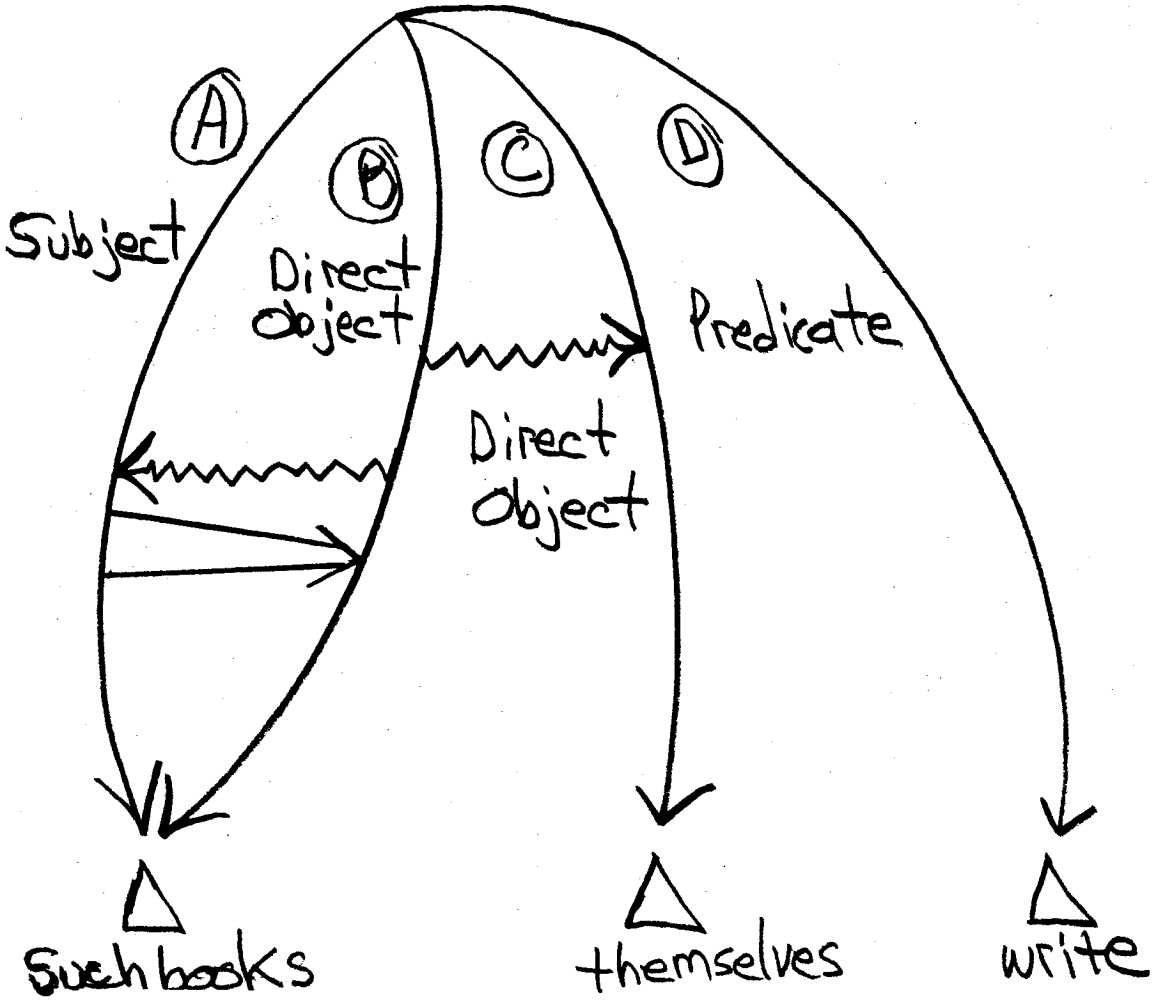
Evidently, copy arcs and anticopy arcs are 'opposites' in the following sense. The former is a replacer of a predecessor$_{I}$, seconded by the successor$_{I}$ of that predecessor. The latter is a replacer of a successor$_{II}$, seconded by its predecessor$_{II}$. A resumptive arc is simply one or the other of these types.

I have yet to exemplify the notion Copy arc. The locally sponsored variety of such is illustrated by a plausible structure for the reflexive variant of English middles (see Chapter 4, section 7) like:

(1.58) Such books write themselves.

This would have a partial structure like (1.59):

(1.59)


A
B
C
D
Subject
Direct object
Predicate
Direct object
Such books
themselves
write

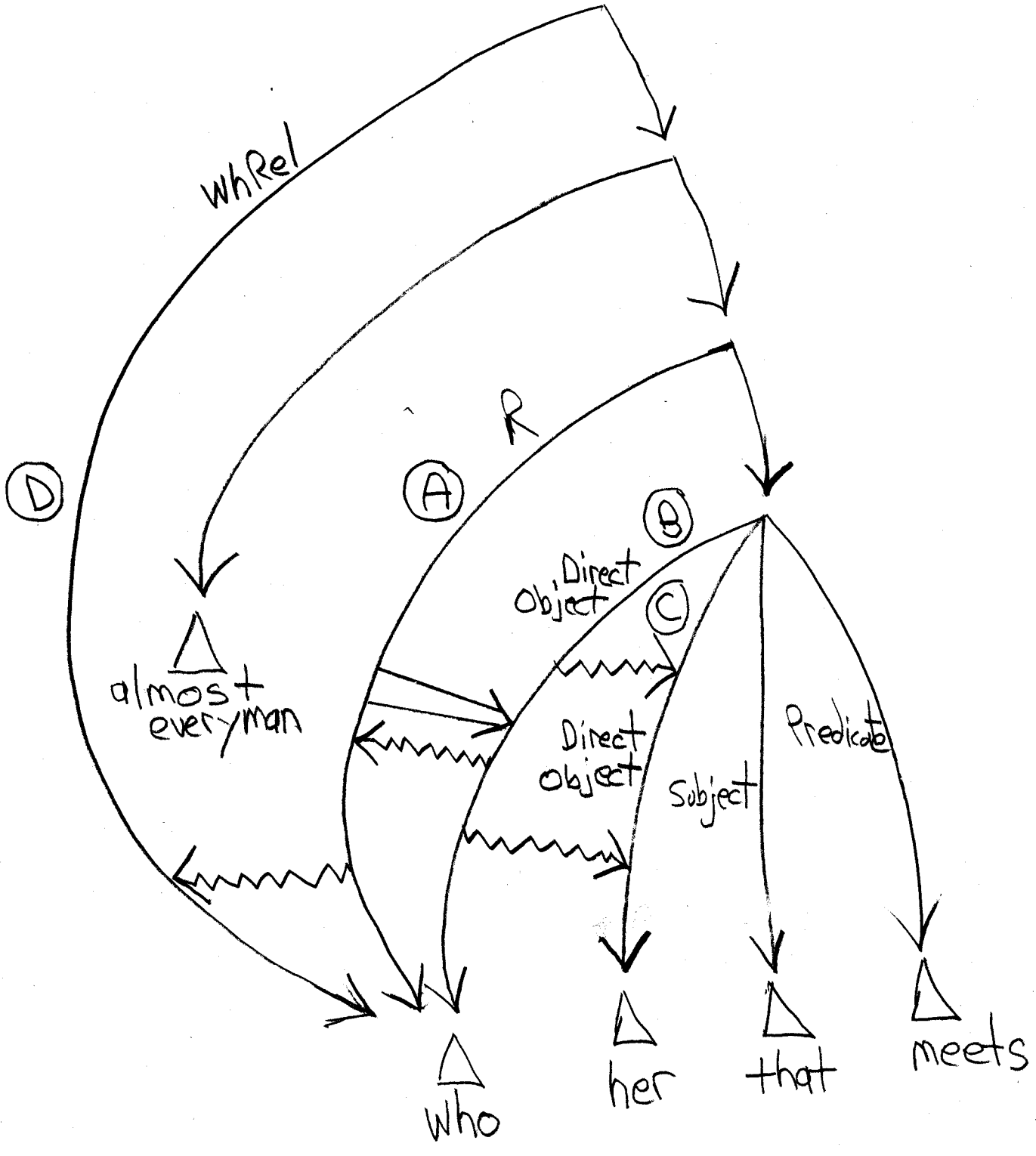
Here C is a copy arc seconded by the local successor$_{I}$ A. The key difference between the anticopy arc structure in (1.54) and the copy arc structure in (1.59) is that the former involves an initial subject arc with a direct object arc local successor$_{II}$, whose replacer is an anticopy arc. The latter involves an initial object arc with a subject arc local successor$_{I}$, which seconds the copy arc replacer of its predecessor.

There are also instances of nonreflexive copy arcs, e.g. that headed by the highlighted form in the substandard restrictive relative clause extraction in:

(1.60) Carla is a woman$_{x}$ [who$_{x}$ almost every man$_{y}$ that$_{y}$ meets *her*$_{y}$ falls in love with].

The (extremely) partial structure of the bracketed relative clause in this would be along the lines of:

(161)


whRel
D
A
R
B
C
Direct object
Direct object
Subject
Predicate
almost every-man
who
her
that
meets

Here on the reading where who antecedes her, the latter form heads a direct object copy arc. This replaces a direct object arc headed by who, which is erased by some foreign successor$_{I}$, the seconder of the copy arc.

So there are both reflexive and nonreflexive types of pronominal arcs of both the inherent type and the resumptive type. I have however, offered no account of the difference between reflexive and nonreflexive cases. I hypothesize that this distinction is reconstructable as in:

(1.62) **Definition:** ***Reflexive (Pronominal) Arc***

B is a *reflexive* (*pronominal*) *arc* if and only if B is a pronominal arc and there is a neighbor of B, A which arc antecedes B.

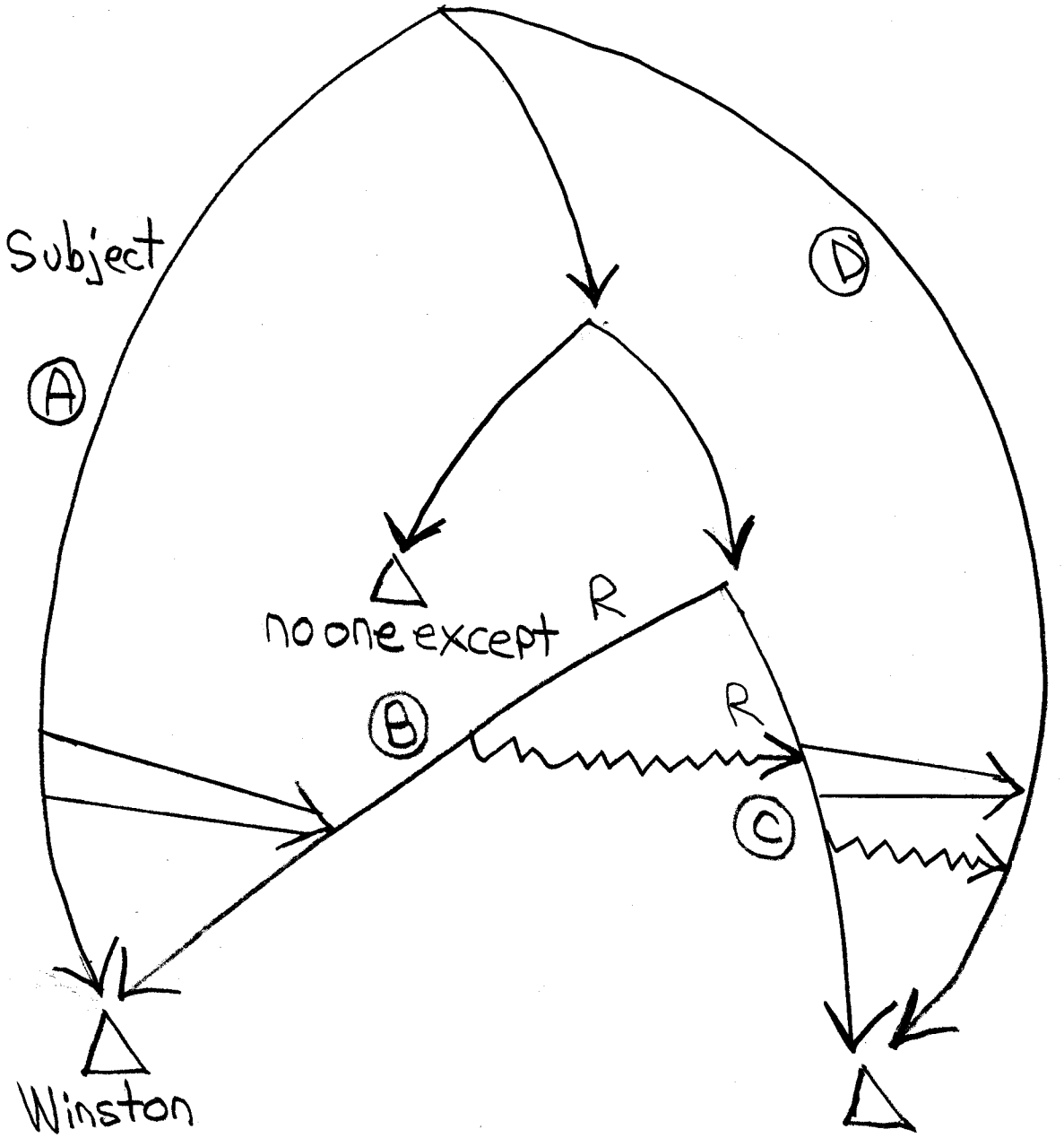
So, in (1.42), C is a pronominal arc arc anteceded by A. And, since A and C are neighbors, C is, moreover, a reflexive pronominal arc. Similarly for C in (1.54) and C in (1.59). But none of B_1, B_2, B_3 or B_4 in (1.60) are *reflexive* pronominal arcs.

A view of reflexives based on a locality idea like that in (1.62) might seem to have no application to *long distance reflexives* such as the little discussed type of English case (1.63):

(1.63) Winston argued that no one except himself could do that.

Such cases, treated in detail in Postal (2006), can, however, be reduced to consistency with an analysis based on (1.62) via the device of foreign successor$_{II}$s and their R-successors, as partially indicated in the oversimplified structure of (1.63) in (1.64):

(1.64)


Subject
A
D
no one except
R
B
R
C
Winston

Here A seconds C, which would not render C a reflexive arc via the claim in the text. But arc D, a foreign successor$_{II}$ of C, is a neighbor of A and arc anteceded by it, which characterizes this structure as one of reflexivization according to (1.51a, b). See Postal (1992a: 318-319) for a bit more discussion. But in general, under this view, long distance reflexives arise from pronominal arcs which, via heading foreign successor$_{II}$s, are neighbors of an arc antecedent. Note that nothing in the account says that the key neighbor relation has to hold between the underlying seconder/pronominal arc pair, in fact not the case in (1.64).

A further problem for the suggested account of the concept reflexive is raised by so-called *split antecedents*, as in (1.65):

(1.65) Frank wrote to Irene a propos of scurrilous stories about themselves.

But maintaining consistency with such cases is possible by relating them to those like:

(1.66) Frank wrote to Irene a propos of scurrilous stories about himself and herself.

Such examples would seemingly need to involve *dual* long distance reflexive structures like that in (1.63). The problem then would not be about reflexivization, *but about mappings of conjoined singular reflexive DPs into single element reflexive plurals*. The same problem is visible in (1.67) on the reading where *him* links to *Frank* and *her* to *Irene*:

(1.67) Frank's father wrote to Irene's mother a propos of scurrilous stories about him and her/them.

But that topic is outside the scope of the current work.

No account of pronominal anaphora can be adequate without an account of control, as in:

(1.68) Nancy wants to visit Venus.

Here there appears to be an antecedence relation between the form *Nancy* and the subject of the complement, although the latter is covert. I assume such cases involve an erased complement subject pronominal arc. But control structures are complicated and relate directly to a core concern of this study, Visser's Generalization. So control is considered in the context of an analysis of that in Chapter 8.

Further concepts related to those introduced so far are relevant to subsequent issues. First:

(1.69) **Definition: *Domestic Arc***

A is a domestic arc if and only if any sponor of A is a neighbor of A.

In other terms, domestic arcs are all those which are either unsponsored (initial arcs) or which have local sponsors.

(1.70) **Definition: *Output Arc***

A is an output arc if and only if A is a domestic arc and has no local eraser.

This takes an output arc to be one which either has no eraser or has one external to the constituent defined by that arc's tail node. In terms of this, one can specify:

(1.71) **Definition: *Final* Arc**

A is a *final arc* if and only if A is an output arc and is not replaced.

To illustrate these ideas and gain a hint of their motivation, focus first on (1.61). Here both <u>who</u> and <u>her</u> head direct object arcs, with the latter one a copy arc which replaces the former. This is an instance of the situation where an arc with a foreign successor$_1$ has a copy arc replacer. Such structures are characteristic of raisings or extractions which involve resumptive pronouns. Case (1.61) represents an extraction case. According to the definitions, both <u>who</u> and <u>her</u> head output direct object arcs since neither has a foreign sponsor nor a *local* eraser. The one headed by <u>her</u> has no eraser at all and the one headed by <u>who</u> is erased by a foreign successor$_1$ representing its extraction. But only <u>her</u> heads a final arc, since the direct object arc headed by <u>who</u> is replaced by the one headed by <u>her</u>.

A raising instance of a foreign successor copy arc structure is seen in the resumptive raising from finite clause case (1.72a) discussed briefly in Postal (2004: Chapter 3). This contrasts with the nonresumptive raising in (1.72b):

(1.72)a. There seems like *there* is a riot going on.

b. There seems to be a riot going on.

In (1.72a), the the leftmost <u>There</u> heads a subject arc in the complement, which is replaced by the resumptive subject copy arc headed by the second <u>there</u>. While both subject arcs headed by the two <u>there</u> are output arcs, under the analysis of expletives developed in Chapter 6, only the subject arc corresponding to the rightmost <u>there</u> is final, since the one which is a foreign predecessor$_I$ is replaced by it.

A notable feature of the present reconstruction of the notion Final arc is that unlike earlier relational specifications of the idea, it makes no appeal to coordinates, which as stressed earlier do not exist in the current account of metagraph.

Turn next to:

(1.73) **Definition:** ***Quasiinitial Arc***

A is a *quasiinitial arc* if and only if there is an initial arc B such that A R-inherent replaces B.

This concept defines the class containing exactly all initial arcs and all inherent replacers of such. This class itself does not seem to be of direct descriptive relevance, but it serves as basis for:

(1.74) **Definition:** ***Viable Arc***

A is a *viable arc* if and only if A is a quasiinitial arc and any B which A locally sponsors is not quasiiniital.

The concept Viable Arc is needed in a relational system which recognizes the role played by initial arcs in RG work but also represents inherent anaphora with overlapping initial arcs. The class of viable arcs is the union of the class of initial arcs which are not inherently replaced with the class of inherent replacers of initial arcs. Where an RG work might then say some grammatical phenomenon in some NL holds only of e.g. initial direct object arcs, say the nominalizing of certain DPs, the present system would say that only the heads of viable direct objects can nominalize in that way. The difference is forced by the fact that RG work did not recognize overlapping initial arcs as the basis for inherent anaphora and took many pronominal arcs to thus be initial.

Finally, I introduce:

(1.75) **Definition:** ***Indigenous Arc***

A is an *indigenous arc* if and only if there is a viable arc of which A is an R-local successor.

This concept thus denotes the union of all viable arcs with all of their local successors.

Notes to Chapter 1

1 The defining literature of this barrel includes Chomsky (1955 [1975]), 1957, 1959, 1962, 1963, 1965, 1966, 1970, 1971, 1972a, b, c, d, 1973, 1975, 1976, 1977a, 1977b, 1979, 1980a, b, 1981a, b, c, 1982a, b, 1986a, b, 1988a, 1993, 1995a, b, 1999, 2000a, b, 2001, 2002).

2 The development of RG in the 1970s was hindered by a lack of understanding (in particular, on my part) of possibilities which graph-theoretic ideas offer for providing precise foundations. Much of the vagueness and obscurity of early RG discussion could have been avoided by explicit appeal to the notion of multigraph; see below.

3 James D. McCawley frequently commented on the relation between an (over)emphasis on strings and isolation from graph-theoretic ideas, e.g.:

(i) McCawley (1982: 118, note 36)

"I conjecture that the reason why Chomsky finds unordered underlying structures such a departure from the standard theory is that he subscribes to the position that strings rather than trees are basic in syntax and wishes to reduce trees to classes of strings and operations on trees to operations on classes of strings."

See also Sampson (1979: 368).

4 For instance, books written to familiarize linguists with fundamental mathematical concepts relevant to Barrel (A), e.g. Partee (1978) and Partee, ter Meulen and Wall (1993), do not even mention graph theory, and hardly touch on the notion graph.

5 One graph property concerns the number of edges having heads with a fixed node *n*, and the number having tails with a fixed node *m*. This is usually called *degree*. For directed edges, one speaks of *in-degree* and *out-degree*; a node with two daughters has an out-degree 2, a node with two mothers (see below) has an in-degree 2. In any L-tree, the in-degree of any node except the root is 1, whose in-degree is 0. In the L-trees of early Barrel (A) work, there was no fixed out-degree. More recent work often claims that the maximum out-degree is 2 (the *binary branching* view; e.g. Kayne, 1994). In present terms, the in-degree of an edge is the number of edges of which it is a branch, while its out-degree counts its branches.

6 This usage of 'head' shares *nothing* the use of that term in phrase structure linguistics to refer to the status of particular kinds of 'central' constituents, e.g. where Ns are heads of NPs, etc..

7 The Wikipedia glossary of graph theory at http://www.answers.com/topic/acyclic-graph states:

"One major problem that has plagued graph theory since its inception is the lack of consistency in terminology."

Relevantly, My use of the term 'Multigraph' differs *slightly* from uses I have seen in graph-theoretic literature. The extant definitions distinguish such from simple graphs by noting first the existence of primitive edges, not present in the basis for graph definition, and one or more functions associating each edge with an ordered pair of nodes. Formally, one can characterize a multigraph in terms relevant for this work as a set M = {V, E, F_1, F_2} where V is a nonempty set V of nodes, a nonempty set E of directed edges/arcs, V and E distinct, and two functions F_1 and F_2 from E to V. F_1, called here the head node function associates each E with a unique member of V called the head of E, while F_2, called the tail node function, associates each E with a unique member of V called the tail node of E. Equivalently, instead of F_1, F_2, one could recognize only a single function relating E and V, the *Incidence Function*, mentioned in the text. This formulation builds into the notion of multigraph the fundamental difference between graph and digraph, the latter a graph whose edges involve an ordered pair of nodes, not just a pair. The term *Multidigraph* would thus be appropriate, but I avoid this neologism.

While primitive edges make possible distinct parallel edges and the present work makes extensive and crucial appeal to graphs with this feature, I deviate trivially by speaking of multigraphs for structures based on primitive edges but which may contain no parallel edges.

8 One might develop a different account of EEL-trees and their further development below by eliminating the set Nodes and the functions assigning members of Nodes to edges. Required would be taking Overlap, Neighbor, Branch as primitive relations between Edges and then ultimately giving a complex definition of a notion 'node'. But the present account accepts the relatively standard framework of multigraphs, based on both primitive nodes and edges.

9 Zwicky (1985) required node labels in L-trees to be atomic. Work in Generalized Phrase Structure Grammar and Head Driven Phrase Structure Grammar depends totally on complex labels; see e.g. Gazdar, Klein, Pullum and Sag (1985), Pollard and Sag (1994). The notion of complex labels, defined in terms of so called *features* on the analogy of earlier feature work in phonology, was introduced into syntactic theorizing in Chomsky (1965) and universally accepted in Barrel (A) work.

10 The single mother condition is one of the formal foundations of Barrel (A) syntactic thinking. Remarkably though, Barrel (A) work offers hardly any justificatory discussion of it or of the possibility of rejecting it. But see Morin and O'Malley (1969), Anderson (1979), Saito (1976) and Sampson (1975) for the latter.

11 Sentences like (1.17) formed one basis of the overall argument set of Postal (1974) for the existence of raising to object in English; see particularly (1974: 412-416). In the Barrel (A) literature *rejecting* a

raising to object analysis in favor of that suggested in Chomsky (1973, 1981a), this argument was just ignored; see Postal (2004: 110-111).

While Postal (1974) gave the argument based on particle word order interactions with infinitives with verbs like those in (1.17), the good cases cited all involved expletive it. Postal (1974: 416) even cited (i) as *ungrammatical*:

(i) *I figured there out to be no money in that safe deposit box.

Today I disagree with the earlier judgment and perhaps have a slightly different NL than I did in the early 1970s.

12 Johnson and Postal (1980) allowed some arcs to have two sponsors, a conceptually complicating and, as it turns out, useless assumption.

13 Johnson and Postal (1980) allowed both reflexive sponsorship and erasure, wrongly I think in both cases.

14 Johnson and Postal's (1980: 127) No Infanticide Law took this state of affairs in effect to be impossible. No factual basis was offered and the principle was rejected in Postal (1992a: 320, note 6). There what are successor_{II}s in present terminology were called *phantom* successors, a terminology not utilized here. Successor_{II}s are extensively exploited in the present work.

15 Restricting the class of metagraphs to those having real NL instantiations must involve limiting the types of overlapping arcs. I know of only two situations where taking a pair of arcs A, B to overlap is motivated. One is that where both are initial (unsponsored), the other that where one is a successor of the other. Logically, there are other possibilities; e.g. one arc A which does not overlap B, could sponsor a distinct C, which does overlap B. I suggest that this is impossible:

(i) **The Overlapping Arc Condition**

If A and B do not overlap and A sponsors B which overlaps C, C is an R-successor of B.

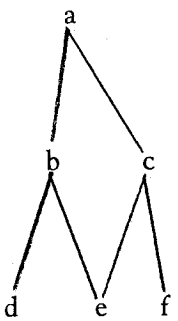
16 The fundamental idea in (1.42) was entirely explicit in Morin and O'Malley (1969: 182), to me, one of the truly important papers in the history of linguistics, and surely the most important to have been unjustifiably *nearly totally ignored*. While citing the key passage in Morin and O'Malley (1969) relevant to current concerns, Johnson and Postal (1980: 480 did not sufficiently indicate how deeply indebted our 1980 views on anaphora were to their ideas. To remedy that lack, I requote the passage:

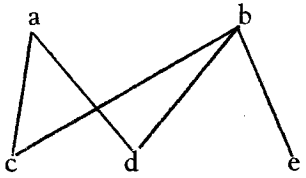
(i) Morin and O'Malley (1969: 182)

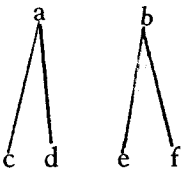
> "Deleting axioms A2 and A3 generalizes the definition of a tree so as to permit more than one node to dominate a single node. Such a structure is a type of directed graph without cycles and

will be called a vine. A vine is a set of nodes N with relations H and L such that L is a total order and H is a partial order. The following are three examples of vines:

(19)


a
b
c
d
e
f


a
b
c
d
e


a
b
c
d
e
f

Vines offer certain economics in the representation of linguistic structures. In order to indicate multiple relationships such as being the subject or object of different verbs, it is necessary for a word or variable to appear on more than one node of a tree. Vines, however, can express multiple relationships by having many different nodes dominate a single word or variable. Vines may thus be used to eliminate multiple occurrences of a node within a tree. Conversely, variables may be used to represent vines as disconnected trees. The use of trees in semantic representation, rather than elements from some other class of formal objects may well have been an historical accident. There is probably no theoretical reason to prefer trees with variables to vines; vines, however. are confusing and cannot always be drawn in two dimensions without crossing lines."

The insights in Morin and O'Malley (1969) have to this day arguably hardly been exploited or investigated. The possibility of success in such a venture is greatly increased by adopting the multigraph framework of primitive edges distinct from nodes. Their approach evidently kept the formal (edge-free) node basis of trees constant and only eliminated (from the point of view of L-tree definitions) constraints on the allowable formal combinations of nodes in linguistic objects.

17 As is, this definition of Pronominal Arc wrongly fails to cover expletive cases which, under the treatments in Johnson and Postal (1980) and those below in Chapters 4-6 do not involve Replace at all. I will not attempt here to deal with this inadequacy.

18 As observed in Postal (1998: 126), reflexives like those in (1.53) also contrast syntactically with those like that in (1.41) in being unextractable. They are subject to neither clefting, topicalization, Right Node Raising nor Complex DP Shift:

(i)a. Herself, Sandra praised.

b. Sandra may have praised and probably did praise herself.

c. *Herself, Sandra conducted poorly.

d. *Sandra may have exerted and probably did exert herself.

Also none of the verbs permitting inherent reflexives has a corresponding nominalization containing such a reflexive.

(ii)a. *Mike's behavior of himself

b. *Mike's poor conducting of himself

c. *Mike's exertion of himself

d. *Paula's composition of herself

e. *Albert's availing of himself of the facilities

f. *this poem's lending of itself to translation

g. *Kim's concern of herself with syntax

Under the plausible assumption that DPs like those in the nominalization of PPs of (ii) head foreign successor arcs, it may be possible to generalize the extraction and nominalization facts. Arcs of the sort headed by inherent reflexives, e.g. C in (1.54), may be unable to have foreign successor$_{I}$s, or perhaps any successors at all.

19 The traditional nomenclature 'inherent reflexive' unfortunately combines with (1.52) to threaten confusion. For in present terms, inherent reflexives do not involve instances of Inherent Replace.

20 The description of cases like (1.53b) requires specifying which verbs permit (or require) successor$_{II}$s defining the inherent reflexive. Most verbs of course will not be among them.

Edge-Based Model-Theoretic Syntax

Chapter 2 Objects and Arrays

2.1 Objects

The English dictionary tradition assumes a binary subcategorization of verbs into the *transitive* and *intransitive*. So *Webster's New World Dictionary of the American Language* of 1968 says that the verb star occurs in both subcategories, referring, I believe, to usages like (2.1a, b), and also says that the verb claim is exclusively a transitive, subsuming usages like that in (2.1c):

(2.1)a. This movie stars Milla Jovovich as Alice. (at www.funtrivia.com/sampleqns.cfm?qid=117004).

b. Milla Jovovich starred in that movie.

c. Milla claimed the reward.

Traditionally, what renders a verbal usage transitive is the presence of an object nominal expression, e.g. Milla Jovovich in (2.1a), the reward in (2.1c). And objects which render a verb transitive are normally called *direct* objects, although traditional studies did not provide a viable theoretical reconstruction of this notion. Nonetheless, the idea permits saying that a form is a *transitive verb* only if it is a verb and occurs as head of a phrase immediately containing a (sister) direct object.

Beyond dictionary traditions, the transitive/intransitive distinction was also fundamental to traditional approaches to English syntax; see e.g. Curme (1931: 437-447), Jespersen (1924: 158) and to more modern exemplars of tradition such as Nida (1962: xi). Not surprisingly then, throughout the history of Barrel (A) linguistics also, a concept of *Direct Object*, applicable to English, and assumptively a feature of universal grammar has been recognized. So, uncontroversially, the DP my gerbil in (2.2) is universally taken as the direct object of insult and often of the containing VP and clause as well.

(2.2) Montague insulted my gerbil.

This doctrine was in effect made explicit by an enormously influential formal definition characterizing as a direct object any NP occurring in a phrase of the given form:

(2.3) Chomsky (1965: 71)

$[_{VP}$ Verb NP Y]

Modulo assumptions about the uniqueness of the symbols which could commute with 'VP' in (2.3), this definition renders any single object complement of a verb a direct object. [1]

Not only did Chomsky's (1965) formulation make explicit the assumptions in (2.4), it also rendered them maximally general theoretically by in effect taking the relevant conditions to hold for every NL. So while the definitions in Chomsky (1965: 71) mention English in particular, the following account envisages their universality:

(2.4) Chomsky (1966: 58)

> "We can go on to define grammatical relations (Subject-Verb, etc.) in terms of these and other notions and there are varirous ways in which one can attempt to formulate language-independent definitions for the central concepts."

But other NLs arguably render universalization of such claims bizarre from the outset. One indication of this is that the grammatical traditions of many NLs (including English, as considered later), e.g. French, German, Korean, Spanish, etc., recognize in addition to the direct object relation a distinct one called *Indirect Object*. However, while Chomsky's (1965) account defined the subject and direct object relations, it provided no theoretical reconstruction of any other object relation; see note 2. Concomitantly, no such concept has played an *official* role in Barrel (A) treatments of English or in the putatively universal generative linguistic frameworks which have emerged from it; nor has any theoretical explication of *other* object relations been offered. [2] Moreover, this state of affairs has never, to my knowledge, been buttressed with any justification for why grammatical theory should characterize a direct object but not an indirect object relation. The decision seems to have been arbitrary, surely facilitated by the subsequently illuminated fact that English direct and indirect objects are not *morphologically* distinguished, rendering their conflation all too easy.

One consequence of the view of object represented by (2.3) is that verbal single objects would be universally specified as direct objects and hence, in particular, never as indirect objects. Straightforward single object data from e.g. German, among multiple NLs which might be cited, show the disconnect between the Barrel (A) idea that only direct object is a theoretically worthy idea (hence that all single objects are direct objects) and linguistic reality. Consider (2.5):

(2.5) Curme (1922: 495)

a. Er beantwortete den Brief.
   'He answered the letter (ACC)'

b. Er antwortete mir..
   'He answered me (DAT)'

The object in (2.5a) has accusative case and permits a passive based on the auxiliary werden, while the object in (2.5b) is dative and does not permit a passive associated with that auxiliary, although it might, at least marginally, permit for some speakers one linked to other auxiliaries, e.g. bekommen or kriegen, (Müller, 1995: 242) which is notably impossible for passives of the object of (2.5a). Given the case and passivization facts, the single objects in (2.5a, b) should not *both* be treated as direct objects, a status clearly only manifested by that in (2.5a). Since the behavior of the object of (2.5b) is in relevant respects parallel to the dative object of a double object construction like (2.6), while the behavior of the object of (2.5a) much more closely parallels that of the accusative object of (2.6), German grammarians of course take (2.5b) to involve an indirect not a direct object.

(2.6) Müller (1995: 197)

dass der Fritz dem Vermieter einen Brief geschickt hat

'that Fritz the landlord a letter sent'

So, while the morphology makes it at least appear possible to ignore the synactic reality of indirect objects in *English*, a reality argued for below, in Basque, French, German, Georgian, etc., this is essentially impossible.

And yet the conflict between the assumptions of Chomsky (1965) and his later work and the undeniable crosslinguistic relevance of the notion indirect object seems to have engendered little or no negative reaction.

2.2 Diverse Types of English Object

I maintain that ideas linked to (2.3) must be replaced by the view that English single verbal objects are of at least *three* distinct relational types, only one of which is direct object. One of the others incompatible with the claim implicit in (2.3) represents roughly the traditional indirect object relation, that taken in pregenerative studies of English to be instantiated *most clearly* (but by no means exclusively) in double object constructions. This monograph suggests that the failure to recognize (several) non-subject relations including indirect object distinct from direct object is a basic (indeed lethal) impediment to understanding English clausal syntax. A range of seeming anomalies and mysteries are such in Barrel (A) terms largely because (i) Barrel (A) work on English lacks (inter alia) any viable theoretical notion of indirect object and (ii) has no notion of a third object type. These lacunae have persistently led to misanalyses or nonanalyses in the face of indirect objects and their properties.

The issues show up clearly in *double object (ditransitive)* constructions, like (2.7) and (2.8), where traditional grammar refers to the first object in each as an indirect object; see e.g. Curme (1931: 96), Jespersen (1924: 162; 1927 [1961: 301]; 1937 [1969: 21] and Sweet (1891: 51).

(2.7) Helen sold Claudia an apartment.

(2.8) Helen bought Claudia an apartment.

The Barrel (A) literature on such cases reveals a remarkable diversity of views and lack of any consensus analysis. The numerous partially distinct proposals about English ditransitive constructions in such terms include those in (2.9):

(2.9) Generative Works Proposing Aspects of Analyses of English Double Object Constructions

Allen (1995), Allerton (1978), Anderson (1988), Aoun and Li (1993), Baker (1988, 1996, 1997a, b, 2001), Barss and Lasnik (1986), Boeckx (1998), Bowers (1993), Bruening (2001), Chomsky. (1977a, 1980b, 1981a), Culicover (1997), Culicover and Wexler (1973), Czepluch (1982), Den Dikken (1995) Dowty (1978, 1979), Emonds, (1970, 1972a, 1972b, 1976, 1993), Faltz (1978), Fillmore (1965), Fraser (1964, 1965), Green (1974), Hale and Keyser (2002), Hust and Brame (1976), Iwakura. (1987), Jackendoff (1990, 1997), Jackendoff and Culicover (1971), Johnson (1991), Kayne. (1984a,b, 1994), Keyser and Roeper (1992), Kitagawa (1994), Kuroda (1968), Larson (1988, 1990, 1991), Lasnik (1999), Lees (1963, 1964), Marantz. (1984, 1993), Müller (1995), Oehrle (1976, 1983a, 1983b), Ouhalla (1994), Pesetsky (1995), Roberts. (1987), Stowell (1981), Stroik (1997), Ura (2000), Wasow (1977, 1981), Whitney (1983, 1984), Woolford (1985), Ziv, and Sheintuch (1979).

These generative works treating such constructions, more than sixty in number, probably contain almost sixty distinct proposals. Moreover, the list dates to 2000 and was basically not updated. That would have revealed still more proposals. A very detailed critical analysis of this and related Barrel (A) literature on double object constructions is found in Emonds and Whitney (2006). Despite this bonanza of positions, obvious basic features of such structures seem to remain unexplicated.

Among these are passive facts; see Chapters 4-7 for detailed discussion. It was no secret to traditional grammarians that for double object verbs, *either object* could sometimes be passivized. So e.g.:

(2.10) Jespersen (1927 [1961: 301])

> "Let us first consider those verbs which have an indirect besides the direct object. Here two constsructions are possible according as one or the other object is made into the subject."

He cited literary British cases:

(2.11)a. Austen: the horses which were left her by her husband

b. Bronte: I have now told monsieur all that was told me

c. Walpole: Had time been permitted him, he would have....Time was not allowed him.

Later, Fillmore (1965) noted that cases like (2.7) systematically permit the directly postverbal DP to passivize while in his English (also mine and that of Emonds, 1973: 83) cases like (2.8) systematically do *not*. But such facts seem to have no standard account and are often *unmentioned*. Similarly, the fact that for many speakers (also including Fillmore himself and the present author) the *external or second* DP of (2.7) can passivize but that of (2.8) cannot, not only receives no serious account in much current work, but is often denied.

Amazingly (see Postal, 2004: 240-243), one reads repeatedly, as if traditional work, Fillmore (1965), etc. had never existed, that second object passivization is just *impossible* for double object structures in American English; see Boeckx, 1998, 451-2, Bresnan (1982a: 25-29; 2001: 316), Lasnik (1999: 198), Ouhalla (1994: 175), Pesetsky (1995: 124), Riemsdijk and Williams (1986: 117), Runner (1998: 155), and Ura, 2000, 244-248). This holds although the traditional literature and the post-1965 generative literature is rich in citations of grammatical second object passives; see Chapter 7. Even more amazingly, as observed in Postal (2004: 240-241), although Chomsky's various Barrel (A) transformational accounts for decades basically *precluded* the possibility of passives of second objects, he had himself noted their existence, citing both (2.12a, b):

(2.12) Chomsky (1955 [1975a: 493])

a. He was given several books by the teacher.

b. Several books were given him by the teacher.

Similarly, in a then well-known work applying Chomsky's ideas, Lees (1963: 10, 25, note 14) cited:

(2.13)a. He told her the story.

b. The story was told her by him.

c. She was told the story by him.

d. A car is given her by him.

e. She is given a car by him.

Despite this history, it has even been relatively recently claimed that a theory can be supported by showing that it explains *why* second objects never passivize; see Stroik (1997: 69), Bresnan (2001: 316) and Den Dikken (1995: 134). I leave it to others to illuminate why a range of modern theoretically oriented grammatical discussion takes seriously the idea that grammatical and long well-attested American English sentences are to be treated not only as uniformly ungrammatical but as manifesting that status for deeply principled reasons.

Clearly though, a serious account of English syntax in the broadest sense must be able to provide a characterization of the passivization of ditransitive second objects as well as mechanisms saying this is not possible in some varieties; since this seems motivated by other NLs as well, it is arguably a feature which any putatively universal grammatical theory must explicate.

Another fact about English double object constructions for which I know of no existent account is that even when passives of both the first and second object of ditransitives *are* grammatical, neither has a presentational <u>there</u> variant or a so-called *locative inversion* one. No ditransitive object permits either of these variant passive types, although both are systematically possible with standard direct object passives, as (2.14) and (2.15) illustrate.

(2.14) Lots of pictures were sent to the sailors.

(2.15)a. At that time there were sent to the sailors ~ lots of pictures.

b. At that time were sent to the sailors ~ lots of pictures.

(2.16) Lots of sailors were sent pictures.

(2.17) a. *At that time there were sent pictures ~ lots of sailors.

b. *At that time were sent pictures ~ lots of sailors.

(2.18) Lots of pictures were sent them.

(2.19) a. *At that time there were sent them ~ lots of pictures.

b. *At that time were sent them ~ lots of pictures.

As far as I am aware, cases like (2.17) are quite bad for everyone. Moreover, (2.19a, b) are quite deviant even for speakers like me who accept second object passives like (2.18) without problem. [3]

Parallel unaccounted for distinctions hold for *middle* formation, possible with ordinary direct object targets but for neither object of a ditransitive:

(2.20)a. Such pictures don't scan very easily.

b. Such pictures don't sell very often (to our sailors).

(2.21) *Our sailors don't sell such pictures very often (irrelevantly well-formed where <u>our sailors</u> is an agent, the structure thus not a middle clause)

(2.22) *Such pictures don't sell our sailors very often.

These data show rather clearly that while passives of both objects of ditransitives are grammatical for large subgroups of English speakers, the passive possibilities for such objects nonetheless differ significantly from those of uncontroversial direct objects.

Another sign of the inadequacy of past treatments of English ditransitive structures like those in (2.7) and (2.8) is that various clearly false claims about them seem to flourish. One is that there must be a *possession* relation between the first and second objects (Pinker, 1989, Den Dikken, 1995:127-128); this, though usually true, is certainly not an inevitable feature; see (2.23)-(2.30). Nor, most of these examples indicate, is it lawfully required, as occasionally claimed, that the first object be animate:

(2.23) That earned the bank enormous amounts of ill-will.

(2.24) Stan shot the TV set a suspicious glance.

(2.25) Stella gave the door a ferocious kick.

(2.26) Ernest played the computer a game of Monopoly.

(2.27) He never gave it a thought that Bolshies are human beings (Jespersen, 1937: 63)

(2.28) Herb gave it a try.

(2.29) The robot fed the machine bad data. (Larson, 1990: 619)

(2.30) It took the acid three hours to eat away the metal.

While observing that it is an old and widespread idea that the analogs of first objects must denote persons in multiple NLs, Herslund (1986: 129) stated: "But the idea is just as wrong and misleading as it is old and widespread." He gave Danish counterexamples.

While not universally true, it is common (Perlmutter and Postal, 1983: 92-94; Larson, 1988: 352-354; Marantz, 1993: 117; Ouhalla, 1994: 174-175) to claim that the immediately postverbal DPs in (2.7) and (2.8) are direct objects, like that in e.g. (2.1c). The present monograph challenges this idea and also argues that the highlighted postverbal DPs in various *single object* structures such as (2.31)-(2.35) likewise fail to be direct objects, contrary to definitions like that based on (2.3) and to widespread ideas such as that of Huddleston (2002a: 244, 251).

(2.31) The gorilla neared *the cash machine*.

(2.32) Most kids want *pizza*.

(2.33) That movie starred *Errol Flynn*.

(2.34) The solution was staring *Wanda* in the face.

(2.35) Claude served *Lucille* as an assistant.

I return to all of the facts just touched on in detail in following chapters. It is argued that recognition of several object relations including indirect object distinct from the universally recognized direct object relation permits regularization of a considerable body of behavior (including that cited above) of English double object constructions as well as certain others. The proposed analysis arguably has a universal basis, given notable parallels with other NLs. A fundamental underlying idea is the RG view that grammatical relations like those at issue cannot be defined in terms of phrase structure configurations or word order or cases or combinations of these, indeed cannot properly be defined in terms of *anything*, but rather are in effect primitives corresponding to the *labels* of *edges/arcs* in the sense of Sections 1.3-1.6.

2.3 Types of Single Object Structures

The first positive substantive claim of this work is that a proper analysis of English object constructions, specifically of ditransitive constructions, needs to be undertaken against a background recognition of *three* relationally distinct *single object* structures; call them *Arrays 0, 1 and 2*. Inter alia, this claim involves a forceful *rejection* of the view in (2.36a) and of the even more general (2.36b):

(2.36)a. Green (1974: 73, note 1)

"These factors, whatever they are, may be responsible for the fact that intransitive verbs have only prepositional indirect objects, and no prepositionless indirect objects."

b. Huddleston (2002a: 251)

"In canonical clauses containing just one object, that object is always a direct object, even if it corresponds semantically to the indirect object of a ditransitive clause."

While deviations from such a position do occasionally occur, as in (2.37), view (2.36b) is, I believe, the overwhelmingly dominant position, though it may often only be implicit. [4]

(2.37) Wasow (1977: 337)

"It is natural, therefore, to ask whether any verbs in English may be immediately followed by a single NP that is not the direct object. A plausible candidate would be *tell*, in constructions like (32b), since the object here clearly corresponds to the indirect object in double object constructions like (32a).

(32) a. I told John the story.

b. I told John." [5]

The factual basis of the rejection of view (2.36b) is that the claim groups together a number of distinct constructions which contrast sharply and systematically in grammatical behavior, as documented in the following three sections.

2.4 Array 0

Array 0 structures are illustrated in (2.38)-(2.41):

(2.38)a. Montague insulted my gerbil.

b. My gerbil was insulted by Montague.

(2.39)a. The conservatives crushed the opposition.

b. The opposition was crushed by the conservatives.

(2.40)a. Claudia consumed all the beer.

b. All the beer was consumed by Claudia.

(2.41)a. The explosion destroyed the house.

b. The house was destroyed by the explosion.

Array 0 *a.* examples evidently involve ordinary transitive structures, which regularly permit passive variants, as in the *b.* examples. The single objects in active Array 0 forms are classic instances of direct objects. Array 0 thus raises no unique problems and need not be lingered over.

2.5 Array 1

Were the claim above from Huddleston (2002a) correct, then *all* English single object structures would be of the Array 0 type. However, I maintain that this position is untenable. A large sample of what I take to be a contrasting set of forms, Array 1, is illustrated in. (2.42)-(2.65). [6] In each case, the *b* examples illustrate one solid generalization, namely, that Array 1 objects are not passivizable. [7]

So consider:

(2.42)a. The express train could not approach the station.

b. *The station could not be approached by the express train.

(2.43)a. A fish course began the dinner.

b. *The dinner was begun by a fish course.

(2.44)a. Karen's remarks betrayed contempt for linguists.

b. *Contempt for linguists was betrayed by Karen's remarks.

(2.45)a. The audience didn't buy my argument.

b. *My argument wasn't bought by the audience.

(2.46)a. Bertrand croaked something unintelligible.

b. *Something unintelligible was croaked by Bertrand.

(2.47)a. The express departed Grand Central at 11 AM.

b. *Grand Central was departed by the express at 11 AM.

(2.48)a. Most guys dig blondes.

b. *Blondes are dug by most guys.

(2.49)a. Deborah lacked a pleasing personality.

b. *A pleasing personality was lacked by Deborah.

(2.50)a. The key couldn't enter the lock.

b. *The lock couldn't be entered by the key.

(2.51)a. This theory fits the facts. (Freidin, 1975: 389)

b. *The facts are fit by this theory.

(2.52)a. Snakes don't give milk.

b. *Milk is not given by snakes.

(2.53)a. Horace heard that from Mildred.

b. *That was heard from Mildred by Horace.

(2.54)a. The cabinet includes the secretary of defense.

b. *The secretary of defense is included by the cabinet.

(2.55)a. Saddam inspired loathing.

b. *Loathing was inspired by Saddam.

(2.56)a. The affair involved foreign banks. (Freidin, 1975: 389)

b. *Foreign banks were involved by the affair.

(2.57)a. US95 will lead you to New Haven.

b. *You will be led to New Haven by US95.

(2.58)a. Ellen left Chicago in June.

b. *Chicago was left by Ellen in June.

(2.59)a. The Titanic neared the iceberg.

b. *The iceberg was neared by the Titanic. [8]

(2.60)a. The doctor possessed a large yacht.

b. *A large yacht was possessed by the doctor.

(2.61)a. Hugh quit the police department.

b. *The police department was quit by Hugh.

(2.62)a. The package never reached Gwen.

b. *Gwen was never reached by the package.

(2.63)a. The Eifel Tower resembles the Washington Monument. Wasow (1977: 334)

b. *The Washington Monument is resembled by the Eifel Tower.

(2.64)a. Carmen can't stand sushi.

b. *Sushi can't be stood by Carmen.

(2.65)a. Tom wanted pizza.

b. *Pizza was wanted by Tom.

Before discussing these data, clarification is needed Given the current feasibility of easy scans of massive amounts of written data via internet search engines, claims like those represented in such data sets should not necessarily be regarded as falsified by random search results giving examples of particular verbs occurring in the same patterns here starred. For illustration, consider (2.60b). This judgment is seemingly challenged by the citation at books.lulu.com/content/18352 of the example This guide will assist the reader in being better prepared when *neared by* a fraudster. Ignoring any doubts about the grammaticality of this for whatever (presumably British) speaker wrote it, it is not my English. Its final word is not even a part of my lexicon. Thus rather than showing that (2.60b) is incorrect; such a citation reveals only that for this verb and its syntax, there are contrasting variants of English and one can hardly doubt that parallel situations hold for many others.

This does not mean that studies like the present one are reduced to citations of mere personal idiosyncracies. Presumably, a large subset of the judgments here are shared by many (at least American) speakers. Moreover, as immediately becomes clear, the key claims involve correlations of (many) properties for specific words. This provides a way of testing what are random judgments, mistakes or partially contrasting idiolects. For example, if the judgment cited just above represents a distinct categorization of the verb near from that for my idiolect, that fact should reveal itself in judgments contrasting with mine for an array of properties (specified in what follows) other than passivization.

The large data set just listed is offered to show that Array 1 extends way beyond just a few 'marginal' verbs. While each *a.* example might seem to be of the same general transitive form as those in Array 0, and standard ideas suggest that such structures should also have verbal passive variants, the *b.* examples show the contrary. It would though be just as great a mistake to seek narrow, specifically *passive-linked* grounds for the ungrammaticality of (2.42b)-(2.65b) as to take them to be lexical idiosyncracies. For verbal passive failures are only one of many properties whereby Array 1 structures systematically contrast with passivizable Array 0 clauses. Other relevant properties include those of (2.66):

(2.66) Beyond verbal passivization blockages, Array 1 structures also:

a. have no corresponding *middles*

b. have no corresponding *nominalizations* in of [9]

c. have no corresponding nominalized *incorporation* forms

d. have no corresponding –able forms

e. have no corresponding *object raising* (with difficult, easy, etc.) forms

f. have no corresponding *object deletion* (with too/enough) forms

g. have no corresponding *nominal object raising* forms (*a strange woman to hire*)

h. have no corresponding *adjectival* passives [10]

Incidentally, hereafter, following the terminology in Postal (2004: 263), I will, when convenient, refer to the three constructions exemplified in (2.66e, f, g) jointly as *Q constructions*; in Postal (2004: 263) this class was also said to include parasitic gaps, which I mostly avoid in the present work for simplicity. Like verbal passivization, these characteristics reference fairly regular features of transitive structures with direct objects, that is properties of Array 0. I illustrate for case (2.39) in (2.39'):

(2.39')a. That kind of opposition doesn't crush easily.

b. the crushing of the opposition

c. insurrection crushing

d. ?The opposition was uncrushable.

e. The opposition was easy to crush.

f. The opposition was too strong for us to simply crush.

g. They were a hard group for the conservatives to crush.

h. The opposition remained uncrushed.

Space precludes documenting the claims in (2.66) fully, but (2.45')-(2.65') illustrate the sort of facts at issue for five corresponding Array 1 cases:

(2.45')a. *Such arguments don't buy easily.

b. *the/Clara's buying of such arguments

c. *argument buying

d. *That argument is unbuyable.

e. *That argument is difficult to buy.

f. *That argument is too weak for anyone to buy.

g. *That is a difficult argument to buy.

h. *Those arguments remain unbought.

(2.46')a. *Such things don't croak frequently.

b. *the croaking of threats

c. *threat croaking

d. *Such threats are uncroakable.

e. *Such threats are difficult to croak.

f. *That threat was too horrible to croak.

g. *That is a difficult threat to croak.

h. *The threats remained uncroaked.

(2.48')a. *Such blondes don't dig easily.

b. *the/his digging of blondes

c. *blonde digging

d. *She was undiggable.

e. *She was impossible for most guys to dig.

f. *She was an impossible person for most guys to dig.

g. *She was too unpleasant for most guys to dig.

h *Many such blondes remain undug (by any guys).

(2.52')a. *Milk gives frequently.

b. *that cow's giving of poisoned milk

c. *milk giving

d. *Chocolate milk is ungivable.

e. *Half and half is impossible for most cows to give.

f. *That kind of milk is impossible for cats to give.

g. *That is a difficult kind of milk to give.

h. *The snake's milk remained ungiven.

(2.53')a. *Such things don't hear from priests.

b. *Jerome's hearing of that from the priest

c. *rumor hearing (from reporters)

d. *That was unhearable from the priest.

e. *That sort of thing is impossible to hear from a priest.

f. *That sort of thing is too evil to hear from a priest.

g. *That is a hard thing to hear from priests.

h. *That remained unheard from the priest.

(2.59')a. *Such islands don't near easily.

b. *the destroyer's nearing of the island

c. *iceberg nearing

d. *That island is unnearable.

e. *That sort of island is hard to near.

f. *That sort of island is too radioactive for us to near.

g. *That is a hard island to near.

h. *The island remained unneared.

(2.61')a. *Such units don't quit easily.

b. *Bob's quitting of the police

c. *police quitting

d. *The police are unquittable.

e.*That sort of organization is impossible to quit.

f. *That sort of organization is too unforgiving for me to quit.

g. *That is a hard unit to quit.

h.*That organization remained unquit.

(2.65')a. *Pizza wants too often.

b. *Marsha's wanting of pizza

c. *pizza wanting

d. *Such food is unwantable.

e. *Marshmallow pizza is hard to want.

f. *Marshmallow pizza is too yucky for anyone to want.

g. *That is an easy type of pizza to want.

h. *Such pizzas remain unwanted.

A few comments can be offered about particular cases. First, with respect to (2.45'), one should compare this paradigm based on a use of <u>buy</u> meaning 'accept as correct' and taking as objects phrases denoting abstractions, specifically arguments and claims, with corresponding forms for the standard meaning of this verb, as in (2.45''):

(2.45'')a. The customer didn't buy my radio.

b. My radio wasn't bought by the customer.

c. ?Such radios don't buy easily.

d. ?the/Clara's buying of the radio

e. radio buying

f. That radio is unbuyable.

g. That radio is difficult to buy.

h. That radio is too beat up for anyone to buy.

i. That is hard radio to buy.

j. Most of his radios remain unbought.

The broad contrast between the two paradigms is a good indication of the systematic linking of the negative properties defining Array 1 and totally missing in a standard object paradigm like (2.45'').

Second, paradigm (2.46') is parallel to those for other *manner of speaking* verbs, many listed in (2.67):

(2.67) Other Manner of Speaking of Verbs (see Zwicky, 1971)

bellow, chirp, cry, drawl, groan, growl, grunt, hiss, howl, moan, mumble, mutter, roar, scream, shout, shriek, snap, snarl, squeak, stammer, wail, whimper, whine, yell

Second, paradigm (2.48') should be compared with that of the equally stative psychological verb <u>love</u>:

(2.48")a. ?Such blondes don't love easily.

b. the/his love of blondes

c. ?blonde love

d. She was unloveable.

e. She was impossible for most guys to love.

f. She was an impossible person for most guys to love.

g. She was too unpleasant for most guys to love.

h ?*Many such blondes remain unloved (by any guys).

While some of these cases are strained at best, the overall paradigm still differs sharply from that in (2.48'). The extensive property contrasts reveal the sharp difference in grammatical behavior between an Array 0 object and one from Array 1.

Fourth, paradigm (2.52') contrasts with standard uses of <u>give</u>, which allow verbal passives freely as (2.68) shows, and really don't bar any of the constructions in (2.66): see (2.52''):

(2.68) Milk products should not be given to children for Christmas.

(2.52'')a. ?Milk products don't give frequently for Christmas.

b. that monster's giving of poisoned milk to the children

c. gift giving for Christmas

d. ?Chocolate milk is ungivable to laxtose intolerant individuals.

e. That much milk is impossible for Australia to give to that country.

f. That kind of milk is impossible for us to give to those children.

g. That is a difficult kind of milk to give to those children.

h. The milk remains ungiven to those children.

Fifth, paradigm (2.53') represents a use of hear involving obtaining a piece of information through the auditory channel. Other uses of this verb which refer purely to sound perception behave differently in most respects, as (2.69) and (2.53'') show:

(2.69)a. Melissa heard the scraping noise.

b. The. scraping noise was heard by Melissa.

(2.53'')a. *Such noises don't hear easily.

b. Jerome's hearing of that noise

c. ?grunt hearing

d. ??Such noises are unhearable.

e. That sort of noise is impossible to hear.

f. That sort of noise is too faint to hear.

g. That is a hard sort of noise to hear.

h. Those voices remain unheard.

While (2.53''a) is flatly bad, (2.53''d) seems more strained than impossible. Perhaps the existence of inaudible disfavors unhearable. But something more general is at work as well, since for some reason, no perceptual verb has a natural –able form, as (2.70) shows:

(2.70)a. ??unfeelable

b.??unhearable

c. ??unseeable

d. ??unsmellable

e. ??untastable

In any event, the contrast between the overall patterns (2.53') and (2.53'') is still clear.

Sixth, paradigm (2.59') should be compared with that for the semantically similar verb approach in (2.59''), which, as (2.71) shows, allows verbal passives without problem:

(2.71)a. The troops approached the island.

b. The island was approached by the troops.

(2.59'')a. Such islands don't approach easily.

b. the troops' approaching of the island

c. iceberg approaching

d. That island is unapproachable.

e. That sort of island is hard to approach.

f. That sort of island is too radioactive for us to approach.

g. That is a hard island to approach.

h. Those islands remain unapproached.

The contrast between the two verbs with respect to the constructions at issue seems total, highlighting the correlation of properties.

This brief survey of Array 1 shows the passivization blockages not to be isolated properties. Each is just one of many failures of the same DPs to enter into constructions normally possible for direct objects. I take these failures to argue that the DPs of relevance in Array 1, unlike those in Array 0, *are not direct objects*. So rather than revealing something mysterious about passivization, blocked Array 1 passives are symptoms of hitherto seemingly overlooked contrasts in grammatical relations and the fact that grammatical constructions like passives, middles, <u>of</u> nominalizations, etc., are, at least for single objects (see Chapters 5, 6 and 7), restricted to true direct objects and so are *regularly* impossible for the non-direct objects defining Array 1.

Overall though, the linking of a significant set of properties contrasting with those of Array 0 single object structures provides a solid initial basis for a central claim of this study: single object structures do not form a uniform class.

2.6 Array 2

Turn to *Array 2*, initially illustrated in (2.72)-(2.85).

(2.72)a. The general never cabled Louisa.

b. *Louisa was never cabled by the general. (ignore irrelevant 'pieces of cable' reading)

(2.73)a. Her name eludes/escapes me.

b. *I am eluded/escaped by her name.

(2.74)a. The Navy had failed her in several ways. (Bresnan, 1982b: 354)

b. *She had been failed by the Navy in several ways.

(2.75)a. 1998 found Vera in Paris. (Bach, 1980: 306)

b. *Vera was found in Paris by 1998. [11]

(2.76)a. The truth just hit me.

b. *I was just hit by the truth.

(2.77)a. A six pack doesn't last Marshall very long.

b. *Marshall isn't lasted very long by a six pack.

(2.78)a. That movie starred Madonna.

b. *Madonna was starred by that movie.

(2.79)a. Laura struck everyone as intelligent. (Chomsky, 1965: 229; Williams, 1980: 207; Bresnan, 1982b: 354; Bowers, 1993: 626)

b. *Everyone was struck as intelligent by Laura/by Laura as intelligent. [12]

(2.80)a. That did not suit the dean.

b. *The dean was not suited by that.

(2.81)a. Claude never wrote Irene. (Oehrle, 1976: 77, 78)

b. *Irene was never written by Claude.

(2.82)a. Sheila served Nolan as an interpreter

b. *Nolan was served by Sheila as an interpreter. (Wasow, 1981: 303)

(2.83)a. Henry stared me right in the eyes

b. *I was stared right in the eyes by Henry.

(2.84)a. The answer was staring us right in the face.

b. *We were being stared right in the face by the answer.

(2.85)a. Something was eating Gilbert (= 'bothering ')

b. *Gilbert was being eaten by something (= 'bothering')

(2.86)a. The dean phoned Marjorie.

b. *Marjorie was phoned by the dean. [13]

One might initially naturally conclude that these fifteen cases are just further Array 1 instances, given that for all, not only passives but the other properties of (2.66) also are lacking. [14] Paradigms (2.77') and (2.78') illustrate for two cases.

(2.77')a. *Students don't last long (on reading 'x doesn't last students long')

b. *that six pack's lasting of Harold

c. *student lasting (on reading 'x doesn't last students long')

d. *Such students are unlastable.

e. *Harold is hard for a six pack to last very long.

f. *Harold is too greedy for a six pack to last very long.

g. *Harold is a hard person for a six pack to last very long.

h. *Harold remains unlasted by that six pack.

(2.78')a. *Old people don't star too often.

b. *that film's starring of Madonna

c. *foreigner starring

d. *Such actors are unstarrable.

e. *Marshall is hard for a good movie to star.

f. *Marshall is too sick for any movie to star.

g. *Marshall is a hard person for any movie to star.

i. *That actress remains unstarred by any film.

However, while sharing all the Array 1 restrictions, Array 2 forms systematically manifest additional constraints *not* associated with Array 1. So, Array 2 forms *are even more restricted than Array 1 forms* in comparison with those of Array 0. The relevant features properly include those of (2.87):

(2.87) Properties of Array 2 *not* Shared with Array 1

The object DP:

a. cannot be a target of left extraction;

b. cannot be a target of Complex Phrase Shift;

c. cannot be a target of Right Node Raising;

d. does not permit subconstituent left extraction;

e. does not strand under Gapping;

f. does not permit subdeletion;

g. cannot be an *in situ* human *relative* pronoun. [15]

These generalizations are illustrated in (2.88) and (2.89) for two Array 2 cases, contrasting them with *ordinary* transitive verb + object structures, that is, ones from Array 0.

(2.88)a. What actress did that movie enrich/*star?

b. That movie enriched enormously/*starred in the lead role - a strange foreign actress .

c. The former film might have enriched /*starred and the latter film did enrich/star the foreign actress in question.

d. Which actress did that film enrich/*star several friends of?

e. *The first film may have enriched/*starred Jim and the second film Tim.

f. As for those foreigners, his films enriched/*starred many.

g. My film enriched/*starred more of those Lebanese than it did of these Lebanese.

h. *untestable* due to lack of human subject

(2.89)a. Which actress did Melvin contact/*write?

b. Melvin called/*wrote several times the actress in question .

c. Melvin may have contacted /*written and Tom certainly did contact/*write that strange foreign actress.

d. Which actress did Mike call/*write several friends of?

e. Mike may have contacted/*written Lois and Ed Selma.

f. Herb contacted/*wrote more of the tall stunt men than he did of the short stunt men.

g. Harriet, contacting/*writing whom is quite boring, is still alive.

I largely leave it to readers to verify that, on the contrary, none of the properties of (2.87) hold of Array 1 structures. But (2.90) illustrates for one case:

(2.90)a. Which banks did the affair involve?

b. The affair involved without any doubt – all of the banks under investigation.

c. The first affair may have involved and the second affair certainly did involve all of the banks under investigation.

d. Which bank did the affair involve two affiliates of? (not worse than the Array 0 case: Which bank did they investigate two afffiliates of?)

e. The first affair involved this bank and the second affair that bank.

f. The affair involved more of these banks than it did of those banks.

g. *untestable* due to lack of human subject

While the Array 2 objects cited so far are all *animate*, inanimate object instances of the Array 2 pattern exist, as in (2.91):

(2.91)a. The soldier/oil filled the bottle.

b. The bottle was filled by the soldier/*oil.

c. Which bottle did the soldier/*oil fill?

d. The soldier/*Oil filled at that time most of the large bottles.

e. The soldier/*Oil may have filled and the sailor/gasoline certainly did fill the large bottles on the shelf.

f. Which bottle did the soldier/*oil fill half of?

g. The soldier/*Oil filled the large bottle and the sailor/gasoline the small bottle.

Other inanimate objects belonging to Array 2 include those of (2.92):

(2.92)a. Water covered the town.

b. The pipe was oozing a dark liquid.

c. The tank was dripping green muck

d. The bottle leaked mercury onto the lab floor. (Emonds, 1985: 133)

e. Hedges surrounded the mansion (Postal, 2004: 373-374, note 21)

Array 2 *in*animate objects reveal the further characteristic of this substructure in (2.93b), involving the inanimate vulgar slang negative polarity items of (2.93a):

(2.93)a. dick, didley (squat), didley shit, jack, jack shit, squat, etc.

b. An Array 2 object cannot be any of the forms of *a*.

While (2.94) and (2.95) show these forms' compatibility with *both* Array 0 and 1 structures, (2.96) illustrates generalization (2.93b).

(2.94)a. Bob didn't buy/clean/destroy dick/jack/jackshit/squat.

b. No one consumed/crushed didley squat/jack shit/squat.

(2.95)a. They didn't lack jackshit/squat.

b. No one wanted didley squat/jack/squat.

(2.96)a. *The tank is not dripping dick/jack/jackshit/squat.

b. The soldier/*Water didn't fill dick/jack/jackshit/squat.

c. *The bottle didn't leak squat/jack/jackshit.

d. *The pipe never oozed dick/jack/jackshit/squat.

e. The police/*Hedges didn't surround dick/jack/jackshit/squat

2.7 The Prefix re-

Finally, to complete the documentation of facts differentiating the different arrays, consider the prefix re. While there are semantic constraints on the affixation of this element to particular verbs and their nominalizations, there are syntactic constraints as well. And re- seems impossible with every element defining Arrays 1 and 2. All the single object cases I know which cooccur grammatically with re- involve Array 0 and hence permit participial passives. Some restricted illustration follows:

(2.97)(i) Array 0

a. Jerome (re)approached the station.

b. The station was (re)approached by Jerome.

(ii) Array 1

a. The plane (*re)approached the speed of sound.

b.*The speed of sound was (re)approached by the plane.

(2.98)(i) Array 0

a. Lucille (re)began the concluding prayers.

b. The concluding prayers were (re)begun by Lucille.

(ii) Array 1

a. A fish course (*re)began the meal.

b. *The meal was (re)begun by a fish course.

(2.99)(i) Array 0

a. The audience (*re)bought the argument.

b. *The argument was (re)bought by the audience.

(ii) Array 1

a. The students (re)bought the old books.

b. The old books were (re)bought by the students.

(2.100)(i) Array 0

a. The gorilla (re)entered the cave.

b. The cave was (re)entered by the gorilla.

(ii) Array 1

a. The needle (*re)entered the patient's arm.

b. *The patient's arm was (re)entered by the needle.

(2.101)(i) Array 0

a. Austin (re)wrote the proposal.

b. The proposal was (re)written by Austin.

(ii) Array 2

a. Austin (*re)wrote Martha.

b. *Martha was (re)written by Austin.

(2.102)(i) Array 0

a. Amanda (re)answered the question.

b. The question was (re)answered by Amanda.

(ii) Array 2

a. Amanda (*re)answered Louis.

b. *Louis was (re)answered by Amanda.

The distribution of re- would thus seem to be a partial test for Array 0, in that arguably any single object taking verb which permits it is a member of that Array.

2.8 What The Distinct Arrays Imply?

While Barrel (A) work, in agreement with the claim of (2.36), mostly assumes that English verb + single object sequences represent a uniform phrase structure, involving direct objects in all cases, evidence from the relatively systematic differential behavior of objects with respect to a variety of grammatical phenomena suggests that such structures fall into at least three distinct categories. Despite this, the three classes do *not* differ in ways which would, at one time, have raised suspicions of *constituency* differences. For instance, in each array, verb + object behave as a unit with respect to the phenomena of VP Fronting, Right Node Raising, VP Ellipsis, and VP Non-restrictive Relativization, all commonly taken as tests for constituency, as illustrated in (2.103)-(2.105):

(2.103) Array 0

a. They said the communists crushed the opposition and <crush the opposition> they did.

b. The communists may have, and probably did <crush the opposition>

c. The communists crushed the opposition last year and the socialists did < > this year.

d. He said the communists crushed the opposition, which they did < >.

(2.104) Array 1

a. They said the kids wanted pizza and <want pizza> they did.

b. The younger kids may have, and probably did <want pizza>.

c. The younger kids wanted pizza yesterday and the older kids did < > today.

d. He said the kids wanted pizza, which they did < >.

(2.105) Array 2

a. They said your name eluded her and <elude her> it did.

b. Your name may have, and probably did <elude her>.

c. Your name may have eluded her yesterday and my name probably did < > today.

d. They said his name eluded her, which it did < >.

All three object types also participate, apparently in parallel ways, in the perplexing coordination type taken to have important structural implications in Bowers (1993: 602-605; 2001), Larson (1988: 345; 1990: 624-626) and Runner (1998):

(2.106)a. The communists crushed [[the socialists in a week] [and the conservatives in a month]].

b. The kids wanted [[peperoni pizza on Friday] [and marshmallow pizza on Saturday]].

c. My name eluded [[Jim during the first meeting] [and Sandra during the second meeting]].

All this appears puzzling if one assumes, as e.g. Barrel (A) work does, that the external syntactic properties of nominal expressions are basically determined by the sort of phrase structure configurations underlying Chomsky's (1965) definition of direct object. Absent such ideas though,

one can assume, as in work like that referenced in (1.2) of Chapter 1, that there are primitive grammatical relations and that different nominal expressions represent different relations *without* dependence on phrase structure configurations, via the possibility of corresponding to the heads of arcs with distinct edge labels. This permits nominals bearing distinct grammatical relations to occur in isomorphic phrase structures, as suggested by the facts about Arrays 0, 1 and 2. I therefore view the three arrays in relational terms as understood in the work in referenced in (1.2).

The fundamental assumption is that English clausal syntax indicates that postverbal DPs without prepositions manifest at least three distinct grammatical relations to their containing constituent, referred to as *direct object, indirect object* and *subobject*. The former two have traditional antecedents of course; the latter does not, though it covers *in part* the same extension as Bresnan's (1982a: 25-29) Lexical-Functional Grammar relation *Object 2*; I hereafter designate these relations in RG style notation as 2, 3, 4 respectively. The three Arrays then represent verbs occurring with objects bearing three different object relations, each as distinct from the other as from, say, the subject (1) relation.. The standard English single object pattern, Array 0, involves an object which is a 2 object. It is a matter of fact that this structure manifests maximal freedom with respect to passivization, middle formation, object raising, etc.

The Array 1 pattern is claimed to manifest subobjects, 4 objects. Finally, Array 2 represents the indirect object or 3 relation. Since indirect objects are classicly associated with ditransitive constructions, it requires justification to invoke that category for Array 2 objects. This will be provided in Chapter 3, section 2. But the patterns as assumed are indicated in (2.107)-(2.109).

(2.107) Array 0 = Verb + 2 Object

a. Carlotta bought a Honda.

b. Carlotta destroyed a Honda.

c. Carlotta stole a Honda.

(2.108) Array 1 = Verb + 4 Object

a. Carlotta heard that from Ted.

b. Carlotta inspired loathing.

c. Carlotta wanted a Honda.

(2.109) Array 2 = Verb + 3 Object

a. Mike wrote Audrey.

b. My name eluded Audrey.

c. Oil filled the bottle.

I also recognize other object grammatical relations, some realized in English as PPs. The vague notion of 'realization' is given a precise metagraph interpretation in section 3 of Chapter 3. Relevant PP linked (in English) relations include the original RG relation *chomeur* and the *semiobject* and *quasiobject* relations. These latter can, I would argue, be taken as identical to relations of the same name motivated for French in Postal (1990a). The overall set of clausal relations born principally by DPs (in some cases, by complement clauses, in others by PPs) then properly includes at least those of (2.110):

(2.110) **Relevant *Nominal-Clausal* Grammatical Relations and their Symbolic Designations**

subject 1	direct object 2
Indirect object 3	Subobject 4
semiobject 5	quasiobject 6
semiclause 7	chomeur 8
extraposee 9	{Oblique} = {Oblique_1, Oblique_2, ...Oblique_n}
Genitive Gen	

Each of these will, of course, function in a grammatical formalism based on metagraphs as an edge label atom. [16] Moreover, it is useful to take these edge labels to define classes of arcs. That is, the class of e.g. 2-arcs is the class of all arcs with (first) edge label 2, the class of e.g. 5-arcs is the class of all arcs with (first) edge label 5, etc. While the relation genitive appears in the list, it in fact plays a role only in nominal structures and is arguably an interloper in the set of nominal-*clausal* relations.

It is also useful for certain purposes to define classes of arcs based on more inclusive sets of edge labels. Classes of such relevant to the description of nominals include those of (2.111):

(2.111) **Definition**

a. *Central arcs* = the class having any of the edge labels in (2.110) except Gen.

b. *Term arcs* = the class having one of the edge labels 1, 2, 3.

c. *Nuclear Term arcs* = the class having one of the edge labels 1, 2

d. *Core arcs* = the class having one of the edge labels 1, 2, 3, 4

e. *Object arcs* = the class having one of edge labels 2, 3, 4, 5, 6

f. *Narrow Object arcs* = the class having one of the edge labels 2, 3, 4

g. *Broad Object arcs* = the class having one of the edge labels 2, 3, 4, 5, 6 or one in {Oblique}

h. External Object arcs = the class having one of the edge labels 5, 6 or one in {Oblique}

i. *Achievable Central arcs* = the class of Central arcs which are not Oblique arcs.

j. *Nominal arcs* = the class having one of the edge labels in (2.110) or any edge label from the class called *Overlay R-signs* in Johnson and Postal (1980).

The first eight classes here are relatively straightforward. The idea behind the ninth is that the Achievable Central arcs can be local successor$_1$s, that is, in informal RG terms, that phrases can advance to these relations but not to any of the Obliques. The class of Nominal arcs is intended to be the maximal class of those headed by DPs. Overlay arcs are those defining the ultimate successors in extractions like Wh interrogative extraction, topicalization, etc.

For a tiny bit of concreteness, the relations in (2.110) are respectively instantiated by the highlighted phrases in (2.112a-j):

(2.112)a. *The vampire* spoke elegantly. (1)

b. Herb invited *the vampire* (2)

c. Herb wrote *the vampire* (a letter). (3)

d. Herb neared *the vampire*./Herb wanted *pizza*. (4)

e. Herb spoke to *the vampire*./Herb's offer of a job to *Melissa* (5)

f. Herb spoke of *the vampire*./Herb's offer of *a job* to Melissa (6)

g. Herb was spoken of by *the vampire*. (8)

h. It is evident *that he is a vampire*./Herb wants *to be a vampire*. (9)

i. Herb threw a rock toward *the vampire*./Herb left from *that airport*. (Some x, y ε {Oblique})

j. *Her* criticism of the vampire was unfair./*Her* hair was purple. (Gen)

There will of course be a range of arc types not headed by nominals. One such will include what have been called Predicate arcs (edge label P), whose head constituents will represent verbs, participles and adjectives. I will suggest, building on suggestions in Postal (1985), that the edge label P is a member of a nonunitary class predicational type edge labels defining a class of predicational arcs. P arcs are the primary members of the latter class, arguably the only one capable of labeling initial arcs, but are capable of having local successor$_1$s labeled with other predicational edge labels. These ideas make more sense when introduced below in the context of facts motivating them. And that holds of other nonnominal arc types which are also appealed to for reasons clarified in particular discussions below.

From a relational viewpoint, the differences between sets like (2.107)/(2.108), that is, that (2.107a-c) but not (2.108a-c) manifest the Array 1 properties of (2.66) as well as non-passivizability, can be argued not to represent anomalies but rather to systematically reflect that the objects in the second set are, at the most superficial level, 4 objects, not 2 objects. However, occurrence of the relation 4 may itself be a deviation from the simplest situation. Plausibly, Array 1 cases represent (lexically determined) *demotion of initial 2 objects to 4*. This possibility exists in current terms because in the metagraph framework of Chapter 1, unlike the relational appeals of traditional grammar, the same phrase can bear both distinct relations to the same constituent at different levels as well as relations to distinct constituents. Formally, the former means at least that a single constituent heads distinct parallel arcs, with the assignment of these arcs to a hierarchy of levels based on the Sponsor relations between arcs in ways to be briefly described in Chapter 3. The latter means, of course, that a single constituent can head two arcs with distinct tail nodes. In such terms, saying that 4 objects represent initial 2 objects and demotion to 4 would amount to the claim that they represent phrases corresponding to the heads of 4-arc local successor$_{l}$s of 2-arcs.

Questions relevant to whether Array 1 does involve 2 to 4 demotion include whether it is possible to restrict so-called *initial* relations to some subset of the overall nominal class, a subset *excluding* say at least 4, 5, 6, 8, 9. But this issue is largely beyond the scope of this discussion. Again the final 3 object in some Array 2 cases might bear a distinct earlier relation; plausibly, this might be subject or 1 in (2.109b) and is arguably a locative oblique relation in (2.109c). In any event, the 3 object status suffices to justify claiming that the various properties which differentiate Array 2 objects from those of Array 0 represent fundamentally not the anomalous behavior of final 2 objects but characteristic features of final 3 objects.

Notes to Chapter 2

1 If there were structures of the form (i), there could be single objects not characterized as direct objects even given (2.3).

(i) $[_{X \neq VP}$ V NP Z],

Given this logical fact, the issue is whether anything motivates contrasting representations (2.3)/(i) other than avoidance of the consequence that all single objects are direct objects. My view is that nothing does. If so, such representations would be a wrong way to distinguish e.g. direct from indirect objects.

2 Without page reference, Baker (2001: 23) claims Chomsky (1965) offers a definition of the form:

(i) Indirect object is 'NP immediately dominated by PP headed by to'.

I find in the cited volume no such definition, which could anyway have no universal value. The rest of this work argues in effect that it could have no value for English either. In any event, Baker's claim is enormously misleading historically.

Chomsky has though utilized the term 'indirect object' (undefined) for descriptive purposes without comment; see e.g. Chomsky (1977a: 152, note 62; 1977c: 157-158; 1981a: 278).

3 The correlation between presentational there and locative inversion cases is unsurprising in the framework of Postal (2004, Chapter 1), which argued that locative inversion involves an invisible expletive of the sort found in the presentational there structures.

4 Huddleston (2002a: 251) supports doctrine (2.36b) by noting that the object in cases like (i), a potential candidate (on semantic grounds) for indirect object status in a single object structure, behaves like a direct object:

(i) She teaches the first year students.

Specifically the object can be extracted, not a property of ditransitive first objects:

(ii) What a lot of first year students she taught!

However, the proposition advanced in (2.36b) is a powerful negative universal, essentially:

(iii) No single object in any clause is anything but a direct object.

A single consistent case like (ii) then hardly begins to justify it and, as what follows argues, there are many cases inconsistent with it.

Wasow (1977: 337) also noted that single human objects with teach do not behave like the first objects of ditransitives (even those with the same verb):

(iii)a. Handicapped children are teachable.

b. John's teaching of handicapped children is admirable.

So this use of the verb is clearly subsumed under Array 0.

Other single object constructions besides that with teach having objects that purely notional concepts of indirect object might also lead one to take as indirect objects likewise cannot be analyzed in that way for reasons including those cited by Huddleston. These include call, feed, help, serve, thank. For me, it is unclear whether single animate objects with e-mail, phone, radio are direct or indirect objects. My tendency is to judge in favor of the latter structure for phone, for the former for the other two.

5 The criteria developed here show that examples like I told John are *not* instances of verb + object structures in which the object fails to be a direct object. Despite Wasow's remarks, such cases turn out to be consistent with the dominant idea, but many others are not.

6 This large list represents no claim of completeness. Other arguable instances of Array 1 sinclude the verbs of the clauses in (i). Readers can check that these cases lack corresponding passives with the same uses as the listed verbs:

(i)a. Flowers adorned her head.

b. The last prayer completes the service.

c. Jewels encrusted the throne. (Jackendoff, 1991: 176)

d. A prayer ended the ceremony.

e.. The train finally entered the tunnel.

f. The express exited the tunnel at 9 o'clock.

g. City Hall faces the park.

h. These two brigades form the last line of defense.

i. The container gave off a horrible odor.

j. That river joins this river in Memphis.

7 The passivization ban for many of these verbs was noted in traditional and early generative work. Specifically:

(i) Jespersen (1927 [1961: 300]) cites cost, weigh, last and resemble;

(ii) My Array 1 category verbs correspond roughly to a superset of the so-called *middle verbs* in Lees (1963), who listed befall, cost, have, lack, mean, resemble and weigh. For me, befall is archaic; but see Ward, Birner and Huddleston (2002: 1432). However, as far as I can judge, it would fall into Array 2 as defined below. The others are clear instances of Array 1.

(iii) Freidin (1975: 389) noted the unpassivizability of the object of resemble.

(iv) Wasow (1981: 307-308) makes a parallel observation for all of cost, equal, have, last, and resemble.

(v) Bach (1980: 332) cited resemble as resisting passives;

(vi) Zwicky (1987: 643, 644) cited fit, resemble and want as having this property.

(vii) Herriman (1995: 50) cited the difficulty of passivizing the objects of fit, marry, match, resemble and suit 'when they are used to describe symmetrical relationships between the subject and object'. All these cases would likely fall under my Array 1, although some authors cite grammatical passives with match (Zwicky, 1987: 643) and the object of suit may be a 3 object.

(viii) Herriman (1995: 50) also cites Allerton (1982) as having noted the lack of grammatical passives for have, lack and possess, all also instances of Array 1.

(ix) Siewierska (1984: Chapter 6) gave an extensive list of verbal structures which (under some uses) preclude passivization; most fall into my Arrays 1 and 2. The cited verbs (pages 188-190) included approach, become, belong, conclude, cost, enter, equal, escape, fit, have, hold, lack, last, leave, mean, number, pace, resemble, sail, suit, turn, weigh

Array 1 verbs do not in general take agentive 1s. But this is not totally precluded. So agentive rid seems to have the distribution of a verb taking a 4 object:

(x)a. Lester finally rid the barn of rats.

b. *The barn was finally rid(den) of rats by Lester.

c. *Such barns don't rid of rats easily.

d. *The barn remained rid of rats.

e. *The barn was very difficult to rid of rats.

f. *The barn was small enough to rid of rats.

The data in this chapter, both text and footnote, like that in Postal (1990b, 2004: Chaper 8) as well as Chapters 4 -8, provide massive counterevidence to claims like (xia, b):

(xi)a. Chomsky (1977a: 14 note 14).

"On the analysis of passive constructions, see Reflections on Language, Chapter 3. There remain a few as yet unexplained exceptions"

b. Dowty (1979: 205)

"Fortunately, Passive is relatively an exceptionless rule in comparison with Dative Shift and Object Deletion rules... Perhaps the only real exceptions are verbs like have and resemble."

8 Both the failure of near to permit passives and the contrast with approach were noted in Oehrle (1976: 185); see (2.71). The contrast only exists when approach takes an agentive subject; with a nonagentive, it behaves like near, and hence arguably takes a 4 object:

(i)a. The knife approached the succulent piece of fruit.

b. *The succulent piece of fruit was approached by the knife.

c. *Such pieces of fruit are impossible for knives to approach.

Apparently, then near takes a 4 object regardless of the nature of its 1, while the 4 object status of the object of approach is linked to the properties of its 1.

9 The verb lack is an exception:

(i) Ireland lacks oil.

(ii) Ireland's lack of oil is unfortunate.

10 I take it to be uncontroversial that adjectival and verbal passives represent distinct constructions; see Wasow (1977), Williams (1981), Bresnan (1982a), Dryer (1985), Levin and Rappaport (1986). Further discussion of adjectival passives appears in Chapter 4, section 11.

11 Bach (1980: 306) also cited:

(i)a. The 1948 election saw Truman paired off against Dewey.

b. *Truman was seen paired off against Dewey by 1948.

Arguably, Truman in (ia) is a 3 object; for instance, it resists Complex DP Shift and left extraction:

(ii)a. *The 1948 election saw paired off against Dewey someone originally from Missouri.

b. *Who did the 1948 election see paired off against Dewey?

12 Williams (1980: 207) claims that passives like (2.79b) are bad because they violate a condition that a predicate (here *intelligent*) must be c-commanded by its argument, a condition met in the active but not in the passive. This account fails to link the passive violation to the range of other restrictions associated with the object of this usage of strike, some already cited in the Preface. Recall that the object of this verb cannot be a target of Complex DP Shift. But that fact cannot result from the c-command condition Williams cites, which fails to distinguish:

(i) Ruth considered/*struck as stupid everyone who supported her.

13 Parallel sentences with call are perfect. The judgment in (2.86b) is certainly dialect variable. Herriman (1995) lists both phone and telephone in her Class 2 ditransitives and states (1995: 108) that the 3 objects of this class in general can passivize, citing:

(i) You won't be cabled/phoned/telegraphed/wired the results until the end of the month.

I would star the phone variant. With respect to variation, Herriman recognizes telephone as a Class 2 verb. But I doubt that this is even part of my NL. Perhaps it is British. Huddleston (2002a: 301) cites it as a verb.

14 Other Array 2 cases probably include the uses of behoove, cost , escape and slip in (i)-(iii):

(i)a. It behooves us to be careful,

b. *the guys who it really behooves to be careful

(ii)a. The book cost $10.

b. Bowers (1993: 626)

*John was cost $10 by the book.

c. *It was that naïve individual that the book cost $50.

(iii)a. His name escapes me.

b. *I am escaped by his name.

c. *Which of the patients did his name escape?

(iv)a. Her name slipped my mind.

b. *My mind was slipped by her name.

c. *It was my mind that her name slipped.

15 A further condition possibly distinguishing 3 objects involves floated each. It is unclear whether such can form sequences where each semantically modifies a distinct DP. Relevant contrasts would be:

(i) Those women purchased three scarves each. (Array 0)

(ii) Those affairs involved three spies each. (Array 1)

(iii) Those women contacted/*wrote three rock stars each (Array 0, Array 2)

(iv) Those women wrote three letters each. (Array 0)

(v) Those ships are nearing two mysterious islands each (Array 1)

(vi) Those films enriched/*starred three jugglers each. (Array 0/Array 2)

But judgments are cloudier than indicated and determining whether this is a valid criterion requires far more investigation.

Edge-Based Model-Theoretic Syntax

Chapter 3 Double Object Structures

3.1 Basics

I begin to address more directly the complex issue of double object (ditransitive) structures illustrated by (3.1a) and (3.2a) and the common (though not invariably possible) alternations of the first object with prepositionally marked ones, as in (3.1b) and (3.2b):

(3.1)a. Melissa sent my brother a message

b. Melissa sent a message to Arnold.

(3.2)a. Claudia bought Jack a toy truck.

b. Claudia bought a toy truck for Jack.

These two variant patterns were distinguished by Fillmore (1965) mostly on distinct passivization possibility grounds, matters returned to in Chapter 7. Hereafter, I call the pattern in (3.1) *Class A* ditransitives, that in (3.2) *Class B* ditransitives.

Barrel (A) literature mostly analyzes such English constructions *without* appeal to a notion of indirect object, though the term is sometimes used informally. This reality is consistent with the theoretical fact, touched on in Chapter 1, that while Chomsky (1965) contained proposed configurational definitions of both the subject and direct object relations, he neither there nor anywhere else since proposed any definition for an indirect object relation.[1] But consideration of other NLs, even those related to English like French, German, Spanish, etc., leaves little doubt that there is a notion of indirect object (3 object) of the same order of reality in these NLs as the direct object (2 object) relation. In the NLs just cited, one could hardly *fail* to appeal to 3 object, specifically with respect to analogs of (3.1) and (3.2). So trying to *justify* a distinction between 2 object and 3 object in e.g. French, German, Spanish or a host of other NLs would, internal to the grammatical traditions of these NLs, be absurd.

One should see the 'missing' notion of 3 object in Barrel (A) as a function of three facts: (i) the overwhelming dominance of work on English in the development of Barrel (A) ideas; (ii) the fact that the extension of the notion of 3 object in English is much less clear than in NLs like French and (iii)

the fact that Barrel (A) ideas offer no natural reconstruction of the 3 object relation. Point (ii) will be explicated in what follows.

Barrel (A) work's avoidance of a notion of 3 object in the analysis of English ditransitive structures is also remarkable for other reasons. First, traditional grammarians of English of course utilized this concept; see e.g. Sweet (1891), Jespersen (1927 [1961]) and Curme (1931). Second, as argued below, considerable evidence supports recognition of a 3 object relation to represent the first object in *English* ditransitives

Although the vast literature on English constructions like (3.1) and (3.2) has yielded a generally accepted analysis of neither the double object cases nor their a/b alternations, two general types of analysis subsume the majority of treatments. In the most common, ditransitives like (3.1) and (3.2a) are taken to involve the occurrence as a superficial *2 object* of an underlying oblique phrase represented by the respective PPs in (3.1b) and (3.2b); often this oblique phrase is taken to be a 3 object. This is the so-called *Dative Shift* analysis, discussed in works like Akmajian and Heny (1975), Culicover (1976), Emonds (1972a, 1972b, 1976, 1993), Emonds and Whitney (2006), Fillmore (1965), Green (1974), Jackendoff (1977), Jackendoff and Culicover (1971), Langendoen, Kalish-Landon and Dore (1976), Larson (1988: 352-354), Marantz (1993: 117), McCawley (1998), Oehrle (1976), Postal (1971), Ross (1967 [1986]), Smaby and Baldi (1981), Soames and Perlmutter (1979) and Wexler, Culicover and Hamburger (1975), to cite some of many.

The other approach treats the first object of a ditransitive as a PP with an invisible P. I discuss this analysis type after more factual substance has been provided to the notion English 3 object.

Embarassingly, I myself long accepted a Dative Shift style analysis; see Postal (1971, 1982), Perlmutter and Postal (1983). A relational variant of it called *3 to 2 Advancement* formed a building block of early RG accounts of clause structure. Statement (3.3) provides a Principles and Parameters version:

(3.3) Ouhalla (1994:174-175)

"58a Mary gave John a book

Starting with the former hypothesis, if the two NPs in (58) both receive their Case from the verb, we should expect both of them to behave like direct objects of the verb. For example, we should expect both NPs to be able to 'passivize', i.e. to move to the subject position of the sentence when the verb is in the passive form. Underlying this argument is the idea that the ability to 'passivize' is a unique

property of direct objects, i.e. NPs which receive accusative Case from the verb. Consider the following examples from Standard English:

59a. John was given a book

59b. *John*$_i$ *was* [$_{VP}$ *given* [t$_i$] [*a book*]]

60a. *A book was given John

60b. *A *book*$_i$ *was* [$_{VP}$ *given* [*John*] [ti]]

(59) was cited in Chapter 6 as evidence that it is the goal (first) argument which has the properties of a direct object in Dative Shift constructions. (60) illustrates the fact that in Standard English the theme (second) argument does not have the properties of a direct object. In view of this, it is unlikely that the theme (second) argument in Dative Shift constructions such as (58) receives Case from the verb.''

While Ouhalla claims explicitly, as many others assume implicitly, that the first object in a ditransitive is a *2 object*, only two properties he cited support this, *banned adverb interpolation between verb and object* and *passivizability*. However, as discussed in Chapter 7, passivizability is *not* an invariable possibility for first objects, nor can one take it as known a priori that only direct objects are passivizable. And that surface 2 objects and 3 objects are both inseparable from verbs does not preclude their instantiating distinct relations. Emonds and Whitney (2006) also claim that the first object of a ditransitive shares many properties with uncontroversial direct objects. But they do not really specify what these are.

Farrell (2005: 24-26) notes that ditransitive first objects have various characteristic properties including inseparability from the verb, passivizability, incompatibility with object raising and Complex DP Shift. On the basis of the first two, he assumes the first object is a 2 object and considers as an alternative to a (relational) Dative Shift analysis the possibility that there is only one object relation which both objects in a ditransitive bear superficially. The contrasting properties of first and second objects of a ditransitive would then be attributed to differences of *semantic roles* born by the relevant DPs.

This view, entirely opposed to the present framework, is rendered untenable by the bulk of what follows. I find its logic strange. If limited *similarities* like inseparability and passivizability suffice to argue that e.g. most single objects and the first objects of ditransitives both fall under the same relational type, why would the sharp *differences* in many properties between first objects and typical single objects not show they *fail* to belong under the same type? More obviously, if inseparability and passivizability can show that first objects and single objects are both 2 objects, why cannot separability

and widespread incompatibility with passivization show that second objects are relationally distinct from either first objects or single objects? Moreover, as Fillmore long ago noticed, passivizability is by no means invariable for first objects.

The foundation stone of the Dative Shift analysis, the assumption that the first object in an English ditranstive structure, e.g. my brother in (3.1a), is a 2 object, was challenged in Ziv and Sheintuch (1979), Dryer (1986), Bickford (1987) and Hudson (1992). These authors distinguish prepositionally unmarked 2 objects and 3 objects and take my brother in (3.1a) to be a 3 object. The substance of the present work argues that this conclusion is entirely correct. And earlier evidence that single object structures divide into three types corresponding to Arrays 0, 1 and 2 can be shown to strongly support the conclusion that ditranstive structure first objects are 3 objects not 2 objects, thus inter alia rendering a Dative Shift analysis untenable. For, while talk of *Array 2* was novel, many of the properties of these *single* object cases are independently known *first object* properties of ditransitives like (3.1a) and (3.2a).

3.2 Links Between Array 2 Single Objects and Ditransitive First Objects

Array 2 was in effect specified in three steps as involving the properties separating Array 1 from Array 0, those distinguishing Array 2 from Array 1 and that of precluding slang polarity items like squat. And Array 2 objects were shown to be incompatible with verbs prefixed with re-. Overall then, an Array 2 single object will have at least the properties in (3.4), and most of these distinguish their possessors from true 2 objects. Passivizability, not listed here, will be focused on separately.

(3.4)(I) Properties of Array 2 Objects *not* Shared with Array 1 Objects

The DP object:

a. cannot be a target of left extraction.

b. cannot be a target of Complex Phrase Shift.

c. cannot be a target of Right Node Raising.

d. does not permit subconstituent left extraction

e. does not strand under Gapping

f. does not permit subdeletion.

g. cannot be an *in situ* human *relative* pronoun

(II) Properties of Array 2 Objects Shared with Array 1 Objects

The object DP:

h. has no corresponding *middle*

i. has no corresponding *nominalization* in of

j. has no corresponding nominalized *incorporation* form

k. has no corresponding –able form

l. has no corresponding *object raising* (with difficult, easy, etc.) form

m. has no corresponding *object deletion* (with too/enough) form

n. has no corresponding *nominal object raising* form

o. cannot cooccur with a verb with the prefix re-

III) p. cannot be one of the slang polarity items {jack, squat…}

With respect to (3.4a), Fillmore (1965) noted that ditransitive first objects could not question-extract; this was observed to generalize to left-extraction in general in Kuroda (1968) and Jackendoff and Culicover (1971). Variants of this constraint are noted by the authors cited as follows:

(3.5) Ziv and Sheintuch (1979: 390-399) [2]

a. It is hard to tell this girl a story.

b. *This girl is hard to tell a story.

c. *My lawyer in the States, I send a telegram every month.

(3.6) Emonds (1993: 249, note 33)

a. ?Who did Mary bring a radio?

b. ?His friend he found a nice coat.

c. ?Not one friend did Sam bring a present.

(3.7) Farrell (1994: 124-125; 2005: 24)

a. It will be easy to send those people some flowers.

b. *Those people will be easy to send those flowers.

See also Baker (1988: 292-293; 1997: 92), Emonds and Whitney (2006), Kayne (1984a: 202, note 19), Larson (1988: 355; 1991: 104-105), Stowell (1981: 320-321),. This property is now standardly recognized; see Huddleston (2002a: 251).

However, there are varieties of English in which the constraint does not hold. [3, 4] So e.g. Jespersen (1927: 138) cited (3.8a), Curme (1931: 116) (3.8b) and Herriman (1995: 55) (3.8c).

(3.8)a. This is the man we gave all those apples.

b. Mr Wells, whom competent critics have given a niche among future classics,…

c. Who is the man you have offered a seat on the board of your company?

These are all simply ungrammatical for me and many others, rendering it possible to use left extraction as a test for 3 objects, something not possible in dialects represented by (3.8). [5]

With respect to (3.4b), Baker (1997: 92), Bowers (1993: 645), Den Dikken (1995: 195), Kayne (1984a: 200; 1994: 149), Larson (1988: 354; 1991: 105) and Steedman (1996: 69-70) noted that an English ditransitive first object cannot be a Complex DP Shift target:

(3.9)a. *Herbert sent flowers ~ the woman who he had met at the drunken party.

b. *Herbert bought flowers ~ the woman who he had met at the drunken party.

c. *Herbert allowed two weeks vacations ~ all of his employees.

d. *Herbert offered two weeks vacations ~most of his salesmen.

Just so, as in (3.4c), like Array 2 objects but unlike those of Arrays 0 and 1, a ditransitive first object cannot be a Right Node Raising target:

(3.10)a. Marvin assigned Wilma that task.

b. *Marvin may have assigned the first task and he certainly assigned the second task – the woman who was sent from the suburban branch.

With respect to (3.4d), Anderson (1979: 272), Den Dikken (1995: 16), Kayne (1994: 147), Müller (1995: 292) and Runner (1998: 161) have registered that the first object precludes *subconstituent left-extraction*, as illustrated in (3.11) and (3.12):

(3.11)a. Anderson (1979: 272)

*Who did you give friends of the picture? [6]

b. Kayne (1994: 147)

(i). the guy who_1 we gave a picture of t_1 to the child

(ii) *the guy who_1 we gave a picture of t_1 a new frame

(3.12)a. the cat that he described the owner of to the police

b. *the cat that he handed the owner of a speeding ticket

c. *the lawyer that he gave arguments by no thought whatever

d. No thought was given those arguments against that senator by that lawyer.

e. *the senator that no thought was given those arguments against by that lawyer

Similarly, as specified for Array 2 in (3.4e), a ditransitive first object is unstrandable under gapping; see e.g. (3.13): [7]

(3.13)a. Arnold sent flowers to Lydia and Tom (candy) to Betty.

b. *Arnold sent Lydia flowers and Tom Betty (candy).

c. Flowers were sent to Lydia and candy to Betty.

d. Flowers were sent Lydia (*and candy Betty). [8]

e. The captain assigned the first job to Roger and the colonel the second job to Edgar.

f. *The captain assigned Roger the first job and the colonel Edgar (the second job).

The Array 2-defining feature of blocking subdeletion, noted in (3.4f), is seen for ditransitive first objects in (3.14):

(3.14)a. Eddie criticized more of those senators than I did of these (senators).

b. *Eddie sent more of those senators' e-mail than I did/sent of these (senators)' handwritten notes.

And that ditransitive first objects share the Array 2 property (3.4g) of banning in situ human relative pronouns is shown in (3.15):

(3.15)a. Zeus, giving a lot of thought to whom is worthwhile, was a terrific god.

b. *Zeus, giving whom a lot of thought is worthwhile, was a terrific god.

c. Carol, buying jewelry for whom is foolish,....

d. *Carol, buying whom jewelry is foolish,...

e. My uncle, playing games of tennis with whom can be quite boring,...

f. *My uncle, playing whom games of tennis can be quite boring,....

Turning to (3.4) (II), that ditransitive first objects cannot be middle targets has been previously noted; see (3.16):

(3.16)a. They teach children French easily.

b. Everaert (1990: 125)

*Children teach French easily.

c. Criminals sell children drugs constantly.

d. *Children sell drugs constantly (where <u>Children</u> = buyers).

With respect to (3.4k) Baker (1997: 93), Dowty (1979: 205), Farrell (1994: 123), Fraser (1970), Johnson (1991: 615), Kayne (1984a: 152), Pesetsky (1995: 127, 168) and Ziv and Sheintuch (1979: 393) note that nominalizations in <u>of</u> of ditransitive first objects are impossible; see (3.17):

(3.17)a. *the sending of Jane (of) flowers

b. *your assignment of Barbara (of) Quine's *Mathematical Logic*

That the nominal incorporation forms of (3.4i) are impossible for ditransitive first objects is noted in part in Baker (1997: 94) and Grimshaw (1992: 14) and illustrated in (3.18):

(3.18)a. They told stories to the kids.

b. They told the kids stories.

c. the telling of stories to kids

d. story telling to kids

e. *kid telling of stories by teachers

f. *drunk-serving of alcoholic beverages by bartenders

g. *terrorist shipment of explosives by unscrupulous businessmen

As for (3.4j), while I find -able forms based on first objects *highly* ungrammatical, Kayne has judged (3.19c) as only deserving a question-mark.

(3.19)a. *Gorillas are unteachable French.

b. *Such problems are ungivable a lot of thought.

c. Kayne (1984a: 140)

?Prisoners are sendable linguistics books under certain conditions.

This judgment seems to me doubly peculiar given that adjectives, and –able forms are such, otherwise systematically bar DP objects of any kind: [9]

(3.20)a. The result of that calculation is equal *(to) 95.

b. They are fearful *(of) ghosts.

c. Louise is proud *(of) Sally.

Properties (3.4k, l, m) hold of ditransitive first objects but I skip verification as that fact probably does not show much. For I would assume that this property ultimately reduces to property (3.4a).

For property (3.4n), Chapter 2, section 2.5 showed that re- could not be an affix on single object verbs of Array 2. This fact now connects to the observation tracing specifically to Carlson and Roeper (1981), Fraser (1964) and Keyser and Roeper (1992) that re- is impossible on ditransitive verbs. Fraser cited contrasts like (3.21a, b):

(3.21)a. She (re)read that section to the man.

b. She (*re)read the man that section.

c. She (re)bought the car for her son.

d. She (*re)bought her son the car.

In present terms, the good cases show re- on verbs which take final 2 objects, while the bad ones have the prefix on verbs cooccurring with 3 objects and 4 objects but no final 2 objects. A similar division appears in single object cases, with which, as seen in Chapter 2, section 5, re- only seems possible for Array 0; see (3.22):

(3.22)a. Herb (re)approached the zombie. (Array 0)

b. Herb (*re)neared the zombie. (Array 1)

c. Herb (re)pronounced the name. (Array 0)

d. Herb (*re)croaked/(*re)grunted the name. (Array 1)

e. Herb (re)wrote the letter. (Array 0)

f. Herb (*re)wrote Gladys. (Array 2)

g. That professor (re)proved that. (Array 0)

h. That book (*re)proved that. (Array 1)

i. They (re)bought their old textbooks.

j. They (*re)bought my arguments. (Array 1)

k. The soldier (re)filled the container. (Array 0)

l. Gasoline (*re)filled the container. (Array 1)

m. The groundskeepers (re)covered the field. (Array 0)

n. Lava (*re)covered the field. (Array 1)

o. The dean (re)answered the question. (Array 0)

p. The dean (*re)answered the protesters. (Array 2)

Last, for property (3.4o), just as the slang polarity forms cannot be Array 2 objects, (3.23) shows they cannot be ditransitive first objects either:

(3.23)a. Margaret did not give anything/*dick/*jackshit/*squat a lot of thought.

b. No drunk gave anything/*dick/*jack/*squat a push.

c. No drunk gave anything/*dick/*jackshit/*squat a coat of paint.

d. Compare: No drunk gave dick/jack/squat to Margaret.

e. Herb didn't throw the new printer/anything/*dick/*squat a strange look.

f. Compare: Herb didn't throw anything/dick/jackshit/squat to the sailors.

g. Herb didn't will the museum/anything/*dick/*jack his stamp collection.

h. Compare: Herb didn't will anything/dick/jack/squat to the museum.

Overall then, extensive evidence indicates that ditransitive first objects behave like the single objects of Array 2 structures. This shows, first, that the first objects of ditransitives are not 2 objects. Moreover, given that the single objects of Array 2 structures represent superficial 3 objects, not 2 objects, the first object of an English ditransitive is, in present terms as traditional grammar and the work of Bickford (1987), Dryer (1986), Hudson (1992) and Ziv and Sheintuch (1979) would have it, and contrary to

most Barrel (A) work, a superficial 3 object. Inter alia then, representing the relations in pairs like (3.1a) and (3.2a) via any conception of Dative Shift is really *impossible*, since the fundamental idea of that view, as Ouhalla indicated, is that first objects are 2 objects.

One consequence of the fact that Array 2 objects are relationally parallel to the first objects of ditransitives is that there are both double and single 3 objects, contrary e.g. to (2.36) of Chapter 2. Viewed in crosslinguistic terms, this conclusion is banal since NLs having an uncontroversial 2 object/3 object distinction reveal single as well as double object instances of 3 objects:

(3.24)a. French

(i) Jacques leur a envoyé beaucoup de livres, à ces gens.

"Jacques sent many books to these people"

(ii) Jacques leur a téléphoné, à ces gens.

"Jacques telephoned these people"

b. German

(i) Heinz hat diesem Leute vielen Bücher geschickt.

"Heinz sent many books to these people"

(ii) Heinz hat diesem Leute telephoniert.

"Heinz telephoned these people"

The 3 object status of the first object in an English ditransitive structure, which renders a Dative Shift analysis untenable, gains significant support from the following. There are constructions partially parallel to the double object pattern which arguably do instantiate an analog of the Dative Shift analysis. And these constructions contrast with the double object case in ways corresponding precisely to the differences between 2 objects and 3 objects.

So, while wrong for ditransitive cases, a Dative Shift analysis does not thereby lack English instantiations. Constructions exist which do involve the advancement of some phrase to 2 object with corresponding demotion of an earlier 2 object to a distinct relation. At issue first are the clauses based on verbs about which Green remarked:

(3.25) Green (1974: 80, note 3)

"With *entrust* and possibly a few other verbs, if the indirect object is internal and prepositionless, the direct object is preceded by *with*."

Green illustrated with:

(3.26)a I entrusted my ray gun to your son.

b I entrusted your son with my ray gun."

Green's comment clearly used the terms 'indirect/direct object' in traditional notional senses, very differently from the way they are taken here. The same usage is seen in Fries (1952: 173-201) cited in Herriman (1995: 16):

To see that the postverbal DP in (3.26b) is not a 3 object, one can compare Green's examples (3.26a, b) with e.g. a standard Class A ditransitive pair like (3.27):

(3.27)a. I loaned my ray gun to your son.

b. I loaned your son my ray gun.

Clearly, there are strong parallels between the two paradigms. Specifically, the two *a* examples seem, and indeed may be, entirely parallel. I return to this point. The two *b* examples differ in an obvious way since only the earlier case has a visible preposition associated with the second object.

But they also differ in less obvious ways; specifically, every test offered as characterizing the differences between 2 objects and 3 objects shows that the verbally contiguous object in (3.26b) is a 2 object, while that in (3.27b) is a 3 object, as illustrated in (3.28):

(3.28)(i) Complex DP Shift

a. I entrusted with my ray gun - one of the children who lived in the next apartment.

b. *I loaned my ray gun - one of the children who lived in the next apartment.

(ii) Object Raising

a. That child was impossible to entrust with my ray gun.

b. *That child was impossible to loan my ray gun.

(iii) Subconstituent Extraction

a. It was that child who I entrusted relatives of with my ray gun.

b. *It was that child who I loaned relatives of my ray gun.

Other verbs which parallel <u>entrust</u> include *furnish*, *present*, *provide*, *supply*; see Pesetsky (1995: 142), as illustrated in (3.29):

(3.29)a. Isabelle furnished/presented/provided/supplied *Marshall* with the necessary drugs.

b. Isabelle furnished/presented/provided/supplied the necessary drugs to Marshall.

While these alternations partially resemble those involving Class A and Class B ditransitives, again the italicized form here is a 2 object, since it lacks the characteristic 3 object properties documented for ditransitive first objects. This is supported by (3.30), indicating that objects positioned like that italicized in (3.29a) can be Complex DP Shift targets:

(3.30) Kayne (1984a: 200)

John supplied with the information - just about everyone who asked.

Baker (1997: 92) also noted this the contrast with ditransitive first object behavior. Additionally, he observed that ditransitive objects do not left extract, and registers the contrast with those like the first DP in (3.29a).

These contrasts and their interpretation in terms of the 2 object/3 object distinction raise the question of how the relations in cases like (3.26) and (3.29) are to be described. One plausible view would also take the initial structures of (3.29a, b) to each involve both an initial 2 object and 3 object. Like the ditransitive paradigm member (3.27a) then, (3.29b) would realize the 3 object instantiating the option of demoting to 5. Nothing further would have to be said. The problematic case is (3.29a). Apparently, this would require allowing some underlying ditransitive 3 objects to advance to 2, with, arguably concomitant demotion of the initial 2 object to a distinct relation, say 8, realized in this case by the <u>with</u> phrase. In the framework under development here, the recognition of this possibility for English requires limiting its distribution to just those verbs which behave like <u>entrust</u>. Section 9 below briefly considers how a version of the analysis just suggested is relevant to a problem in Peruvian Spanish discussed in Montalbetti (1999).

Specifically then, one must block the posited 3 object to 2 advancement possibility for all standard Class A ditransitives in order e.g. to prevent verbs like e.g. <u>hand</u>, <u>lend</u>, <u>offer</u>, <u>sell</u>, <u>show</u>, etc., from wrongly permitting actually impossible structures like:

(3.31)a. *I handed/lent/offered/sold/showed Bob with my ray gun.

b. *I handed/lent/offered/sold/showed with my ray gun - the child who lived next door.

c. *Which child did you hand/lend/offer/sell/show with your ray gun?

The dual tasks of stating these constraints and the restriction of the phenomenon to the verbs which actually manifest it can be simultaneously achieved by a restriction of the form in (3.32):

(3.32) **The *English* 3 Object to 2 Advancement Condition (Version 1)**

If A is a 3 arc neighbor of a P arc, B, and C is a 2 arc local successor$_1$ of A, then *B has a Stem arc branch whose head is labeled {credit, entrust, furnish, present, provide, supply.....}*

The verbs <u>hand</u>, <u>lend</u> and other standard ditransitives will simply be not be listed in the full version of (3.32), blocking cases like (3.31).

A recurrent issue is manifest in (3.32), specifically in the highlighted fragment. This is the need to refer to lexical identity in a rule despite the fact that I can not here offer a precise account of how lexical representations should be integrated into metagraphs. For purposes of this work, I assume rather arbitrarily that the phonological representations of lexical items will appear as (complex) labels of the head nodes of relevant arcs (more accurately, probably, of the head nodes of branches of those arcs). I posit an arc type defined by the edge label Stem, whose head is labeled with the phonological representation of lexical verbs. This leaves open inter alia how inflections and derivational morphology are to be described or how complex verbs (e.g. those with particles) are to be integrated into the account. It is irrelevant to current concerns whether different stem labels need to be recognized for nouns.

It will be repeatedly necessary to form statements parallel to that in (3.32b), where the presence and possible local successors of specific Central arcs are restricted via the Stem of a neighboring P arc. It is convenient to simplify reference to such situations, facilitated via abbreviatory definition (3.33):

(3.33) **Definition: *[PS] Zoned***

Arc A is *[PS] zoned* if and only if A has a P arc neighbor B which has a Stem arc branch (*maybe R-branch*) whose head label is [phonological structure PS].

No doubt, this definition would have to be refined and generalized but it will suffice for present purposes.

Given this definition, (3.32) can be stated more compactly as (3.34)**:**

(3.34) **The *English* 3 Object to 2 Advancement Condition (Version 2)**

If A is a 3 arc neighbor of a P arc, B, and C is a 2 arc local successor$_1$ of A, then B is [{credit, entrust, furnish, present, provide, supply.....}] zoned.

Definition (3.33) permits picking out once and for all the particular relation between one arc A and the phonological representation of a Stem arc branch of the P arc neighbor of A. In different terms, it

maps a particular phonological representation π into a simply specifiable property of every distinct neighbor of the P arc whose Stem arc branch's head node is labeled π.

While an analysis of (3.29a, b) which takes them to involve initially ditransitive structures is plausible (and consistent with Green's remarks), I have provided no evidence that the final 2 objects in cases like (3.29a, b) or the DP of the final <u>to</u> phrase in (3.29a) are earlier 3 objects. I am mostly appealing to assumptions about minimizing the range of initial clause structures and maximizing similarity with distinct paradigms like (3.27), which can be shown to involve 3 objects more directly. Relevantly, one can give a strong argument from German for the view that a (ditransitive) verb can take an underlying 3 object which does not (in fact, cannot) appear as a final 2 object; see section 11.

Moreover, more direct evidence for the English cases is available. First, as Kayne (1984a: 200) in effect noted, with at least one verb participating in pattern (**3.29**), for at least some speakers three distinct structures occur, one of which is simply that of a ditransitive, illustrated in (3.**35**), annotated with what I take to be plausible relational analyses. [10] Beck and Johnson (2004: 99) refer acceptingly to Kayne's (1984a) judgment and seem to accept that another verb of the same class, <u>present</u>, also occurs in the ditransitive structure:

(3.35)a. Joe supplied the information to Mary.

2 3

2 5

b. Joe supplied Mary the information.

3 2

3 4

c. Joe supplied Mary with the information.

3 2

2 8

The examples in (3.35) represent the first use in this work of a table like row and edge label diagram to represent the metagraph structure of a single constituent. Such a (typable) form of representation is more easily incorporable into texts than the elaborate diagram type illustrated in Chapter 1. However, it also obscures much of the structure and thus the simplicity and readability gained by its use in a particular context inevitably entails considerable loss of precision and accuracy. Moreover, such diagrams simply pick out from metagraphs certain subsets of properties to represent. So it is

important to understand how such diagrams relate to the actual metagraphs they are intended to (very partially) illustrate.

Consider (3.35b). This is intended as an abbreviation of a metagraph fragment of a single clause in which the word Mary corresponds to the head node of an initial (unsponsored) 3 arc, in which the phrase the information corresponds to the head node of an initial 2 arc and the head node of a 4 arc local successor$_{I}$ of that 2 arc. Thus the first rows of such diagrams indicate the initial relations of a constituent, the last row the *final* relations.

Turn to (3.35c), which represents a metagraph fragment in which Mary again corresponds to the head of an initial 3 arc and in which the information corresponds to the head of an initial 2 arc. But unlike in (3.35b), here the 3 arc is portrayed as having a 2 arc local successor$_{I}$, while the initial 2 arc is indicated to have an 8 arc local successor. It is reasonable to require, as the representation of (3.35c) does, the presence of a local successor$_{III}$, since not only is the predecessor 2 arc erased, but the relevant 2 object must be taken to head some kind of later arc which is not a 2 arc.

The relation between the existence of the two local successors found in a structure like (3.35c) is critical because arguably the local successor$_{III}$ exists only because the local successor$_{I}$ W-equivalent to the viable 2 arc does. The question is how such a dependency can be stated in linguistic theory or in grammars. The factual situation underlying this complex area was extensively discussed in the RG literature and in Johnson and Postal (1980: especially Chapter 8).

This literature was strongly linked to assumptions about 8-arcs in particular and the idea that there is grammatical law determining their occurrence and distribution in syntactic structures. A key underlying assumption was that the syntactic structure of a clause node, taken as a set of arcs, was divided into levels (called *strata*). Their fundamental characteristic was that any two arcs in a single stratum had to have different edge labels (the so-called *stratal uniqueness* property). While accepting that there was something right about that view, I here limit claims to analogs of initial and final strata. Recall that an *initial arc* is one which has no sponsor.

To simplify a development related to the linked arcs in cases like (3.35c), one can first define:

(3.36) **Definition: *Congruent***

A is *congruent* to B if and only if A is an W-equivalent neighbor of B.

I then propose:

(3.37) **The Initial Central Arc Uniqueness Condition**

If A and B are congruent initial Central arcs , then A is identical to B.

This imposes the earlier RG condition of stratal uniqueness *but only for initial arcs*. However, the uniqueness claim is extended (from just Term arcs) to all Central arcs

But I speculate as follows:

(3.38) *Conjecture*: Final Central Arc Uniqueness

If A and B are congruent final Central arcs, then A is identical to B.

This formulation suggests that given (3.37), it will ultimately be possible to prove the content of (3.38) from other conditions, including those turned to now. If that conjecture fails, (3.38) would arguably have to be an independent condition, as the grounds for holding it true are as strong as those for (3.37). Conditions (3.37a) and (3.38) would jointly impose the effects of the traditional RG stratal uniqueness condition for initial and final arcs. The restriction does not mean that it fails to impose such effects for other strata. More accurately, such things are in present terms simply undefined.

Return to (3.35c), which represents a situation where the existence of a local successor, there represented by the entry 2 in the second row for Mary, potentially yields a situation in which stratal uniqueness would be violated if there is an W-equivalent arc in an 'earlier' stratum than the first occupied by the local successor arc. And just that is found given the entry 2 in the first row for the information. So something should guarantee that at most one of these nominals can head a final 2 arc, specifically, that *the information* does not, since it is clearly not a superficial 2 object. The idea in Johnson and Postal (1980) was that, in the case of Term arcs in this situation, some principle would force the earlier Term arc to have an 8 local successor$_1$, preserving stratal uniqueness. The consequnce of that idea is built into (3.35c).

To capture more precisely that part of these ideas that I consider viable in present terms, I appeal to an independently useful notion introduced in Postal (1990a).

(3.39) **Definition: *Erasable***

Arc A is *erasable* by B if and only if no arc distinct from B erases A.

So arc A will be erasable by B only if it is either erased by B or not erased at all. This concept in effect alludes to the assumption, formalized in the Unique Eraser Condition of Chapter 1, that no arc has more than one eraser to pick out arcs which are capable of being erased in particular contexts by specific other arcs. Most appeal to this notion will actually involve the derivative concept *locally erasable* (see (1.37) of Chapter 1 for the prefix *locally*), limiting satisfaction to those cases where instantiations of variables A and B in (3.39) are neighbors.

The situation is though complicated, in particular, by the fact that failure of <u>the information</u> in (3.35c) to represent a final 2 arc is linked to the assumption represented there that it heads a final 8 arc, which is a successor of the 2 arc. Assuming the correctness of this view, one issue is the precise nature of that 8 arc. I take it to be an instance of what I call *local successor$_{III}$ arcs*. These are assumed only to exist precisely when their predecessors are arcs which inter alia are neighbors of an W-equivalent Central arc, the latter as it were forcing (under penalty of a uniqueness violation) the existence of the local successor$_{III}$. Necessary here is to sketch a precise account of what, internal to the formalism, this idea of forcing could mean and under what conditions it exists. Specifying this requires further auxiliary concepts:

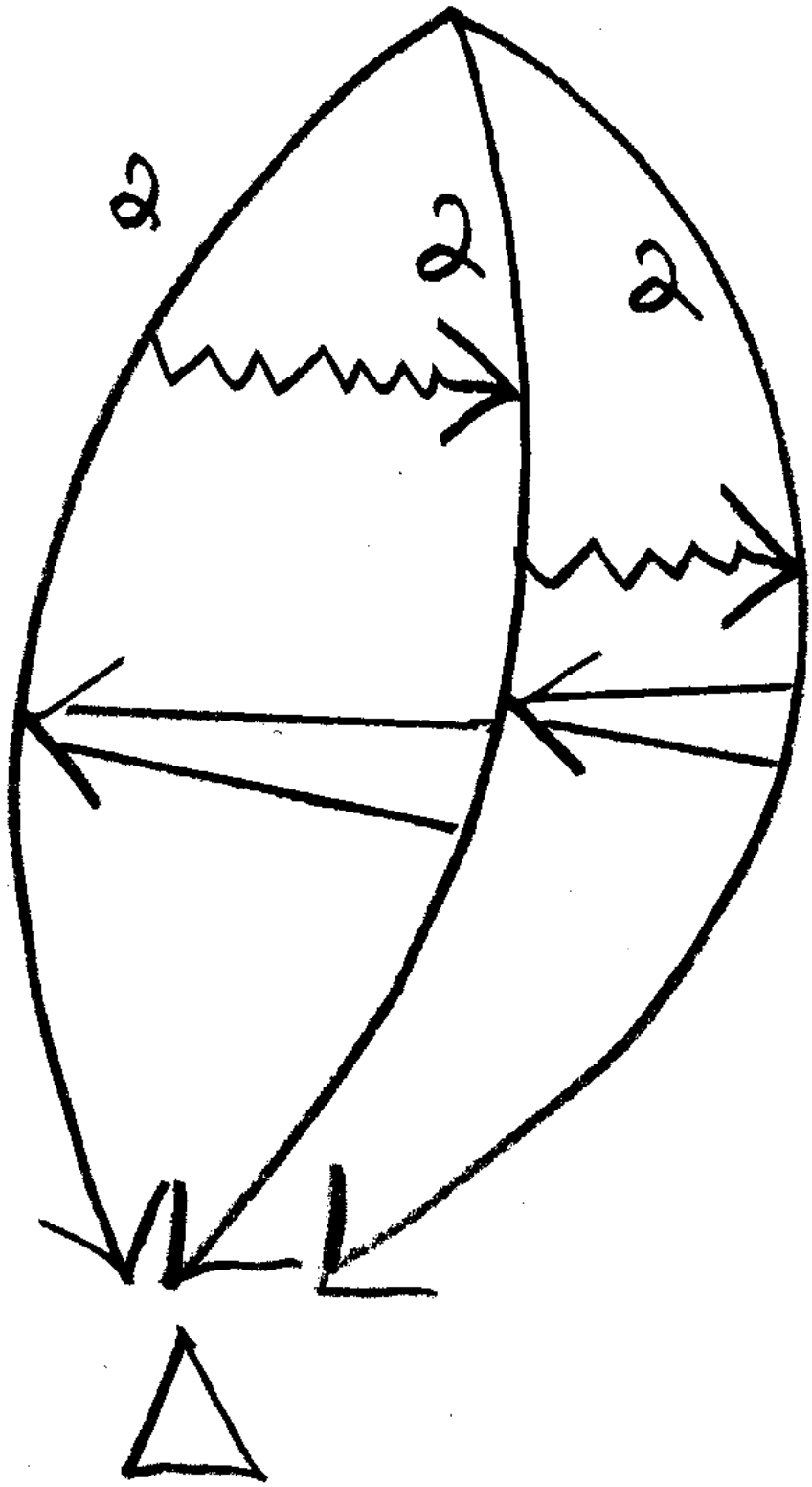
Central will be to define a notion *threaten* such that when an arc is threatened, it must have a local successor, where threatening is a situation like that involving the two 2 arcs in (3.35c). The following is a claimed invariant property of the local successor relation:

(3.40) **The Local Successor Nonequivalence Condition**

If A is a local successor of B, then A is not W-equivalent to B.

Recall from Chapter 1 that arcs are W-equivalent if and only if they share the first elements of their edge label sequences and F-equivalent if the full sequences are identical. Given this, the local successor$_{III}$ of a threatened arc eliminates a possible instance of congruent final arcs. One virtue of (3.39) is that it precludes the existence of redundant sequences of W-equivalent local successors of the form:

(3.41)


2
2
2

There is no natural bound on such sequences, which provide no information not provided by the first element in the sequence.

Next, I introduce a more basic concept then the ultimately desired Threaten:

(3.42) **Definition: *Potentially Threaten***

A *potentially threatens* (a distinct arc) B if and only if A is a local successor congruent to B, which is erasable by a local successor.

If then A potentially threatens B, B cannot be an inherently replaced arc, nor a (local) successor_{II}. It can essentially be either an arc without a local eraser or one erased by a local successor (of either the successor_{I} or successor_{II} types).

On this basis, one can further introduce:

(3.43) **Definition: *Threaten***

A threatens B if and only if A potentially threatens B and B is erasable by A.

This picks out among the potentially threatened arcs that subset of arcs which either have no local erasers or are erased by their potential threatener. As a result of the following key principle, these two logical possibilities reduce to that where the second disjunct is satisfied:

(3.44) **The Forced Erasure Condition**

If A threatens B, A erases B.

I can also take this opportunity to define the complement of Threaten in the potentially threaten domain:

(3.45) **Definition: *Immune***

B is immune to A if and only if A potentially threatens B but does not threaten B.

This will be used in Chapter 6 to formulate a principle which narrowly restricts the possibility of a potentially threatening arc failing to threaten.

To see how the concepts just introduced function so far, return to (3.35c). The relevant arcs are the 2 arcs headed by <u>Mary</u>, call it A, and by <u>the information</u>, call it B. By (3.42), A potentially threatens B. And by (3.43), it also threatens it. Therefore, by (3.44), A erases B, guaranteeing that at most one of them can be a final arc, and hence that they are consistent with conjecture (3.38).

So far though the account does not say anything about the 8 arc local successor of B. First, to guarantee that there is such a successor, I propose:

(3.46) **The Local Successor$_{III}$ Condition**

B has a local successor$_{III}$ C (if and only if B is a Core arc and there is an arc A which threatens, hence erases, B) and each local successor$_{III}$ is an Achievable non-Term (i.e. a 4, 5, 6, 7,8 or 9) arc.

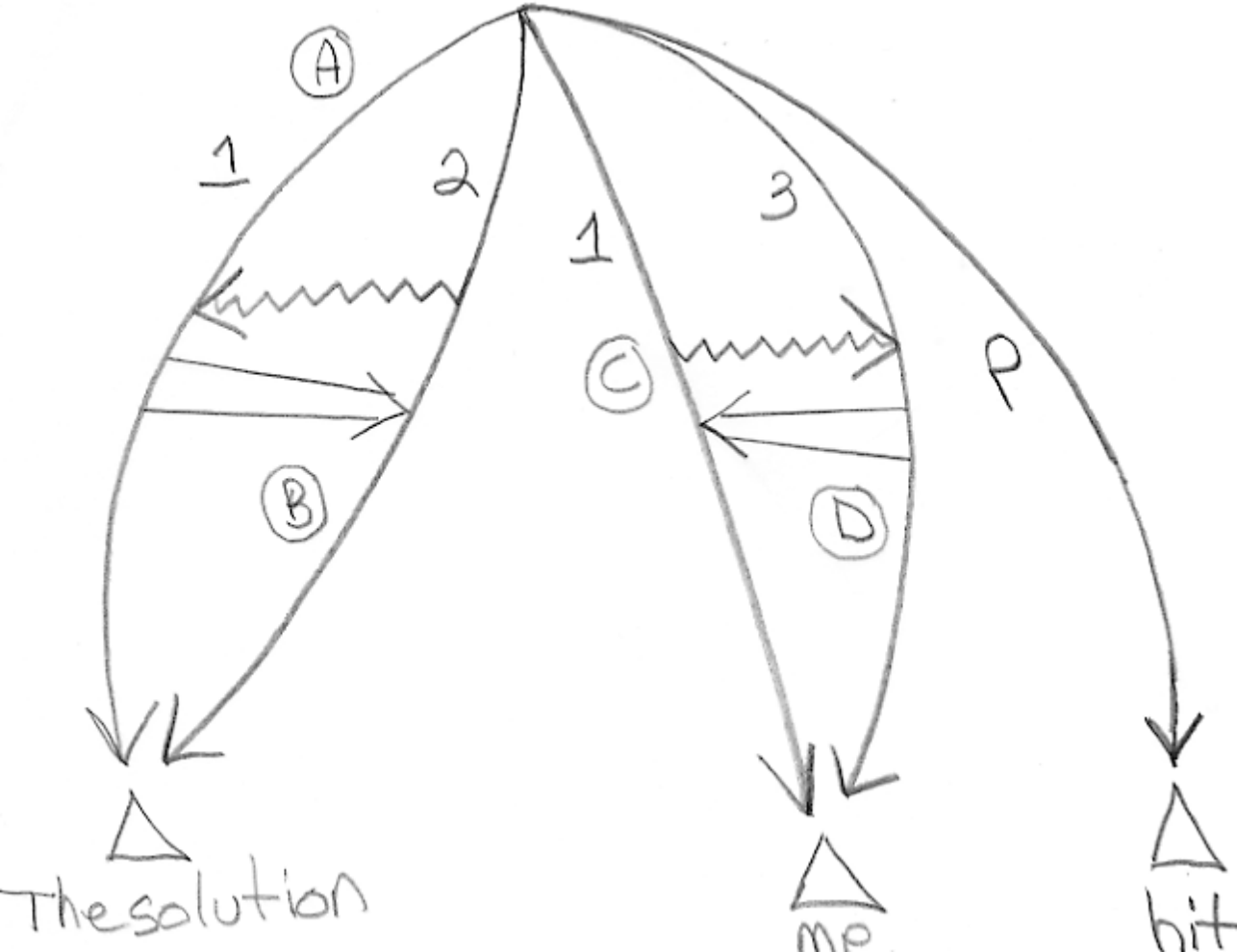
This principle restricts the domain of local successor$_{III}$s to a narrow subset of Central arc edge labels for the successor and an even narrower set for the predecessor.

What (3.44) and (3.46) jointly require then with respect to the structure in e.g. (3.35c) is that the 2 arc headed by Mary erase the 2 arc headed by the information and that the latter obligatorily has a local successor$_{III}$. The specification that the latter is specifically a local successor$_{III}$ is redundant. Given the Unique Eraser Condition, it cannot be a succesor$_{I}$ or successor$_{II}$. If one specified further that the successor was an 8 arc, one would approximate the intended consequences of earlier RG principles like the Chômeur Condition and Motivated Chômage Law of Perlmutter and Postal (1983) and the Chômeur Law of Johnson and Postal (1980: 305). I have of course allowed for threatening conditions and the arc erasures and local successor$_{III}$s they determine to be relationally broader, with six possible local successor$_{III}$ types defined by edge label and four types of predecessors for those (where RG ideas had only three). This conceptual broadening might be wrong but it allows for greater descriptive flexibility and some of it is appealed to in what follows, especially in connection with the various statuses of 2 objects demoted by 3 object to 2 advancement.

Cases like (3.35c) are typical of situations involving threatening. If they were the *only* type of case, the account would be simpler, and could require more generally that in every potential threatening arc erase the potentially threatening arc erase the arc it potentially threatens. But arguably there are cases of a different sort. I discuss several involving the interaction of passives and advancement of 3 objects to 2 in Chapters 5 and 6. Here I only mention what were called *inversion clauses* in the RG literature; see see e.g. Harris (1981, 1984), Perlmutter (1984) and, for an early metagraph account of inversion structures in French, Postal (1989). In current terms, an inversion clause is defined by a 1 arc having a 3 arc local successor$_{I}$, while a neighboring 2 arc has a 1 arc local successor$_{I}$. A (to be sure lexically very restricted case) of an inversion analysis would involve a metagraph fragment like (3.47b) for (3.47a):

(3.47)a. The solution just hit me.

b.


A
1
2
1
3
C
B
D
P
The solution
me
bit

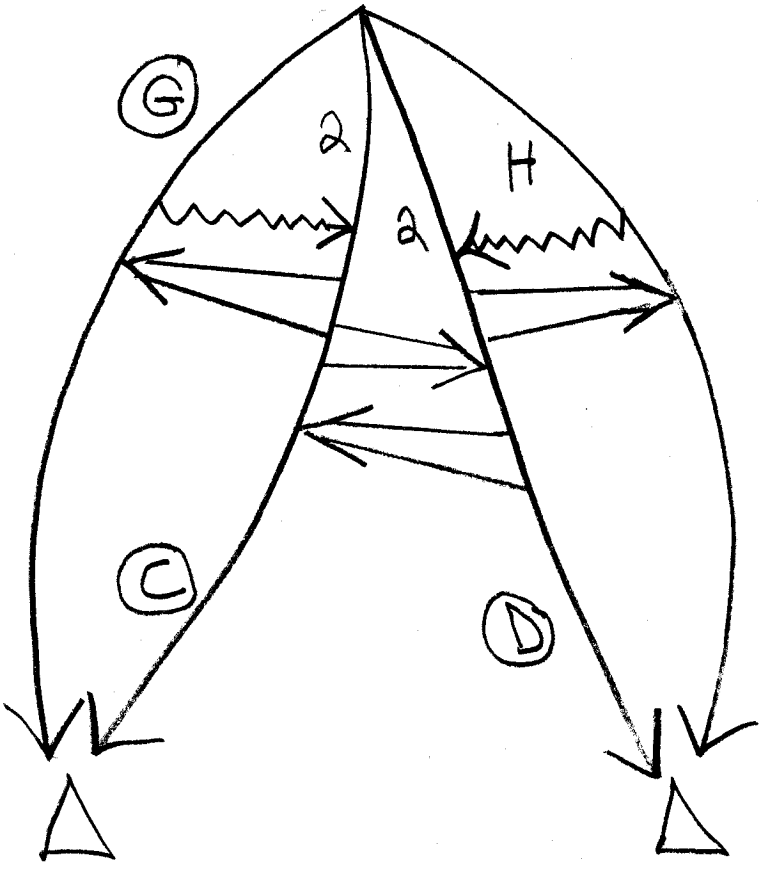
Here a 2 arc cooccurring with a viable 1 arc headed by me has a 1 arc local successor$_{I}$. It shares this property with what are called synthetic passives in Chapter 4, those not involving the auxiliary structure typical of English passives. But the inversion structure differs in that that the 1 arc local successor does not erase a 1 arc and thus does not qualify as an *arc passive arc* in the terminology of Chapter 4, hence fails to render the structure a passive under the analysis given there. Additionally, the 3 arc local successor in (3.47) is a successor$_{I}$ not a succcessor$_{III}$ characteristic of periphrastic passives.

Given present definitions and conditions, the situation in (3.47) is permitted because the 3 arc local successor$_{I}$ determines that although potentially threatened, the viable 1 arc is not threatened. It is immune to its potential threatener according to (3.45), hence not forced by (3.44) to be erased by that potential threatener, hence is not required to have a local successor$_{III}$. Final Arc Uniqueness is satisfied in inversion clauses even though the potentially threatened 1 arc is not erased by the arc that potentially threatens it and does not have a local successor$_{III}$. However, as documented in Chapter 5 section 3 the freedom just mentioned is excessive and a further constraint, the Immunity Condition, is introduced there.

Important questions about the development of the concepts Potentially Threatens and Threatens and conditions (3.44) and (3.46) involve the logically possible case where two (or more) distinct neighboring arcs G and H have W-equivalent local successor$_{I}$s. [11] In this scenario, each of the two local successor$_{I}$s, C and D, potentially threatens the other. Suppose further neither has an eraser distinct from the other.

Then each of C and D threatens the other, and each would be required by the Forced Erasure Condition to erase the other. Assuming arbitrarily that C and D are 2 arcs would then yield metagraph fragments like (3.48):

(3.48)


G
2
H
2
C
D

This situation instantiates a pattern of symmetric erasure between arcs. I know of no reason to believe this exists and more generally, even *ancestrals* of symmetric erasure may be excludable for distinct arcs:

(3.49) **The Remote Erasure Asymmetry Condition**

If A, B and C are distinct and A R-erases B and B R-erases C, C does not R-erase A.

With respect to congruent local successor$_{I}$s, the entailment is then that either such do not exist or that if there is such a pair, at least one of the local successor$_{I}$s must have a local eraser distinct from the other. The overall theoretical discussion of congruent local successors is most likely relevant to factual situations like those described for some Bantu NLs, which have on occasion been taken to instantiate multiple advancements to 2 in the same clause. This would in my terms of course involve multiple 2 arc local successor$_{I}$s. Relevant NLs would definitely include Haya and Kinyarwanda. See e.g. Duranti and Byrushengo (1977), Gerdts (1999), Gerdts and Whaley (1991a, 1991b, 1993a, 1993b), Kimenyi (1980, 1988), McGinnis and Gerdts (2004) and Samkoe (1994). Notably, Gerdts, Whaley and McGinnis argue for distinct analyses of these Bantu cases *not* invoking multiple advancements to 2 in the same clause.

Returning to cases like (3.35c), it is reasonable to require, as I have, the presence of a local successor$_{III}$, since not only is the predecessor 2 arc erased, but the relevant 2 object clearly heads some kind of later arc which is not a 2 arc. But a problem with making this situation general arises in cases already encountered with verbs like e.g. <u>feed</u>, <u>serve</u>, <u>supply</u> <u>teach</u>. In those, as discussed in connection with e.g. (3.75) below, the phrase heading the erased earlier 2 arc has no phonological realization, as in (3.51b):

(3.50)a. I fed the gorillas peaches.

b. I fed the gorillas.

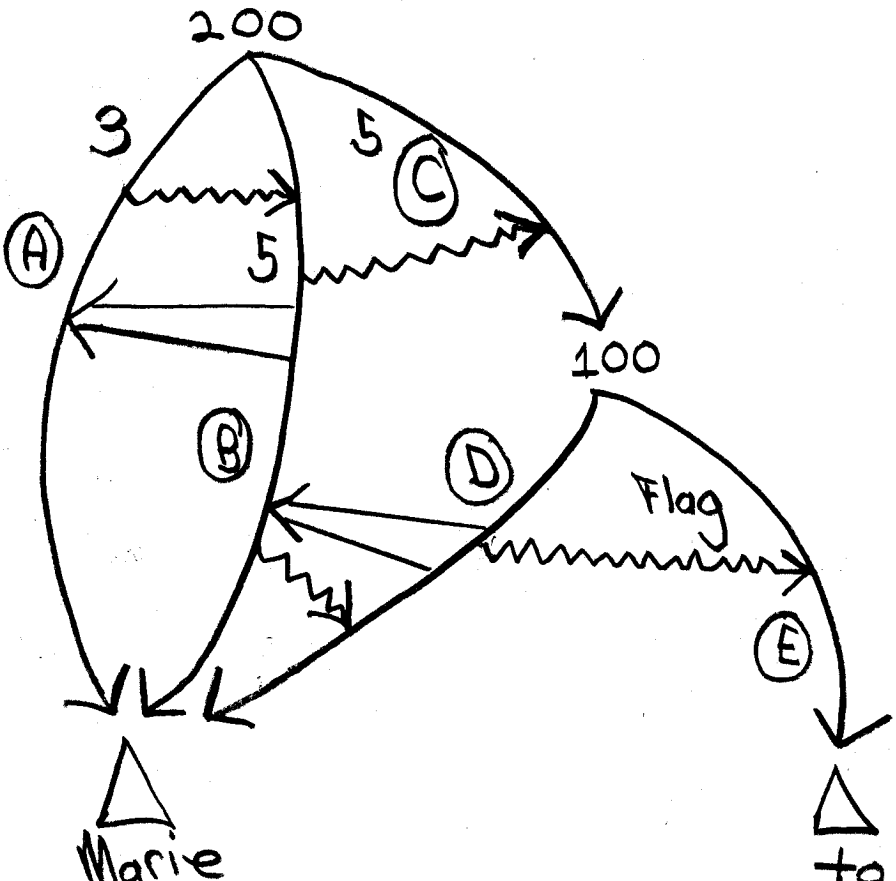
It can be shown that <u>the gorillas</u> in (3.51b) heads a 2 arc, arguably, given (3.51a), a local successor$_{I}$ of an initial 3 arc. Arguably too then, in (3.51b) the initial 2 arc, headed by some kind of unspecified nominal, is erased. In such cases, the original 2 arc could be permitted to have no successor. The alternative is to posit one and then specify somehow that it is erased. This issue arises also in the case of so-called *short passives*; see Chapter 4. I will not seek here to justify the decision I have made to require a successor$_{III}$ in such cases. It is motivated so far by the desirable generality of condition (3.46).

Finally, turn to (3.35a). Here the word Mary is represented as head of both an initial 3 arc and a 5 arc local successor$_l$ of that 3 arc. Evidently, no information is provided about the preposition to or the existence of a PP of which that preposition and the DP Mary are immediate constituents, although these are uncontroversial features of the sentence. As PP structures recur in the discussion of the data of relevance, this work needs to say something general about their metagraph representation, requiring a brief digression

3.3 Prepositional Flagging

First, along the lines of Johnson and Postal (1980), modulo differences between underlying assumptions between that work and this (e.g. rejection of *multiple* sponsors for a single arc), I propose, that PPs have a complex metagraph structure. Structure (3.51) provides a first approximation for the PP to Mary in (3.35a).

(3.51)


200
3
5
C
A
5
100
B
D
Flag
E
Marie
to

Its key features are these. The fact that the nominal (DP) of a PP is an internal constituent of it is taken devolve on noninitial arcs. More precisely, arc D in (3.51) is a foreign successor$_I$ of B, while C is a replacer of B. As a result of the existence of C and D, B's head node ends up defining a constituent internal to node 100, which is not the head of any initial arc. Since both A and B are erased, neither can be an S-graph component element. The whole PP corresponds to the head of an arc, C, which has the same edge label as the predecessor of the 60 arc, B. That is guaranteed by the appeal to the replace relation in the structure of such constituents, since a replacer by definition has the same edge label as the arc it replaces. Thus explicit in structures like (3.51) is that the overall PP ends up heading in the constituent immediately containing it an arc with same edge label as the edge label of the output arc the smaller DP phrase headed in the larger containing constituent.

Johnson and Postal (1980) posited the edge label Flag for arcs like E and took them to be sponsored by the neighboring foreign successor$_I$. That work also posited a special edge label for arcs like D, unique to PP structures, one called arbitrarily Marq. I would now consider the hypothesis that this is merely a special case of a set of specified relations for different types of nominal arc foreign successors (see the mention of 20 and 40 arcs in and around (4.43) below for other cases). [11] Here I have given it the numerical designation 60. It might be correct to assume a universal condition requiring each 60 arc to locally sponsor a neighboring, nonsuccessor Flag arc like E in (3.51). If, moreover, the condition limits Flag arcs to just that origin, then 60 arcs are just a designation for the foreign successors defining prepositional flagging in current terms.

Instead of positing a designated edge label like 60, one could, logically, take the edge label of an arc like D in (3.51) to be identical to that of its foreign precedessor$_I$. This would formally charactererize a phrase like <u>Mary</u> in (3.51) as a 5 object, even a final 5 object, with respect to its status internal to the PP structure. That would permit saying in effect that PP structures do not alter the ultimate relational status of the flagged DP. I have no basis for thinking that is correct and will not adopt it here. Moreover, even if it is, it could be accomplished even while taking D to be a 60 arc by requiring that 60 arcs have local successor$_I$s W-equivalent to their predecessors. This would determine that e.g. D in (3.51) would have a 5 arc local successor$_I$, permitting the flagged DP to bear the same final relation internal to the PP as it would have born if it was not flagged. By definitions

(1.69) and (1.70), B in (3.51) is an output arc but not a final arc, since it is erased by an R-Branch of its neighbor C.

NL grammars need to indicate the conditions under which PPs must or must not appear. From the current point of view, major constraints will determine which Central arcs must end up determining the presence of the PP structure. For instance, clearly English 1s, 2 objects, 3 objects, and 4 objects do not permit the PP structure, while 5 objects require it. To actually state such a condition involves various complications. Assuming, for instance, that it is necessary to associate PPs with 5 arcs, it is necessary to pick out from among all 5 arcs only those which should have 60 arc foreign successors.

An initial formulation of the needed constraints might say something along the following lines.

(3.52) **The *English* Prepositional Phrase Control Condition (Version 1)**

If A is an output arc and is not attached to a Flag arc, there is a 60 arc foreign successor$_1$, B, of A, and a replacer neighbor of A of which B is a branch if and only if A's edge label is one of {5, 6, ...} <and B (locally) sponsors a colimb Flag arc>.

If earlier remarks about the existence of a condition requiring each 60 arc to locally sponsor a colimb Flag arc were correct, the bracketed portion of (3.52) would not be required.

Condition (3.52) requires in (3.51) that the 5 arc B, which lacks a local eraser, have the foreign successor D and replacer C. If B were a 1 arc, 2 arc, 3 arc or 4 arc, (3.52) would, on the contrary, rightly preclude the isomorphic structure, corresponding to the fact that English 1s, 2 objects, 3 objects and 4 objects are not associated with prepositions, and hence the relevant edge labels would not be listed even in a complete version of the edge label list in (3.52). The specification that A is not attached to a Flag arc, determines that the requirement of a foreign successor, etc. does not hold for arc C in (3.51). For recall that for two arcs to be attached means that they share an endpoint (head node or tail node), and C in (3.51) shares an endpoint with the Flag arc E, namely, 100, C's head node and E's tail node.

The unwieldy (3.52) can be simplified by further definitions motivated for the same reasons as earlier ones. Namely, a recurrent pattern of arcs, arc labeling and sponsor/erase relations can be picked out once and for all, rather than repeatedly in separate rules (even of separate NLs):

(3.53)a, **Definition: *Flaggable***

A is *flaggable* if and only if it is an output arc and is not attached to a Flag arc.

b. **Definition: *Flagged***

(The head node of) A is *flagged* if and only if A has a replacer B and a 60 arc foreign successor$_1$, C, which is a branch of B and which (locally) sponsors a Flag arc.

These definitions, which beg the question of whether each 60 arc sponsors a colimb Flag arc, permit (3.52) to be simplified to (3.54).

(3.54) **The *English* Prepositional Phrase Control Condition (Version 2)**

If A is flaggable, then (A is flagged if and only if A's edge label = {5, 6, ...}).

Definitions (3.53) and condition (3.54) reveal clearly the need for a distinction between output arc and final arc. Evidently, it is the arc heading a whole PP which needs to be a final arc.. The concept output arc then provides the natural account of which arcs are flaggable. Since an output arc can only be a final arc if it is not replaced, and flagging involves the replace relation, it follows that the output ars which are input to (3.54) are not final, but the outputs determined by the rule can be.

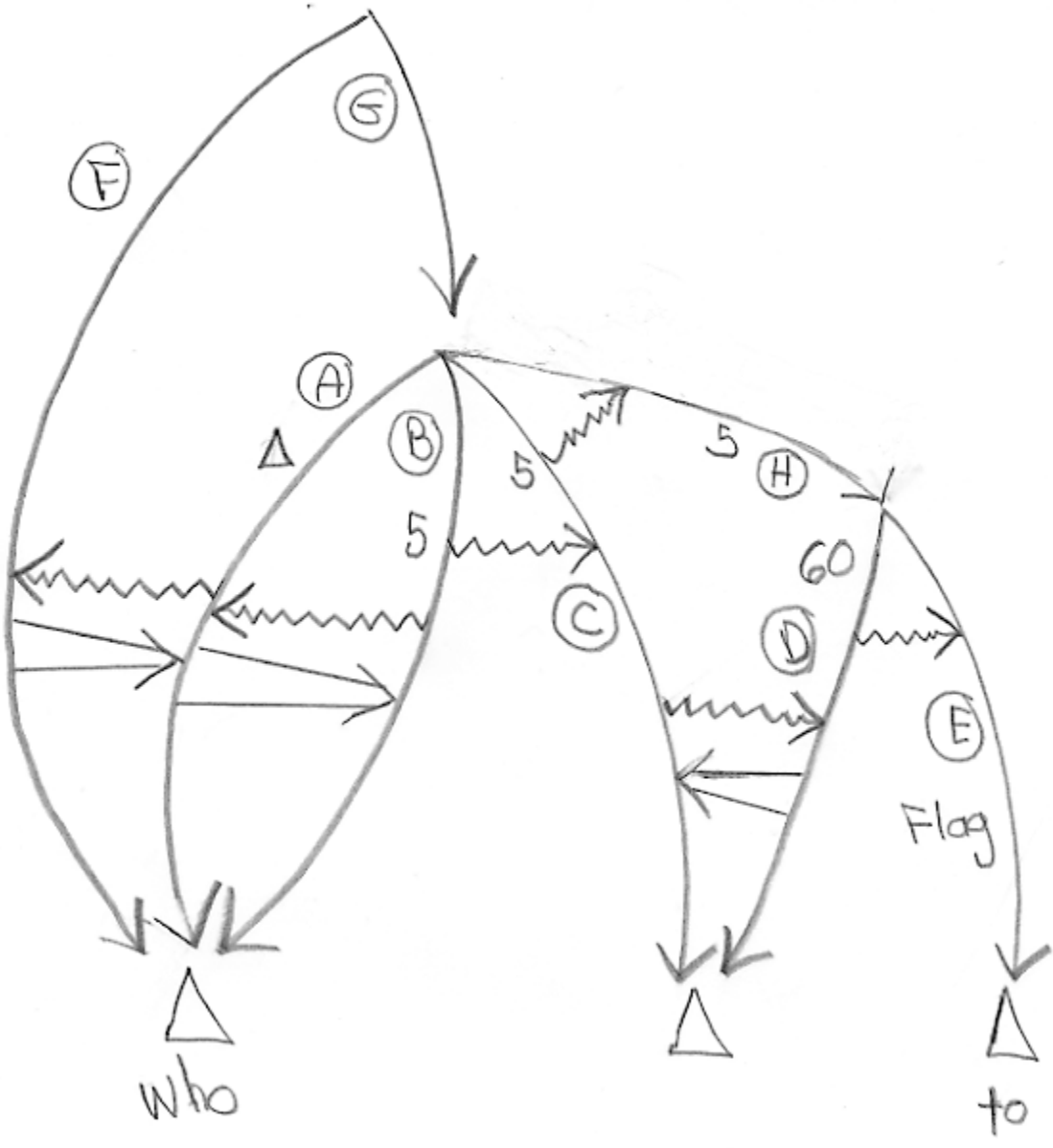
The view of flagging just sketched, specifically, constraint (3.54), has implications for apparent extractions from PPs like those in (3.55):

(3.55)a. Who did they supply information to?

b. None of those women did they supply information to.

As is well known, in many NLs (e.g. French, German) analogs of (3.55) are entirely ill-formed. These could simply involve foreign successor$_1$s of arcs like D in (3.51). However, an alternative analysis of cases like (3.55a) which could exclude all extraction from PPs appeals to a partial structure like (3.56):

(3.56)


G
F
A
B
Δ
5
5
5
H
60
C
D
E
Flag
Δ
Δ
Δ
who
to

The idea here is that apparent extraction from PPs is actually an advancement inherently linked to a replacer like C in (3.56), that is, to a copy arc in the sense of Chapter 1 (1.55). As indicated, the heads of such arcs correspond to resumptive pronouns. In apparent extraction from PPs, one would then assume that (i) the PP structure determined by condition (3.52) would require arc C in (3.56) to have the foreign successor$_I$ (and neighbor of a Flag arc), not B (which has a local eraser, namely A); thus the DP component of the PP in cases like (3.55) would not be the extracted DP (Who) but a resumptive pronoun heading arc C, one obligatorily rendered invisible by a condition I have yet to state. The extracted DP would not be a constituent of any PP in any sense; literally, there would be no extraction from a PP.

Justification for the proposed complex analysis and structures like (3.56) may arise from an observation in Kuroda (1964), which Ross (1967 [1986]: 133) formulated in the transformational terms of the time as in (3.57):

(3.57) No NP whose head noun is not pronominalizable may be moved out of the environment [$_{NP}$ P__].

This was designed to capture a correlation between the unstrandibility of certain prepositions associated with certain types of DP and the fact that those prepositions could not occur with weak definite pronoun objects:

(3.58)a. Herb disappeared in that way and my father disappeared in that way/*it too.

b. *What way did your father disappear in?

c. My sister arrived at an embarrassing time and Joan arrived at that time/*it too.

d. *That was the time that my sister arrived at.

Such facts would follow under an analysis like (3.56), if something requires that the invisible resumptive pronoun in the relevant environments obeys the same pronominal constraints as visible pronouns do in that environment. Otherwise, the corrrelations seem like sheer accidents.

While the view that bars extractions from PPs may thus seem attractive, what I have said so far is incomplete. First, the edge label of arc A in (3.56) is not specified, Greek Δ being an arbitrary symbol, not a specified edge label. It can be argued on stratal uniqueness grounds, although I will not treat the matter here, that Δ cannot be identified with any Central edge label and, more generally, not with any independently justified edge label at all. So to render structures like (3.56) tenable apparently requires recognizing an edge label unique to such structures. Required further is a constraint forcing every such arc to have a foreign successor$_I$ of the appropriate type. Moreover, at least for English, it must

presumably be specified that those edge label defined arcs which can have Δ arc local successor$_l$s are those, or at least a subset of those, which determine flagging. Otherwise, simple extractions of 1s, 2s, etc. would be permitted incorrect analyses in which the foreign predecessor$_l$ for an extraction is not a 1 arc, 2 arc, etc. but rather an Δ arc which is copied. There would then be no motivated principle to erase those copy arcs, which, however, do not in general form parts of S-graphs. Specifically, principle (3.59) just below, posited to account for the apparently invisible resumptive pronouns in extraction from PP cases, would not determine the needed erasure.

There is a further gap in the sketch of apparent extraction from PPs represented by (3.56). Since the resumptive pronoun posited therein is not overt, some arc must be required to erase arc D. It is, unclear which arc should be the eraser and how the condition requiring it is to be specified. Tentatively, I propose (3.59):

(3.59) **The Flagged Resumptive Pronoun Erasure Condition**

If A a Flag arc neighbor of a 60 arc B, then A erases B if and only if B is a successor of a copy arc seconded by an Δ arc.

This requires the erasure in the PP cases under consideration, while forbiding it in all others.

While the various constraints just gone over hardly seem ideal, I do not take that to undermine the proposal. In effect, recognition of Δ arcs claims that there is a special device permitting the extraction of unflagged constituents bearing relations which would otherwise require flagging because informally the flagging requirement is 'passed' to a resumptive pronoun. NLs like French, which exclude analogs of sentences like (3.55), could easily be described in such terms. Their grammars would incorporate a condition barring Δ arc local successor$_l$s.

In general, foreign successor$_l$ structure seem to be raisings, not lowerings, and claims have been made in the transformational literature that would bar lowerings (e.g. Chomsky, 1975: 106). Nonetheless, metagraph structures like (3.51) clearly represent lowerings in the following technical sense. Arc B has a foreign successor$_l$ whose tail node is an R-branch of an arc with the same tail node as B. It remains to capture the idea that 'most raisings' are not of this character, if that is indeed a valid generalization. Possibly, the claim can be limited to raisings into constituents which exist independently of those raisings themselves, which, in a clear sense, *the structure in* (3.51*) does not*. Namely, none of the arcs

headed by node 200 is an initial arc, whereas standard raisings involve higher constituents defined by the tail nodes of initial arcs.

3.4 Return to Main Thread

Returning to descriptive questions linked to (3.35c), Iwakura (1987) provided data consistent with the claim that the verbs under consideration with respect to the posit of 3 object to 2 advancement in English take initial 3 objects, revealing the ditransitive possibility for provide as well as supply:

(3.60) Iwakura (1987: 93)

a.They supplied the villagers medicine.

b. The supplied the villagers with medicine.

c. John provided the children books and toys.

d. John provided the children with books and toys.

The first object in (3.35b) and (3.60a, c) as well is a 3 object, having all the limitations documented for such, while the first object in (3.35c), like that in (3.60b, d), is free of them and is arguably a 2 object, as partially justified by (3.61) through (3.64):

(3.61) Iwakura (1987: 94)

a. *Who did they supply medicine?

b. Who did they supply with medicine?

(3.62)a. Which of the women did Mike supply with information?

b. *Which of the women did Mike supply information?

(3.63)a. That woman, supplying whom with information was unwise, ...

b. *That woman, supplying whom information was unwise, ...

(3.64)a. Mike didn't supply anything/jackshit/squat with bad data.

b. Mike didn't supply anything/*jackshit/*squat bad data.

Moreover, Rodney Huddleston (personal communication of 12/21/2005) kindly informed me that (3.65) occurs on page 762 of the large print edition of Elizabeth George's 2005 HarperCollins mystery *With No One as Witness*:

(3.65) Lynley had a copy of *The Source*. It had been supplied him by the guard in the kiosk when he'd arrived a short time earlier.

As he noted, (3.65) is a second object passive of a ditransitive structure, thus supporting both the ditransitive possibility for supply and the possibility of second object passives of ditransitives in some varieties of English (see Chapter 7, section 7).

The fact that a single extended paradigm shows the notional 3 object manifesting as a final 3 object as well as a final 2 object provides some support for the idea that patterns like (3.35a, c) do involve initial 3 object status for the notional 3 object which ends up as a 2 object or in a PP in to.

Another bit of evidence supporting the 3 objecthood of the final 2 object of cases like (3.35c) comes from a different source. I observed earlier that what Bresnan (1975) called *subdeletion* is impossible for final 3 objects:

(3.66)a. I sent more of the books to the children than I did of the magazines (to the adults).

b. *I sent more of the children books than I did of the adults (magazines).

Although it is a final 2 object, the postverbal DP in (3.26b) and (3.35c) also precludes subdeletion:

(3.67)a. I entrusted more of the green ray guns to Jack than I did of the red ray guns (to Bill).

b. *I entrusted more of the men with ray guns than I did of the women (with bazookas).

c. I supplied more of the recent files to Mary than I did of the older files to Louise.

d. *I supplied more of the recent hires with outdated files than I did of the older hires with usable ones.

This raises the possibility that the proper characterization of the subdeletion restriction would at least entail (3.68):

(3.68) **The Subdeletion Condition**

Subdeletion is impossible with a DP heading a 3 arc.

Since I do not have an overall conception of subdeletion, I will not attempt to formulate this constraint formally. But if the informal account is right, then the ill-formedness of (3.67b, d) is evidence for the claim that their final 2 objects are earlier 3 objects. [12]

Another class of cases, illustrated by paradigms like (3.69) and (3.70), arguably instantiate 3 object to 2 advancement in English without being entirely parallel to the class partially described in (3.35).

(3.69)a. I cabled/wrote letters to the gorillas.

b. I cabled/wrote the gorillas letters.

c. I cabled/wrote the gorillas.

(3.70)a. I fed/served apples to the gorillas.

b. I fed/served the gorillas apples.

c. I fed/served the gorillas.

Although (3.69) and (3.70) might seem parallel, the *c.* cases contrast systematically with respect to features distinguishing *single 3 objects* from single 2 objects, as (3.71) and (3.72) document:

(3.71)a. *The gorillas were cabled/written.

b. *I recabled/rewrote the gorillas.

c. *Gorillas don't cable/write often.

d. *Gorillas are hard animals to cable/write.

e. *[Which gorilla]$_1$ did Mike cable/write t_1?

f. *[Which gorilla]$_1$ did Mike cable/write friends of t_1?

(3.72)a. The gorillas were fed/served.

b. I refed/reserved the gorillas (*apples).

c. Gorillas don't feed/serve quickly.

d. Gorillas are hard animals to feed/serve.

e. Which gorilla did Mike feed/serve?

f. Which gorilla did Mike feed/serve friends of?

Plausibly then, (3.72c) but *not* (3.71c) involves 3 object to 2 advancement with the underlying 3 object ending up as a final 2 object. These examples reveal sharp differences between the sort of analysis I am sketching and talk in terms of so-called thematic (semantic) *roles*, whose function in NL grammars I suspect to be null. In these cases, syntactic patterns fail to correlate directly with thematic similarities, even for fixed verbs. That is, the 'goal' DP in e.g. (3.69b) is a final 3 object but the seemingly parallel 'goal' DP in (3.69c) is a final 2 object.

While cases like (3.70) arguably involve 3 object to 2 advancement, there is an obvious contrast with the patterns represented by generalization (3.68). In the latter cases, the posited initial 2 object in general ends up flagged with <u>with</u>, while in cases like (3.70) such flagging is impossible:

(3.73) *They fed/served the gorillas with apple sauce. (ignore bizarre instrumental reading for <u>apple sauce</u>)

Moreover, in (3.70) the only evidence that there actually is an initial 2 object is that the relevant verbs also occur in ditransitive clauses and that thematically the structure can be taken to involve invisible arguments. So e.g. an example like (3.74a) clearly entails (3.74b):

(3.74)a. I fed the gorillas.

b. I fed the gorillas something.

My conclusion is that the few verbs like feed, serve permit 3 object to 2 advancement *only* if the initial 2 object is an unspecified nominal which obligatorily fails to appear when the 3 object does advance. This requires refinement of (3.34). Suppose one informally designates the relevant type of unspecified nominal as ⊗. This amounts to simultaneously recognizing the existence of a syntactic category of unspecified nominal while refraining from offering any structural analysis of such a thing. Then a new formulation might be something like:

(3.75) **The *English* Ditransitive 3 Object to 2 Advancement Condition (Version 3)**

If A is a 3 arc neighbor of a P arc, B is a 2 arc local successor$_1$ of a A and C is threatened by B, then either B's head is not labelled ⊗ and C is [{credit, entrust, furnish, present, provide, supply.....}] zoned or B's head is labelled ⊗ and C is [{feed, serve, supply, teach,....}] zoned.

There is one type of relevant fact which (3.75) cannot account for. It does not block ungrammatical cases where certain of the verbs listed therein occur in a minimal clause in which *neither* 3 object to 2 advancement nor 3 object to 5 demotion manifests. In such cases, the relevant clauses will involve *final* 3 objects:

(3.76)a. *Jerome credited Tony the discovery

b. *Jerome entrusted Tony the manuscript.

Evidently, *some* of these verbs fail to allow this possibility. Below such ungrammatical cases are taken as consequences of a further lexical statement simply barring some verbs, including those of (3.76) as well as the frequently discussed donate, from occurring with *output* 3 arcs.

3.5 Links Between Array 1 Single Objects and Ditransitive Second Objects

Beyond recognizing an edge labelling identity between ditransitive first object arcs and Array 2 object arcs, one can justify a similar connection between ditransitive *second* objects and Array 1 single objects. In present terms both represent 4 objects. The justification is that ditransitive *second* objects share most of those properties which define Array 1 in contrast to Array 0, that is, do not qualify as 2 objects, but *fail* to share the additional features distinguishing Array 2 from Array 1 objects and so do not qualify as 3 objects either.

That ditransitive second objects do not behave like 2 objects is documented very skeletally in (3.77)-(3.80).

(3.77) A ditransitive structure cannot have a corresponding *middle clause* whose subject corresponds to the second object:

a. Everaert (1990: 126)s

*Those books don't sell linguists.

b. *Chocolate milk doesn't sell Chinese often.

c. Compare: Chocolate milk doesn't sell well.

d. Compare: Chocolate milk doesn't sell to Chinese (often).

e. Mohawk doesn't teach easily to gorillas.

f. *Mohawk doesn't teach gorillas easily.

(3.78) The second object DP of a ditransitive has no corresponding *object raising* form:

a. *That prize will be hard to award Marsha.

b. Compare: That prize will be hard to award to Marsha.

c. *Mohawk will be hard to teach that gorilla.

d. Compare: Mohawk will be hard to teach to that gorilla.

(3.79) A ditransitive second object DP has no corresponding *object deletion* form:

a. *Mohawk is too complicated to teach any gorilla.

b. Compare: Mohawk is too complicated to teach to any gorilla.

(3.80) The second object DP of a ditransitive has no corresponding *nominal object raising* form:

a. *That is a strange language to teach a gorilla.

b. Compare: That is a strange language to teach to a gorilla.

These data provide the principal support for the claim that the second objects of ditransitives behave like, and thus should be assumed to have the same status as, Array 1 single objects. There are several other ways in which second objects behave differently from Array 0 single objects, but these do not show much:

(3.81) The second object DP of a ditransitive has no corresponding *nominalization* in <u>of:</u>

a. *the handing of them of chocolate milk

b. *the awarding of her of the Nobel Prize

c. Compare: the handing of chocolate milk to them

(3.82) The second object DP of a ditransitive has no corresponding nominalized *incorporation* form:

a. *apartment renting of students

b. *threat-sending of senators

(3.83) The second object DP of a ditransitive has no corresponding <u>-able</u> form

a. Kayne (1984a: 141)

*Linguistic books are sendable prisoners.

b. *That apartment is unrentable students.

Examples like (3.81) show little because they are independently blocked by the condition precluding verbal 3 objects from appearing in corresponding nominalizations marked with of; examples like (3.82) show little for the same reason. And those like (3.83) are also arguably independently blocked by a condition precluding any sort of objects with adjectives.

However, second objects of ditransitives, like Array 1 objects, do *not* share the Array 2-defining restrictions of (2.87) of Chapter 2. For instance, (3.84) shows that second objects can left-extract and be Complex DP Shift targets:

(3.84)a. What kind of cookies did you send the kids?

b. It was broccoli cookies that she offered the kids.

c. She sent the kids on Friday ~ two boxes of sugar-free broccoli cookies.

d. She assigned that nurse during that week ~ a really hard job.

And (3.85) reveals that second objects of ditransitives can manifest subdeletion as well as subconstituent extraction and also permit the slang NPI forms:

(3.85)a. He sent the older children more cookies than he did the younger children donuts.

b. It was Ernie that they mailed Barbara compromising videos of.

c. They didn't sell her jack/squat.

The reader can verify that other negative Array 2-defining properties also do *not* hold of ditransitive *second* objects.

Together, this evidence suppports the conclusion that in *true* double object structures, the first object is a superficial 3 object, the second a superficial 4 object. The '*true*' terminology is meant to distinguish the cases I've been discussing from DP sequences like those in (3.86), noted in e.g. Jespersen (1927 [1961: 299]):

(3.86)a They painted the barn that horrible color.

b. They named him ambassador to Togo.

c. They made him a partner.

d. They consider her a genius.

e. You shouldn't confront people that way.

It is not part of my goal here to analyze these structures. But application of the tests proposed for Arrays 0, 1 and 2 reveals that the first object is a 2 object, not a 3 object or 4 object in all these cases. So, all the verb adjacent objects can be Complex DP Shift targets, arguing they are not 3 objects:

(3.87)a. They painted that horrible color ~ both the barn and the garage.

b. They named ambassador to Togo ~ someone who was of dubious qualifications.

c. They made a partner ~ a person who they did not know very well.

d. They consider a genius ~ that slow witted young woman who you just listened to.

e. You shouldn't confront that way ~ anyone who is applying for an entry level position.

Moreover, all can be targets for object raising, arguing they are not 4 objects:

(3.88)a. The barn was easy to paint that color.

b. She will be hard to name ambassador to Togo.

c. That woman will not be easy to make a partner.

d. She is difficult to consider a genius.

e. She is impossible to confront that way.

The claim that immediately postverbal DPs in (3.86) are 2 objects, that is, in terms of grammatical distributions, fail to manifest the properties defining either of Arrays 1 or 2, is largely consistent with the view of Jespersen (1927 [1961: 299]), except that he analyzed cases like (3.86b) as involving one complex object consisting of a subject and a predicate. Jespersen observed that not all the cases of the sort at issue have parallel analyses. While (3.86b, c, d) have a second DP which is of course a *predicate nominal* (distinct from any of the types of object), cases like (3.86e) were taken to involve a second DP which is a kind of adverbial adjunct. That seems correct to me. Emonds and Whitney (2006) also stress that cases like (3.86b, c, d) represent a 2 object followed by a predicate nominal.

In one important way, cases of the form Verb + DP + Predicate Nominal bear directly on current concerns. For not all instances of this pattern actually involve a 2 object. Consider:

(3.89)a. She made him (into) a good husband.

b. She made him a good wife.

That such constructions contrast was noted in Bresnan (1978), as discussed in Wasow (1977: 352-353; 1981: 303). These authors observed that the nonpredicate nominal in the structure (3.89a) could passivize, while that in the only seemingly parallel structure (3.89b) could not:

(3.90)a. Aunt Mary made the boys good little housekeepers.

b. The boys were made good little housekeepers by Aunt Mary.

c. The boys made Aunt Mary good little housekeepers.

d. *Aunt Mary was made good little housekeepers by the boys.

Further investigation shows that the pattern in (3.89b) behaves in general like an instance of Array 2, arguing that the postverbal DP is a 3 object, while that in (3.89a) behaves like an instance of Array 0, arguing that it is a 2 object. The passive facts in (3.90) are simply a special case of array contrasts seen earlier. So the first DP in the (3.89a) pattern can be left extracted, shifted in the Complex DP Shift construction, have a subconstituent extracted, etc.: [13]

(3.91)a. Which of her acquaintances did she make (into) a good husband?

b. She made a good husband ~ the guy she had originally been wary of getting involved with.

c. It was Ernie that she made an old friend of (into) a really good husband.

But the verb adjacent DP in (3.89b) behaves contrastively, and like a 3 object:

(3.92)a. *Which of her lawfully wedded partners did she make a good wife?

b. *She made a good wife ~ the guy who she originally met at a church supper.

c. *It was Ernie that she made an old friend of a really good wife.

The contrasts between (3.91) and (3.92) illustrate in microcosm the importance of distinguishing 2 objects from 3 objects in English syntax. And cases like (3.92) are, of course, further evidence of the incorrectness of claims like that in (2.36) of Chapter 2 that all single objects are 2 objects.

Parallel 2 object/3 object contrasts occur in single object patterns with a following <u>as</u> phrase:

(3.93)a. She treated him as a partner.

b. She failed him as a partner.

Compare:

(3.94)a. He was treated as a partner (by Lucille).

b. Which employee did she treat as a partner?

c. It was Tom that she treated one friend of as a partner.

d. She treated as a partner ~ one of his friends.

(3.95)a. *He was failed as a partner (by Lucille).

b. *Which employee did she fail as a partner?

c. *It was Tom that she failed as a partner.

d. *She failed as a partner ~ one of his friends.

Here too the key distinction of this work is critical for understanding patterns, which would be wrongly conflated if one accepted assumption (2.36) and failed to relationally distinguish different types of single object.

3.6 The Universal Status of 3 Object and and 4 Object Types

While the distinctions between 2 objects, 3 objects and 4 objects as applied so far to single object and ditranstive structures might, internal to English syntax, seem radical, in a crosslinguistic perspective subsuming no more than French or German, at least the 2 object/3 object contrast appears entirely banal. For in these and many other NLs, analogs of what I call 2 objects and 3 objects are not even superficially similar, since 2 objects or their linked clitics occur in the accusative and 3 objects in the dative. Modern English may then be peculiar only in that no *morphological* features distinguish the syntactically distinct 2 objects, 3 objects and 4 objects. Put contentiously, the morphological evolution of Modern English has made it possible for many grammarians, including the present writer, to confuse ditransitive superficial 3 objects with superficial 2 objects (and also, of course, superficial 4 objects with superficial 2 objects). Such mistakes are impossible in French, German, Japanese, etc., whose morphologies largely preclude confusing relationally distinct sorts of objects.

Beyond the failure of English morphology to distinguish 2 objects and 3 objects, an additional feature of English grammar facilitates conflating ditransitive 3 objects with 2 objects. This is the productive existence of alternations like earlier examples such as:

(3.96)a. Melissa sent Arnold a message.

b. Melissa sent a message to Arnold.

For the existence of rough paraphrases like (3.96b) of cases like (3.96a) has suggested to many, including me at one time, that it is the PP in <u>to</u> which represents the English indirect object; see e.g. Huddleston (2002a: 308-309). This was also a traditional grammatical idea; see Curme (1931: 96-97), Jespersen (1924: 162) and Hornby (1954: 51-52). The latter's discussion of his Table 35 makes explicit a usage of 'indirect object' covering both the first object of a ditransitive and the <u>to</u> phrase alternate for verbs permitting both patterns. The idea that <u>to</u> PPs are 3 objects was also incorporated in early RG work.

Were that the case, an analysis of the first object in structures like (3.96a) as the 3 object would be contraindicated, and motivation for the Dative Shift analysis would be obvious. However, I assume and argue on partly universal grounds that English <u>to</u> phrases like that in (3.96b), while representing underlying 3 objects, manifest a distinct superficial grammatical relation with no traditional name, one called *semiobject* in Postal (1990a) and above, and designated by the edge label 5. I return to this issue presently, with key evidence from German.

While crosslinguistic evidence of a 2 object/3 object distinction is sufficiently available to make the matter in general banal, it is much harder to find crosslinguistic support for the 2 object/4 object distinction of the sort that numerous NLs provide for the 2 object/3 object distinction and that various facts have been shown to provide for an English-internal 2 object/4 object distinction. Relevantly then, I find remark (3.97) *enormously* suggestive of the possibility that a 2 object/4 object distinction plays a genuine role in Hausa:

(3.97) Donna Gerdts , Simon Fraser University (personal communication to the author about the West African language Hausa circa 1992-3)

> "An interesting problem has emerged. Hausa is [S V IO O other] and has 3-2 and Loc-2 (initial intransitives only) as evidenced by Case and object raising with 'tough' and 'resemble'. However, the initial 2 in ditransitives--whether or NOT there is advancement of the 3--lacks all object properties -- including the above and passive as well."

Gerdts claimed that object raising and passive both only target 2 objects, that there is a morphological case characteristic of 2 objects and that regardless of whether the initial 3 object of a ditransitive clause behaves like a 2 object with respect to these features, the *initial* 2 object, which corresponds to the nominal I treat as a 4 object in English ditransitives, *manifests none of the 2 object properties.* These facts would evidently follow from an analysis paralleling that I advocate for English, in which the Hausa second object, presumptively an earlier 2 object, is forced to be a superficial 4 object. Absent that view, these facts would appear mysterious.

Additional nonEnglish support for the grammatical relation 4 derives from French. Various facts about such single object verbs as <u>avoir</u> 'to have' and <u>vouloir</u> 'to want' can be taken to argue that *their* superficial objects are 4 objects not 2 objects. Their being 3 objects is internal to French out of the question. Each of the negative properties, listed in (3.98i) yields a contrast with characteristic behavior of French 2 objects, as shown in (3.99) for the standard 2 object taking verb <u>critiquer</u> 'criticize'.

(3.98)(i) The objects of the French verbs <u>avoir</u>, <u>vouloir</u> cannot:

a. be targets for periphrastic passivization;
b. be targets for the kind of <u>se faire</u> clause union passivization discussed in Chapter 4, section 3;
c. be targets for middle formation;
d. be targets for object raising (e.g. with <u>facile</u> 'easy');
e. determine reflexive/reciprocal clitics;

(ii) (ia-e) support the 4-hood of the objects of these verbs since the properties they lack are systematic characteristics of French 2 objects. If these verbs take 2 objects, then properties (ia-d) are anomalous and their correlation entirely unexplained.

(3.99)a. Jacques a eu/voulu/critiqué cela.

"Jacques had/wanted/criticized that"

b. Cela a été *eu/*voulu/critiqué par Jacques.

"That was had/wanted/criticized by Jacques"

c. Cela s'est fait *avoir/*vouloir/critiquer par Jacques.

"That got had/wanted/criticized by Jacques"

d. Cela *s'a/*se veut/se critique tout le temps.

"That has/wants/criticizes all the time"

e. Cela sera difficile à *avoir/*vouloir/critiquer.

"That will be difficult to have/want/criticize"

f. *Heureusement, vous vous avez l'un l'autre./*vous vous voulez l'un l'autre./vous vous critiquent l'un l'autre.

"Happily, you have each other/Happily, you want each other/Happily, you criticize each other"

The only French-internal *price* known to me for positing 4 objects with these verbs is that one must recognize non-reflexive *accusative* verbal clitics determined by 4 obects as well as the standard case of determination by 2 objects (given e.g. the grammatical Heureusement, je vous ai (, vous). "Happily, I have you"'). [14]

An additional suggestive ground for recognizing 4 objects in NLs other than English arises in Rhodes's (1990) description of the Alognikian NL Ojibwa. Since the facts are complex, space requires that I be *extremely* sketchy; those interested in real detail should consult the original.

Rhodes account is designed to show first that there are two types of objects in Ojibwa, traditionally called *primary* and *secondary* objects. Rhodes concluded, on the basis of RG assumptions of the time, that primary objects are 2 objects and secondary objects 3 objects. There was no notion of 4 object in the framework Rhodes appealed to. But I suggest that analyzing Ojibwa secondary objects as 4 objects gives a better fit with universalist assumptions and costs nothing internal to Ojibwa as against Rhodes's claim.

First, while many single object verbs take primary objects, the number taking secondary objects is small, probably less than one hundred (Rhodes, 1990: 408). The parallelism with the English situation in which thousands of single object verbs take 2 objects but only a restricted class 4 objects is evident. Second, primary objects passivize, while secondary ones do not; again parallels with the English situation are clear.

Third, Ojibwa ditransitive clauses manifest a primary object and a secondary object. Significantly, the notional 'recipient' is in all cases a primary object and Rhodes argues that the other object is a secondary object. In Rhodes' terms, this yields a crosslinguistically perhaps unknown situation where a sentence meaning 'I fed the boys blueberries' (Rhodes, 1990: 409), 'boys' is a final 2 object and 'blueberries' a final 3 object. But if the second object is a 4 object, the oddity disappears; the pattern of relations would be one whose elements at least are also seen in English, that is, with the 'recipient' a 2 object in 'They provided her with blueberries' and the non-'recipient' a 4 object in 'They sent her blueberries'. My guess would then be that Ojibwa is an NL in which 3 objects in general obligatorily advance to 2 object; possibly there are no Ojibwa *final* 3 objects at all. [15] If so, the structure of the Ojibwa 'blueberries' clause would be schematically:

(3.100)	'I'	'boys'	'blueberries'
	1	3	2
	1	2	4

Parallelisms with the situation described by Gerdts for Hausa are then also clear.

Finally, appeal to the 2 arc/4 arc distinction *might* be relevant to many NLs in which case contrasts in objects correlate with interpretive facts:

(3.101) Lidz (2006: 10)

> "Languages very often use morphological means to distinguish two types of direct objects, marking some direct objects with morphological case leaving others unmarked or, in some instances, marked with a different case (Comrie 1979, Croft 1988, de Hoop 1996, Kiparsky 1998, Torrego 1998, Aissen 2004). Such marking generally distinguishes objects on the basis of factors like animacy, definiteness, and specificity."

3.7 Distinct Relations at Different Levels

The standard modern relational assumption that the same phrase can bear distinct relations to the same constituent *at different levels*, already informally invoked with respect to the possibility of analyzing some or all Array 1 cases as manifesting 2 object to 4 demotion, and the possibility of a 3 to 2 advancement analysis of various cases, becomes particularly significant for treating alternations like (3.102) and (3.103), exactly those where I claimed the prevalent Dative Shift view fails.

(3.102)a. I sent my brother a package.

b. I sent a package to my brother.

(3.103)a. I bought my brother a book.

b. I bought a book for my brother.

I will try to bolster this negative claim with positive views of such alternations.

A basic assumption is that, although both *a*. examples end up with a final 3 object and 4 object, (3.102) and (3.103) do *not* have entirely parallel analyses. They *are* parallel in that in all cases the verbs take an initial 2 object. The argument that in e.g. both (3.102a, b) the phrase <u>a package</u> heads a single arc type can be based on the parallel semantic relations and selectional restrictions. So e.g. substitution of <u>Jupiter's circumference</u> for <u>a package</u> yields the same anomaly in both. That the DPs in question are 2 objects is supported by the fact that such phrases in the *b* case have the extremely unrestricted passivization properties of 2 objects (e.g. those of uncontroversial 2 objects in structures which are neither ditransitives nor their alternations).

But there are nonparallels. For cases like (3.102a, b), recall the *Class A ditransitives*, where a 3 object alternates with a <u>to</u> phrase, I propose that both involve an initial 3 object. The *b.* example then represents demotion of that initial 3 object, by hypothesis to 5. This is realized in English principally via PPs in <u>to</u>. Thus, abstracting from major framework distinctions, my analysis of Class A ditransitives shares key features with view (3.104):

(3.104) Wasow (1981: 295)

> "First, my dative rule differs from most others in taking the 'double-object' construction as the input and deriving the other from it."

Since I have concluded that ditransitive second objects are (final) 4 objects, I assume that a principle sketchable as in (3.105) holds for English:

(3.105) **The *English* 3 Object-Induced 2 to 4 Demotion Condition (Version 1)**

If A is a 2 arc neighbor of a final 3 arc and locally erasable by a 4 arc, then A has a 4 arc local successor$_1$.

Roughly, (3.105a) says that in a ditransitive clause with a 3 object which does *not* demote to 5, the (otherwise) last 2 object is *required* to demote to 4 object. [16] The precise formal concept Locally Erasable permits making sense of the otherwise obscure notion of 'otherwise' being a final 2. Erasable permits one to pick out those 2 arc neighbors of final 3 arcs which have no non- 4 arc erasers at all. That is not a sufficient reconstruction of the idea sought in (3.105) since one does not want to allow a 2 arc to fail to demote to 4 just because it has a *foreign* eraser, e.g. if it is raised or extracted. But (3.105b) specifies Locally Erasable, which means the presence of a 4 arc local successor$_1$ is required in the absence of any non-4 arc *local* eraser. The phrasing determines that in cases like (3.102b), where the 3 object demotes to 5, the underlying 2 object is not required to demote; presumably, it remains a 2 object.

Although obscure at this stage how it accomplishes this, principle (3.105) is intended to determine that passivization of 3 objects does *not* suppress the requirement of 2 object to 4 demotion. It can yield this consequence in association with an analysis of English participial passives of 3 objects which determines that the participial inner clauses have final 3 objects. Such can be based on a variant of the analyses of *periphrastic* passives sketched in Postal (1985, 1992a); it takes advantage inter alia of their periphrastic, that is, multiclause, structure. See Chapter 4 for elaboration.

That an otherwise final 2 object must demote to 4 in a ditransitive clause whose 3 object passivizes, is factually motivated as follows. The criteria which pick out the second object of an English *active* ditransitive as a 4 object seem, to the very limited extent one can tell, also to do so when the 3 object is passivized. Two exemplifications: first, as in actives, the second object in a passive involving passivization of a 3 object is not subject to object raising with predicates like <u>easy</u>:

(3.106)a. Jenny sent that kind of present to Larry.

b. Jenny sent Larry that kind of present.

c. Larry was sent that kind of present by Jenny.

d. That kind of present is not easy to say she sent to Larry.

e. *That kind of present is not easy to say she sent Larry.

f. *That kind of present is not easy to say Larry was sent.

This test as given depends on object raising taking its target from inside a finite complement clause not containing the object raising trigger.

This requirement is problematic, as many English variants do not allow such targets. In fact, Postal (1971: 114) starred (3.107a) and Ross (1973: 195) cited (3.107b), subsequently stating (3.107c). Berman (1974) also noted that clausal object raising was impossible across finite clause boundaries, citing as starred (3.107d). Along the same lines, Hukari and Levine (1991) gave (3.107e):

(3.107)a. *You are tough for me to believe that Harry hates.

b. *Gravel pizza is tough for me to prove that she thought of.

c. ''However, as has often been remarked, Tough Movement will not operate out of <u>that</u> clauses.''

d. Berman (1974: 304 (iii)

Joe will be impossible to convince Mary that she should invite.

e. *Kim is tough for me to believe that Sandy would ever marry.

But my contrary 2008 judgment of these cases is not just theory driven or idiosyncratic. Arguably, there is a dialect split. For my current acceptance parallels that of Bach and Horn (1976: 283), who cite (3.108b) (twice) as grammatical, Pollard and Sag (1994: 166), who cite (3.108c, d, e) as grammatical, of Steedman (1996: 63), who cites (3.108f) as grammatical, and of Stowell (1981: 446), who cites (3.108a) as grammatical:

(3.108)a. John should be easy for us to tell Bill that he really ought to ask Mary to tell Jane to invite.

b.Walter is hard for me to imagine that anyone would look at.

c. Kim would be easy to prove Sandy bribed.

d. This theorem will take only five minutes to establish that Gödel proved in 1930.

e. This $500 bribe will cost the government $500,000 to prove that Senator Jones accepted.

f. John is easy to imagine that we could please.

Moreover, despite their starred (3.107e), Hukari and Levine (1991: 133) noted that Nanni (1978) and Kaplan and Bresnan (1982) explicitly accept such examples. Strangely, they suggested accounting for this in terms of a *processing confusion* of the relevant construction by the latter authors with topicalization. But this amounted to a refusal to accept the contrasting judgments of equally native speakers, moreover, experienced linguists. I discern no more reason to assume Nanni, Kaplan and Bresnan were confused about *their* judgments than to assume Hukari and Levine were confused about *theirs*.

I conclude that the test in (3.106) is justified for speakers of the dialect illustrated by the judgments of various linguists in (3.107), with whom I *now* agree. Note too that object raising gaps in *finite* complement clauses seem even better when the latter are subjunctive :

(3.109)a. It will be difficult to demand/insist/require that he reinterview Maureen.

b. Maureen will be difficult to demand/insist/require that he reinterview.

Second, the object deletion construction with too is equally barred for second objects of ditransitives.

(3.110)a. *That story is too upsetting for us to tell Larry. [17]

b. That story is too upsetting for us to tell to Larry.

c. *That story is too upsetting for Larry to be told.

The analysis I have sketched of Class A Ditransitive structures has certain properties which deserve highlighting. Specifically, while the demotion of 2 objects to 4 claimed here to be characteristic of double object structures is obligatory, the demotion of 3 objects to 5 taken to characterize the non-double object variants where the earlier 3 object appears in a to-PP, is not. As far as I know, no principle of English grammar forces such demotion. This optionality raises various questions, only some of which can be treated here. One involves the much discussed fact that alongside standard Class A cases, there are two other types which fit only part of the paradigm. These are cited by Emonds and Whitney (2006) as a longstanding basis for many linguists rejection of a systematic syntactic connection between 3 object cases and their PP alternations.

First, there are cases, the classic example is donate (Pestsky, 1995: 128), which, while plausibly parallel to Class A Ditransitives on semantic grounds, block the double object structure and allow only that with the to phrase. There are many other such verbs, communicate, contribute, convey, distribute, explain, mention, observe, point out, etc. Second, a much more restricted class of cases have only the double object structure; these include cost, envy, forgive, save, spare and take. [18]

The issue is how these types are to be characterized? Let us assume that all the verbs just mentioned fall into the category of Class A Ditransitives, thus take intial 2 objects and 3 objects. [19] The paradigmatic gaps just noted can be simply characterized by lexical restrictions, informally:

(3.111)a. **The *English* Final 3 Object Lexical Ban Condition**

If A is a 3 arc which is [{contribute, donate, explain, mention, ...}] zoned, then A is not final.

b. **The *English* Final 5 Object Lexical Ban Condition**

If A is [{cost, envy, forgive, spare,...}] zoned, then A is not a 5 arc.

Nothing further need be said. [20] These lexical restrictions mean that while the 3 object to 5 demotion linked to Class A Ditransitive verbs is, from the viewpoint of the grammar as a whole, a mere option, for particular verbs it is in effect rendered obligatory by principle (3.111a) or prohibited by principle (3.111b).

Further, recall the problem involving those assumed initial ditransitives like credit, entrust, etc., which cannot occur with final 3 objects. As noted earlier, principle (3.75) failed to predict that fact. But nothing is required other than adding such verbs to the list forming the right version of (3.111a). From this viewpoint, e.g. donate and credit are characterizable as follows. Both are initial ditransitives, both occur in structures in which their initial 3 object demotes to 5 but neither permits a final 3 object. The latter verb permits its 3 object to advance to 2, but the former does not, as specified by its failure to occur in the ultimate full verb listing in (3.75), which yields inter alia facts like:

(3.112)a. *They donated the hospital with several hundred thousand dollars.

b. *They donated last week - a number of different hospitals.

One observes that the combination of optional 3 object to 5 demotion and obligatory 2 object to 4 demotion in the presence of a final 3 object means that no Class A structure can ever end up with *both* a final 2 object and a final 3 object. And this restriction appears general for English. Seemingly, no minimal English clause of any type manifests both a final 2 object and a final 3 object.

That an analysis of Class A ditransitives involving 3 object to 5 demotion invokes an *independently* possible NL feature is suggested by German analogs of (3.102) like (3.113):

(3.113) Data from Sarah M. B. Fagan:

a. Ich habe meinem Bruder (dative) ein Paket geschickt.

b. Ich habe an meinen Bruder ein Paket geschickt.

I have to my brother a package sent

"I sent a package to my brother"

While the German alternation seen here with schenken 'to send' does not seem highly productive, Curme specified that it was also possible with schreiben and Huber (1974) gave data with (zurück)bezahlen:

(3.114)a. Curme (1922: 520)

(i) Er schreibt mir Briefe.

"He writes me letters"

(ii) Er schreibt Briefe an mich.

"He writes letters to me"

b. Huber (1974: 2)

(i) Ich bezahle ihm das Geld zurück.

"I pay him the money back"

(ii) Ich bezahle an ihn das Geld zurück

"I pay to him the money back"

In such pairs, an *uncontroversial* German 3 object, a DP bearing dative case and subject to passivization with the auxiliary <u>bekommen</u> rather than the 2 object passivization auxiliary <u>werden</u> (Wilkinson, 1983, Ackerman and Webelhuth, 1998), compare (3.115a, b), alternates with a non-3 object prepositionally marked with <u>an</u>.

(3.115) Ackerman and Webelhuth (1998: 224-226)

a. weil die Blumen dem Mann geschenkt wurden/*bekam

"because the flowers the man given were" =

"because the flowers were given to the man"

b. weil der Mann die Blumen geschenkt *wird/bekam

"because the man the flowers given was" =

"because the man was given the flowers"

Various grounds suggest that in (3.114ai, ii, bi,ii) <u>ein Paket/das Geld</u> is a 2 object. While the German alternation in (3.113) is analyzable by claiming (only) (3.113b) involves 3 object to 5 demotion, it is not conceivably representable via oblique object (or 3 object) advancement to 2. For in neither (3.113a, b) does <u>meinen/meinem Bruder</u> behave like a German 2 object. Incidentally, I don't know whether ditransitives or other structures provide German motivation for positing 4 objects.

I conclude that the Dative Shift approach to English ditransitive alternations like (3.102) not only misses the 3 object status of English ditransitive first objects. It also overlooks the relevance to *English* of the NL phenomenon illustrated in (3.113) and (3.114), the possibility of a 3 object alternating with, and in my terms demoting to, a representative of a relation with no traditional name. The German cases reveal a type of NL alternation which has apparently never been taken into account in the study of *English* ditransitives, one conceptualized here as 3 object to 5 demotion. Inter alia, this alternation

and the crosslinguistic parallelism strengthens the case for taking the first object of an English ditransitive to be a 3 object.

There is also, I believe, good evidence for 3 object to 5 demotion in *Georgian*, including in ditransitives. Harris's (1981) study of Georgian provides a rich documentation of 3 object to 5 demotion, although this was not how Harris described things; she could, moreover, not have, since the 1970s RG framework she adopted recognized no edge label 5.

Harris showed that Georgian 3 objects have five characteristic properties: dative case marking, the determination of verb agreement, the possibility of anteceding reflexives, the possibility of the suppression of weak definite pronouns and that of triggering direct object 'camouflage'. The latter is similar to the African-American English construction in I am tired of waiting on his ass corresponding to I am tired of waiting on him, with ass the empty 'camouflage' head noun; see Collins, Moody and Postal (2008); in Georgian the noun is the otherwise reflexive form tav. In certain environments, DPs corresponding to 3 objects lack all these properties and are realized as postpositional phrases with -tvis, which determines the genitive on its DP. I would argue that –tvis phrases represent (flagged) 5 objects and, in the environments in question, 3 objects demote to 5. [21] Georgian 3 objects systematically demote to 5 in nominalizations (*masdars*), parallel to the fact that English nominalizations manifest no superficial 3 objects. More generally, in both NLs, nominalizations arguably contain no superficial 1s, 2 objects, 3 objects or 4 objects. Focusing on the 3 object case, this yields asymmetries like:

(3.116)a. They sold Joan a giraffe.

b. They sold a giraffe to Joan.

c. *their sale (of) Joan (of) a giraffe

d. their sale to Joan of a giraffe

That is, no proper nominalization of sell includes any nominal that could be taken as a final 3 object.

Given the independent existence of 3 object to 5 demotion as an NL feature, it would, to justify traditional English Dative Shift analyses of class A ditransitives, be necessary inter alia to ground the *rejection* of a 3 object to 5 demotion analysis. This has never even been attempted.

A partially different pattern from (3.102) occurs in (3.103); these represent the earlier *Class B ditransitives.* They are characterized fundamentally by at least three factual features. The 3 object

systematically alternates with a PP in for, the 3 object and the PP designate *intended* rather than *actual* recipients and the non-3 object can occur without a 3 object or the for phrase:

(3.117) I baked/bought/got/ordered (her) a cake (for her).

The semantic feature related to intention was noted in Williams (1974), Oehrle (1976, e.g. 103, 108) and Green (1974: 123). So Oehrle observed in particular about cases like (3.118a, b) that in both instances, the individual denoted by John intended that the one denoted by Mary come to have a cake with, however no implication that the intention is realized.

(3.118)a. John baked a cake for Mary.

b. John baked Mary a cake.

c. but she never got/received it.

d. John handed Mary a cake but she didn't get/receive it.

Neither yields a contradiction when (3.118c) is appended; contrast the inconsistent (3.118d).

Turn to pattern (3.103). Although, as already indicated, the first object in (3.103a) can be shown to manifest 3 object behavior and the second 4 object behavior, I deny that the relations between (3.103a, b) *fully* parallel those of (3.102a, b). While (3.102b) involves demotion of a 3 object to 5, (3.103b) involves no *demotion*. Rather, I posit that (3.103a) involves *advancement* of an oblique of the type in (3.103b) to 3 object. I am proposing then for (3.102) and (3.103) the schematic relational structures in (3.119)-(3.122):

(3.119) = (3.102a) = I sent my brother a package

3	2
3	4

(3.120) = (3.102b) = I sent a package to my brother

2	3
2	5

(3.121) = (3.103b) = I bought a book for my brother

2	Oblique_1
2	Oblique_1

(3.122)= (3.103a) = I bought my brother a book

Oblique_1	2
3	4

In (3.119) and (3.122), the demotion of the 2 object is required by principle (3.105).

The analysis proposed here for Class B ditransitives is partially congruent with the following observation:

(3.123) Dowty (1979: 197-198)

> "The most important thing to note about *for*-Datives that distinguishes them from the *to*-Datives discussed so far is that *for*-Datives seem to constitute adverbial modifiers, rather than the third argument of a three-place verb."

Dowty observed that in all cases the <u>for</u> phrase was optional and that semantically, the structure without such a phrase never entails the existence of an intended recipient. Hence there is no entailment from (3.124a) to (3.124b):

(3.124)a. Susan cooked some rat livers.

b. Susan cooked some rat livers for someone.

In present terms then, Dowty's idea that the *for* phrases represent adverbials shows up as their heading some type of initial Oblique arc rather than, e.g. an initial 1, 2 or 3 arc.

Jackendoff (1990a) and Goldberg (1995) also distinguish what I call Class A and Class B ditransitives. Culicover and Jackendoff (2005: 213) express the relevant ideas in partly similar ways to the views just outlined. They take Class A ditransitives to be three argument verbs but deny that the 3 objects of Class B ditransitives are inherent arguments of their verbs. This is consistent with the present account.

But they go on to characterize the 3 object/<u>for</u> phrase as being a *benefactive*, which is erroneous. An example like (3.125a) is ambiguous:

(3.125)a. Melissa baked a pie for Loretta.

b. Melissa baked Loretta a pie.

c. Melissa cleaned the house for Loretta.

d. *Melissa cleaned Loretta the house.

On one reading, Loretta is the intended recipient of the pie; on the other, if there is such, it is unspecified and the baking is done to benefit Loretta. But (3.125b) has only the former reading; correspondingly, (3.125c), in which the semantics precludes the intended recipient meaning, does not yield a 3 object variant. Conclusion: English has a very productive advancement of intended recipient obliques to 3 object. But constructions involving genuine benefactive 3 objects, to the extent they exist, are much less systematic. [22]

The proposal that (3.102) and (3.103) involve partially contrastive analyses contradicts claim (3.126):

(3.126) Czepluch (1982: 4)

"Clearly, the dative alternation has to be described uniformly for 'to' and 'for' IOs."

But the Clearly and necessity expression has to stand in for an absent argument for the assertion. That is therefore merely opinion, whose force if any is linked at best to a vague idea about 'null hypothesis'.

A pair like (3.103) has the respective German/French analogs in:

(3.127)a. Ich kaufte ihm (dative) ein Buch.

"I bought him a book"

b. Ich kaufte ein Buch für ihn.

"I bought a book for him"

c. Mike lui a acheté une voiture classique (, à elle).

"Mike bought her a classic car" (also irrelevantly "from him/her")

d. Mike a acheté une voiture classique pour elle.

"Mike bought a classic car for her"

Both the a. and c. examples uncontroversially involve 3 objects; hence neither the German nor French alternations are treatable via an analog of a Dative Shift analysis, which would untenably require the non-oblique variant of the human object to be a 2 object in (3.127 a, c). But both the German and French cases can evidently be analyzed via an oblique to 3 object advancement posit, exactly as suggested for the English analogs.

While I cannot advance any supporting evidence for German, for French, Postal (1990a) argued that the type of 3 object (indirectly represented regularly by the dative clitic lui) in (3.128a) is behaviorally distinct from that represented by the dative clitic leur in (3.129a):

(3.128)a. Michel la lui a décrit.

"Michel described it/her to him/her"

b. *Michel vous lui a décrit.

"Michel described you to him/her"

c. Michel vous a décrit à elle.

"Michel described you to her"

(3.129)a. Michel la leur a acheté. =

(i) ok "Michel bought it/her from them"

(ii) ok"'Michel bought it/her for them"

b. Michel vous a acheté à elle.

(i) ok "Michel bought you from her"

(ii) *"Michel bought you for her"

The core of the discussion was that it can independently be argued that a French 3 object cooccurring with a *non-third person* (or *reflexive*) 2 object must demote to 5, accounting both for the dative cliticization failure in (3.128b) and the possibility of a nonclitic pronoun in (3.128c). The bad reading of (3.129bii) then corresponds in the analysis of Postal (1990a) to demotion of the non-initial 3 object (initial Oblique_1) to 5. Example (3.128c) and the 'from' reading of (3.129bi) survive as grammatical because they instantiate initial 3 objects not initial Obliques advanced to 3. The facts were taken to follow from a principle barring demotion to 5 of 3 objects *which are earlier obliques*.

Arguably the analogous constraint exists in English, for demotion to 5 of 3 objects taken here to represent advancement from an oblique is, of course, impossible; see (3.130):

(3.130)a. *Henry bought that violin to his son. (ok <u>bought his son that violin</u>)

b. *Henry baked a cake to me. (ok <u>baked me a cake</u>)

c. *Henry's pouring a drink to me. (ok <u>pouring a drink for me</u>).

Internal to present assumptions, an English constraint like (3.131) seems motivated:

(3.131) **The *English* 3 Object Demotion Condition**

If A is a 3 arc local successor_1 of an Oblique arc, A is not the local predecessor_1 of a 5 arc.

However, even posit of principle (3.131) does not properly limit the phenomenon of 3 object to 5 demotion. For instance, I do not think that (3.131) can be appealed to as is to block all the apparent failed cases of 3 object to 5 demotion found in particular with almost all the *single object* 3 objects I have cited:

(3.132)a. The general never cabled (*to) Louisa.

b. Her name eludes/escapes (*to) me.

c. The Navy had failed (*to) her in several ways.

d. 1998 found (*to) Becky in Paris.

e. The truth just hit (*to) me.

f. A six pack doesn't last (*to) Marshall very long.

g. That movie starred (to) Madonna.

h. Laura struck (*to) everyone as intelligent.

i. That did not suit (*to) the dean.

j. Claude never wrote (to) Irene.

k. Sheila served (*to) Nolan as an interpreter

l. Henry stared (*to) me right in the eyes

m. The answer was staring (*to) us right in the face.

n. Something was eating (*to) Gilbert (= 'bothering ')

o. Hedges surrounded (*to) the farmhouse.

p. Gasoline fumes filled (*to) the room.

A number of these cases might be analyzed such that the 3 object undemotable to 5 is an earlier 1; this is plausible for cases (3.132b, e, g, h, i). Others, e.g. cases l. and m., plausibly involve 3 objects which are raised possessors. Such possibilities might suggest generalizing (3.131) to cover as well 3 objects which are earlier 1s or Gens. But even if that were right, it would leave cases (3.132a, c, d, f, k, n, o, p) unexplicated. Perhaps some other principles are relevant to such cases or, in a worst case, possibly English 3 object to 5 demotion is limited to clauses with 2 objects, making cases like (3.132j) apparent anomalies.

Returning to crosslinguistic justification for 3 object to 5 demotion, as known from Bickford (1985, 1987) and Demonte (1994), certain continental varieties of Spanish arguably distinguish the two types of ditransitive 3 objects I am positing. As illustrated in (3.133), for the type I claim involves an initial 3 object, an associated dative clitic is *optional*, while for the type taken to involve an oblique advanced to 3, a dative clitic is *required*.

(3.133) Demonte (1994: 112)

a. Juan (le) dió un libro a Maria.

Juan (to her) gave a book to Maria = "Juan gave a book to Maria"

b. Juan *(le) cocinó une tarta a Maria.

Juan to her cooked a cake for Maria = "Juan cooked Maria a cake"

I know little about Spanish. But if the doubling dative clitic is avoidable only when a 3 object has demoted to 5, that is, if such clitics are obligatory for *final* 3 objects, with the demotion to 5 being at least an option for initial 3 objects like that of (3.133a), then the contrast in (3.133) could also follow from an analog of constraint (3.131).

This view could yield, in addition, another significant prediction via a generalization of (3.131) already motivated for the French analogs in Postal (1990a). This would also ban demotion for a 3 object

which is a raised possessor, determining that possessor raising 3 objects would behave like that in (3.133b) and not like (3.133a). This is correct, as kindly verified by Violeta Demonte (personal communication of 4/25/06), who previously documented the fact in Demonte (1995). [23]

(3.134)a. Yo *(le) rompí el brazo.

"I broke his/her arm"

b. Yo *(le) acaricié la cara.

"I caressed his/her face"

c. Demonte (1995: 27)

*(le) operaron la nariz a Luisa.

'her operated the nose to Luisa'

"They operated on Luisa's nose"

These Spanish facts combine with the French data to provide a genuine basis for the view that the notion of oblique advancement to 3 interacts with restrictions on the demotion to 5 of initially oblique (and raised possessor) 3 objects.

3.8 Reconstructing 3 Objects As a Special Kind of PP

While the Dative Shift view is common, as (3.104) supports, and arguably dominant, another transformational analysis of ditransitives based on Barrel (A) concepts also has adherents. The distinct view, variants of which are suggested at least by Baker (1988, 1997), Den Dikken (1995), Emonds (1985, 1993), Emonds and Whitney (2006), Kayne (1984a) and Stroik (1997), claims that in English ditransitives the first DP always is a component of a PP with a null P. This *Null P Analysis* might be interpreted to mean that at least the notion English *indirect object* can be reconstructed in terms of PPs with empty or null Ps. I believe, however, that this idea is as untenable for English as the Dative Shift analysis. [24]

Kayne (1984a: 200) attempted to factually support the Null P Analysis for English, giving only one argument serving this end. Taking what I call 3 objects to be null P based PPs subsumes the Complex DP Shift failure in (3.135a) under the well-known (since Ross, 1967 [1986]) Complex DP Shift failure manifest in (3.135b):

(3.135)a. *I gave a monograph ~ the student I met in the dining hall.

b. *I spoke to in the elevator ~ the student I met in the dining hall.

This good argument is though hardly decisive. It would be overwhelmed by the existence of a multitude of properties with respect to which 3 objects and uncontroversial PPs sharply *differed*. But

Kayne did not mention the myriad ways in which the behavior of first objects in double object constructions does contrast with that of PPs with visible Ps.

These contrasts involve at least the following:

(3.136)a. word order

b. in situ nonrestrictive relative pronouns

c. right node raising

d. left extraction

e. subconstituent left extraction

f. post-nonsubject nominal floating <u>each</u>

g. pre-P modifiers

Contrast (3.136a) refers to the fact that while English word order principles require 3 objects to precede second objects, in general, ignoring considerations underlying Complex DP Shift, simple PPs always follow simple DPs in a clause:

(3.137)a. I sent the two contestants something.

b. *I sent something the two contestants. (at best ok only if <u>something</u> denotes the recipient)

c. I copied something with my miniZerox machine.

d. *I copied with my miniZerox machine something.

Contrast (3.136b) refers to the fact that DPs in PPs can take the form of in situ human relative pronouns but that 3 objects cannot:

(3.138)a. Frank, sending messages to whom was a waste of time, is very busy..

b.*Frank, sending whom messages was a waste of time, is very busy.

Contrast (3.136c) denotes the fact that PP objects are in general subject to Right Node Raising while 3 objects are not:

(3.139)a. Nora may have sold Barbara the pies and certainly sold her the cookies.

b. * Nora may have sold the pies and certainly sold the cookies ~ the woman you saw with the protest sign.

c. Nora may have talked to Barbara frequently about the pies and certainly talked to her frequently about the cookies.

d. Nora may have talked to frequently about the pies and certainly talked to frequently about the cookies ~ the woman you saw with the protest sign.

e. The first movie may have starred Nora and the second movie certainly starred that actress.

f. *The first movie may have starred and the second movie certainly did star that unpleasant actress.

g. The first movie may have dealt with Nora and the second movie certainly did deal with that unpleasant actress.

h. The first movie may have dealt with and the second movie certainly did deal with that unpleasant actress.

Contrast (3.136d) refers to the fact that PP objects are in general apparently subject to various left extractions; but in many varieties of American English, 3 objects are not, as seen in preceeding sections.

(3.140)a. Which company did you order printer cartridges for?

b. *Which company did you order printer cartridges?

c. No such company did the judge allow a delay to.

d. *No such company did the judge allow a delay.

Contrast (3.136e) refers to the fact that PP objects in general permit subconstituents of their defining DPs to left extract, but 3 objects do not permit that, as previously discussed:

(3.141)a. That is the principle that he wrote about an argument for.

b. *That is the principle that he gave arguments for little consideration.

c. How many people did he promise really good jobs to relatives of.

d. *How many people did he promise relatives of really good jobs.

e. She argued with many friends of Jack's.

f. It was Jack that she argued with many friends of.

g. 1939 found many friends of Jack's in Montevideo.

h. *It was Jack that 1939 found many friends of in Montevideo.

Contrast (3.136g) alludes to the fact that 3 objects do not permit pre-P modifiers but PPs of the sort which alternate with (some) 3 objects do:

(3.142)a. They sent the application (back/directly/right/straight) to the applicant.

b. (Directly/right/straight back) to the applicant was sent the application.

c. They sent (*back/*directly/*right/*straight) the applicant the application.

Summarizing, a comparison of the properties of 3 objects with those of PP objects reveals, in spite of the genunine similarity Kayne (1984a) noted, broadly contrastive behavior with respect to a variety of

grammatical phenomena. Given that, 3 objects can be treated as PPs with invisible Ps only at the price of attributing the contrasts to the particularities of null Ps or deleted Ps. But this in effect grants that treating English 3 objects as PPs as in the Null P Analysis is not only factually unmotivated but actually disconfirmed. Arguably, such an analysis is basically motivated by two things; (i) a need to distinguish 3 objects from e.g. 2 objects; (ii) a decision that this is to be done exclusively with grammatical devices made available by Barrel (A). Absent (ii), the Null P Analysis appears as an essentially largely arbitrary and factually baseless coding of the 2 object/3 object distinction. And of course it has nothing to say about the 2 object/4 object or 3 object/4 object distinctions.

3.9 A Problem in Peruvian Spanish

Like most Romance NLs, Spanish systematically precludes participial passivization of a 3 object. Montalbetti (1999: 133) illustrates this with the following data:

(3.143)a. Juan le vendio una casa a Maria
Juan cl dat sold a house to Mary
"John sold a house to Mary"

b. Una casa le fue vendida a Maria
A house cl: dat was sold to Mary

c. *Maria fue vendida (P) una case

The distinction between 2 object and 3 object in Spanish is morphologically clear, as the two determine different (respectively accusative vs. dative) verbal pronominal clitics.

However, Montalbetti observed that in several dialects, including his own Peruvian variant, under certain conditions some 3 objects seemingly do passivize; he illustrated with (3.144):

(3.144)a. Juan le prohibio leer el libro a Maria
Juan cl: dat prohibited to-read the book to Maria
"John prohibited Mary to read the book"

b. Leer el libro le fue prohibido a Maria
to read the book cl: dat was prohibited to Mary

c. Maria fue prohibida de leer el libro
"Mary was prohibited of to read the book"

The dative clitic in (3.144a) leaves no doubt of the 3 object status of Maria, and yet the passive (3.144c) is grammatical in this dialect, although in most variants of Spanish its analog is impossible.

Montalbetti states that seeming 3 object passives are possible only if conditions (3.145a, b, c, d) hold:

(3.145)a. the main verb is one of {prohibir, permitir, impeder, ordenar, ...}

b. the 2 object is an infinitival clause

c. the final 1 of the infinitival is be controlled by the 3 object of the main clause

d. the passivized 3 object appears in the preauxiliary position

Since (3.145a, b) are straightforward, consider (3.145c). This would seem to be related to the *Visser's Generalization* phenomenon in English, to which Chapter 8 is devoted. Montalbetti supported it by showing the impossibility of passivization with subject control verbs like prometer 'to promise' and confeser 'to confess':

(3.146)a. Juan le confeso [PRO serle infiel] a Maria

b. [PRO serle infiel] le fue confesado a Maria

c. *Maria fue confesada de [PRO serle infiel]

Finally, property (3.145d) is notable since in general Spanish passives of 2 objects permit the seemingly passivized phrase to optionally occur in postparticipial position.

While Montalbetti finds this distribution of data rather paradoxical, straightforward metagraph hypotheses unproblematically capture the basics. The most obvious is that Montalbetti's dialect, like all other Spanish dialects, *permits no passives of 3 objects at all*. What it does permit, *which most variants do not*, is that the 3 object of certain control structures advance to 2. The conditions which permit this advancement are exactly those of (3.145a, b, c), which I will abbreviate as X, *supplemented* by the requirement that the 2 object resulting from the advancement of the 3 object *must passivize*:

(3.147) **The *Peruvian Spanish* 3 Object to 2 Advancement Condition (Version 1)**

If A is a 2 arc local successor$_I$ of a 3 arc, then conditions X hold and A *is an R-predecessor$_I$ of a 1 arc*.

The idea then is that e.g. (3.144c) would have a schematic structure like:

(3.148) Maria fue prohibida [de leer el libro]

3	2
2	8
1	8

Given the 2 arc local successor, the 1 arc local successor is required by the highlighted portion of (3.147), while the 8 arc local successor of the initial 2 arc is required by principle (3.46b). Note that this account offers a basis for the presence of the marker de in the passive (3.144c). Whatever its exact morphological status, this element is not found in the active (3.144a) and can be taken to be the

marker (flag?) associated with one type of object which heads a final local successor$_{III}$ (perhaps an 8 arc, perhaps a 6 arc) of a 2 arc

It remains to explain property (3.144d). The difference between the two Spanish passive clause word orders is not really a word order phenomenon per se but rather results from the fact that the word order in which the initial 2 object appears postverbally involves an invisible expletive 2 object. The latter forces the demotion (via principles (3.44) and (3.46)) of the earlier 2 object to some distinct relation, say 8, and itself passivizes. [25] The word order in (3.144c) is then not that of a postverbal 1, but of a postverbal initial 2 object which has demoted to a distinct status.

For that postverbal word order to exist in 3 object to 2 advancement cases like (3.144c), the 3 object advanced to 2 would then have to be demoted by the invisible passivized expletive 2 object. But that would violate the highlighted part of (3.147), which requires *the original 3 object* to end up as a 1. [26]

In these terms, the difference between the better known dialects of Spanish and one like Montalbetti's comes down to this. The grammars of the former would lack a rule like (3.147) and would have instead either a rule banning all 3 object to 2 advancement (unlikely), or one allowing this only with a class of verbs *not including those subsumed under X in (3.147).* I present a slightly simpler version of (3.147) in the next chapter after developing theoretical apparatus relevant to the description of periphrastic passives like (3.144c).

3.10 Certain German Ditransitive 3 Objects

Fagan (1985) and Wilkinson (1983) have described the properties of a small class of German double object verbs. These support the reality of initial ditransitive 3 objects which cannot, at least in active clauses, appear as final 3 objects with those verbs. Both authors mention <u>abfragen</u> 'to examine', <u>abhören</u> 'to hear' and <u>fragen</u> 'to ask' and Wilkinson also considers <u>lehren</u> 'to teach'. [27]

While there are some complications and dialect variation, the key properties of these verbs are these. First, they occur in double object constructions in which *both objects are in the accusative*. [28] A typical example, given by Fagan is:

(3.149) Sie hörte ihn die französischen Vokabeln ab.
She heard him (ACC) the (ACC) French vocabulary PRT
"She heard him recite the French vocabulary"

Second, such verbs permit the human object to passivize as a standard 2 object would, that is, with the auxiliary werden.

(3.150) Fagan (1985: 3)

Er wurde die französischen Vokabeln abgehört.

He (NOM) was the French vocabulary heard-recite

"He got his French vocabulary listened to"

In isolation, this banal fact shows nothing remarkable.

Third, the relevant verbs also, remarkably, permit the human object to passivize with one of the auxiliaries associated with the passivization of German 3 objects, bekommen, kriegen, or erhalten.

(3.151) Fagan (1985: 10)

Er hat die französischen Vokabeln abgehört bekommen..

He (NOM) has the French vocabulary heard-recite Aux

"He got his French vocabulary listened to"

As Wilkinson argued, since in general bekommen passives are limited to targeting 3 objects, this fact is a strong argument that Er in (3.151) heads a 3 arc, even though in the corresponding active, (3.149), it appears as a 2 object. In other words, this fact is an argument for 3 object to 2 advancement, which, with abhören, is obligatory *in active clauses*. Under the advancement assumption, the underlying 3 object can passivize as a 3 object if it does not advance, or as a 2 object if it does, exactly the situation.

To understand the patterns better, consider the fuller paradigm with abfragen that Wilkinson gave and analyzed, and which he claimed is characteristic also of abhören and lehren, although fragen has some additional features:

(3.152)a. Der Professor fragte mich alle Einzelheiten ab.

the professor examined me (ACC) on every detail

"The professor examined me on every detail"

b. Ich bekam vom Professor alle Einzelheiten abgefragt.

"I was examined by the professor on every detail"

c. Ich wurde vom Professor alle Einzelheiten abgefragt

"I was examined by the professor on every detail"

d. Alle Einzelheiten wurde mir abgefragt.

"Every detail was examined me on"

Example (3.152a) is an active clause with two accusative objects; the human object cannot appear in the dative. (3.152b) is a passive of the first object, formed on the pattern of a 3 object passive. Example (3.152c) is a passive of the first object, formed on the pattern of a 2 object passive. Example (3.152d) is a passive of the second object, formed on the pattern of a 2 object passive.

Modulo some differences in theoretical framework, I believe the proper analyses of these cases are essentially those provided by Wilkinson.

(3.153) Wilkinson (1983: 283-284)

"I claim that in each of these sentences mich 'me' is the initial 3 but the final 2 and that die unmöglichsten Dinge, alle Einzelheiten and die Vokabeln are initial 2s but final chomeurs."

In (3.152a) there is 3 object to 2 advancement, and concomitant demotion of the initial 2 to some other relation, perhaps 8 as Wilkinson claimed, perhaps 4. The advancement of the 3 object is arguably obligatory in this context. In (3.152b), the 3 object passivizes directly, showing that in this case, 3 object to 2 advancement is not required. In (3.152c) the initial 3 object passivizes as a 2 object, suggesting that it advanced to 2, which is thus an option in this environment. Finally, in (3.152d), the initial 2 object passivizes as a 2 object, and the initial 3 object appears as a final 3 object, showing that in this environment also, 3 object to 2 advancement is not required.

Thus, as described by Wilkinson, abfragen, abhören and lehren are subject to the following generalizations:

(3.154)a. 3 object to 2 advancement is obligatory in active clauses;

b. These verbs permit

(i) passives of the first object of their actives according to pattern of 3 object passives;

(ii) passives of the first object of their actives according to the pattern of 2 object passives;

(iii) permit passives of the second object of their actives according to the pattern of 2 object passives. In this case, the first object can appear in the dative, hence arguably is a 3 object.

These generalizations plus the fact that *most* German verbs taking 3 objects do not permit these to ever appear as 2 objects can be incorporated in German grammar as follows:

(3.155)a. **The *German* General Lexical 3 Object to 2 Advancement Condition**

If A is a 2 arc local successor$_1$ of a 3 arc, then A is [{abfragen, abhören, fragen, lehren,...}] zoned.

b. **The *German* 3 Object to 2 Advancement 3 Arc Condition**

If A is an output 3 arc which is [{abfragen, abhören, fragen, lehren,...}] zoned, A is a neighbor of a prepassive arc.

Condition (3.155a) limits 3 arcs having 2 arc local successor$_l$s to clauses based on a lexically restricted class of verbs. Condition (3.155b) say that for those verbs listed in (3.155a), such a 2 arc local successor is required in nonpassives, but is otherwise just an option. The term 'prepassive' appealed to in (3.155b) is defined in (4.8) of Chapter 4. It denotes arcs which are local predecessors of 1 arcs which locally erase 1 arcs, that configuration taken to universally characterize passive clauses.

Actually, there are hidden assumptions here, since obviously (3.155b) does not mention 2 arc local successors at all. Thus *anything* which precluded a 3 arc from being an output arc could lead to satisfaction of (3.155b). The hidden assumptions are that having a 2 arc local successor$_l$ is the only means for a viable 3 arc to fail to be an output arc, e.g. that German lacks 4, 5 or 6 arc local successor$_l$s of 3 arcs, at least for the relevant verbs. But see immediately below for possibly conflicting considerations.

To explicate further, condition (3.154a) follows from (3.154b) since if a 3 arc with these verbs has no 2 arc local successor$_l$, it will, under present assumptions, be an output arc. Condition (3.154b) follows from two assumptions: the first is the crucial one motivating the whole present discussion of German. Namely, although active clauses based on the relevant verbs have no output 3 arcs, they permit passives of a type otherwise found only with 3 object targets. This then supports the idea, crucial to my analysis of some English paradigms, that advancement of a 3 object to 2 can be obligatory in certain contexts.

Condition (3.154c) holds because the relevant verbs are presumed to take initial 3 objects, and neither condition in (3.155) precludes such from advancing to 2, feeding passivization according to the 2 object pattern in a perfectly regular way. Finally, (3.154d) depends on two aspects of current assumptions which do not, however, fully suffice to guarantee the situation. First, it is assumed the relevant verbs are initial ditransitives and hence have 2 objects which can passivize regularly via the 2 object pattern. Second, the fact that the initial 3 object can appear as an output 3 object is consistent with (3.155b). So far, so good.

What has not been shown to follow from anything though is that under such a circumstance, it is precluded that the underlying 3 object appear as anything but a 3 object. But that is, it turns out, not clearly a flaw. For with the verb fragen, and possibly some of the others listed in (3.155a), it might appear that such is at least marginally possible.

(3.156) Wilkinson (1983: 284)

?Die unmoglichsten Dinge werden mich gefragt.
the most impossible things are me (ACC) asked
"The most impossible things are asked of me"

I infer from Wilkinson's discussion that this is the only possibility with this verb, that is, that replacement of mich in (3.156) by the dative mir is barred. Moreover, Curme explicitly noted that 'double accusative' double object verbs could form passives of the second (usually nonhuman) object in two ways, either leaving the first object in the dative or in the accusastive, as in (3.157):

(3.157) Curme (1922 [1952: 536-537])

"In the passive this construction assumes different forms: **(1)** The acc. of the person of the active construction becomes here nom., and acc. of the thing remains acc.: **Ich werde das nicht gelehrt**. **(2)** The acc of the thing becomes nom. and the acc. of the person remains acc.: **Das wird mich nicht gelehrt**. **(3)** The acc. of the thing becomes nom. and the dat. of the person remains dat.:**Das wird mir nicht gelehrt**."

So several questions arise.

First, what is the edge label of the final arc headed by mich in (3.157) and in the next to last example in the quote from Curme? The passive pattern of the relevant examples is that of the passive of a 2 object. So the edge label could only be 2, as the accusative case marking of the form would naturally suggest, via a violation of stratal uniqueness for output arcs. For the passivized phrase heads an output 2 arc (for reasons discussed in the following Chapter). Moreover, if the edge label were 2, that would violate the Forced Erasure Condition in (3.44). Thus the posit here of edge label 2 is very disvalued. Second, if the edge label is not 2 but 3, what accounts for the otherwise unknown (in German) accusative marking of a final 3 object? Third, if the edge label is not 2 and not 3, but X, what is X and what principle determines that a 3 object in this construction can demote to X?

I have no solid answers to these questions. My best guess though is that the accusative marked first objects in these passives are in fact final 3 objects. It is possible, by utilizing the version of the notion *quace* (introduced in Postal, 2004: Chapter 1) described in Chapter 1 to hypothesize as follows. The

accusative marked nominals in question are final 3 objects with *quirky 2 quace*. That is, their edge labels are <3, 2>. This can determine accusative case marking of their heads via a simple generalization of the principle needed independently to determine accusative case on final 2 objects in simple clauses. Fortunately, neither acceptance of that hypothesis nor resolution of the problem just gone over are relevant to the major point of this section, the existence of evidence in NLs of (initial) 3 objects which, at least in certain contexts, nonetheless cannot surface as a 3 objects.

Notes to Chapter 3

1 Exceptionally, Emonds (1985: 61-62) proposed to define the indirect object relation universally in terms of PPs, where the relevant NP is case marked by the P. This definition has not been influential; I am unable to cite a single reference to it. Moreover, as section 6 observes, the view that English 3 objects involve PPs with null Ps faces strong factual objections.

2 Ziv and Sheintuch (1979) find only certain cases of left extraction of what I take to be 3 objects to be grammatical:

(i) This is the enemy which they struck a heavy blow.

According to them, this is possible when the 3 object does not alternate with a PP, and is thus a property of cases like <u>spare</u>, <u>save</u>, etc. But for me, (i) is as ungrammatical as e.g. the cases these authors star, like (3.5b, c).

3 Relevantly, Oehrle (1983: 167) stated:

"As the prepositionlesss dative construction can in fact yield perfectly good structures in which an initial *wh*-phrase corresponds to the inner NP."

He then cites (i) from a public Glow discussion:

(i) By Robin Cooper: Who did NP give what?

And he added:

(ii) Oehrle (1983: 167)

"While the view that there exist in nature good instances of extraction from the inner NP position seems to go counter to received opinion (opinion that my work has perhaps reinforced), the view advocated here is shared by others (Ades and Steedman 1982)."

4 Den Dikken (1995: 183, 185), citing Hornstein and Weinberg (1981), recognizes a variety of English which distinguishes:

(i) Who did John give a book?

(ii) *Who did Bill think that John gave a book?

(iii) *Children are not easy to give a book.

I cannot discern these distinctions. While Baker (1997a: 652-653) accepts them, with perhaps some inconsistency, Baker (1988: 293) cited (iv) while Baker (1997b: 92) offers (v):

(iv) Whose mother did Greg bake a birthday cake?

(v) Which woman do you think I should ?give/*buy perfume?

I also find the cases of (v) indistinguishably bad.

5 The dialect variability with respect to 3 object extractability attacks the view that the existent unextractability is a consequence of fundamental syntactic principles. So attempts to show it is such, e.g. Den Dikken (1995: Chapter 4), Emonds (1993), Whitney (1982, 1983, 1984) seem condemned to failure.

6 Anderson (1979: 272) claimed that examples like (11a) were ungrammatical even in dialects which allow left extraction of 3 objects. This state of affairs raises no problems for present views, which do not assert that the two constraints are identical.

7 Another test for Array 2 objects and 3 objects has not been utilized in the text. This involves so-called *pseudogapping* (see e.g. Lasnik, 1999 and references therein), as in:

(i) Although Jerome didn't antagonize Louise, he did Marsha.

For me, the phrase 'stranded' under pseudogapping, in (i) Marsha, can be an Array 0 object (as in (i)), an Array 1 object or a ditransitive second object but not an Array 2 object or ditransitive first object:

(ii) Array 1

Although the ship approached/*neared the first island, it didn't the second.

(iii) Array 2

*Although he failed Barbara (as a husband), he didn't Ruth.

(iv) Ditransitive second object

Although she mailed Arthur the first article, she didn't the second article.

(v) Ditransitive first object

*Although she mailed Arthur the first article, she didn't Mike.

These facts thus support the association of Array 2 objects with ditransitive first objects and serve as another test for 3 objects.

I did not utilize this criterion in the text because of doubts as to how widely my judgments are shared. Lasnik (1999) takes ditransitive first objects to at least weakly function as pseudogapping remnants but rejects that status for a ditransitive second objects:

(vi) Lasnik (1999: 153-154)

a. ?John gave Bill a lot of money, and Mary will Susan.

b. *John gave Bill a lot of money and Mary will a lot of advice.

Although I find neither of (via, b) great, I would reverse Lasnik's characterization of them.

8 Evidently, (13d) is only a viable test for those who, like me, accept second object passives. Compare the problem-free gapping case based on first object passivization:

(i) Lydia was sent flowers (and Betty candy).

9 Exceptions to the impossibility of adjectives with prepositionally unmarked objects are known, near being a clear case; see Maling (1983: 270):

(i) Paris is near Fontainbleu.

See Chapter 4, section 11.

10 I say 'for at least some speakers' because, while I agree with Kayne's judgment of all of (3.35), the ditransitive use of supply as in (3. 35b) may be limited to certain speakers. Pesetsky (1995: 145) gave:

(i)a.The kolkhoz supplied grain to the villagers.

b. *The kolkhoz supplied the villagers grain.

c. The kolkhoz supplied the villagers with grain.

11 Two local successor$_{II}$s cannot threaten each other. If such a successor, B, is erasable by a congruent local successor, A, A must be B's predecessor, which by definition erases it. But A cannot itself be a local successor$_{II}$, since according to (4.35) of Chapter 4, a local predecessor$_{II}$ is always an output arc. Unfortunately, nothing so far precludes two local successor$_{III}$s from threatening each other, although I cannot imagine such a case. But see (4.82) of Chapter 4.

12 Since (3.68) no doubt needs generalizing, what is really provided is only evidence that they are earlier non-2 objects. But then parallelisms justify posit of an initial 3 arc as against e.g. some initial Oblique arc.

13 A further contrast between the two constructions is seen in:

(i)a. Aunt Mary made good little housekeepers for the boys.

b. The boys made good little housekeepers for Aunt Mary.

Here only (ib) represents a clause alternating with the construction at issue. (ia) has only a reading (merely possible for (ib)) in which the postverbal DP is not a predicate nominal. This suggests that (3.89b) represents a for phrase/3 object alternation, found elsewhere; see below.

Another verb behaving like the make of (ib) is serve:

(ii)a. He served as a bodyguard for Ellen.

b. He served Ellen as a bodyguard.

c. *Ellen was served as a bodyguard by Glen.

d. *It was Ellen who he served as a bodyguard. (compare: It was Ellen who he served/It was Ellen who he served burned toast to.)

e. It was Ellen who he served as a bodyguard for.

Again a straightforward analysis would treat these cases as involving a for phrase/3 object alternation.

14 The singular third person accusative clitic le is also determined by predicates, in structures like:

(i) Elle est encore riche mais elle ne le sera plus d'ici quelques semaines.

"She is still rich but she won't be in a few weeks"

15 This is, I believe, an independently known situation; see the discussion for Mohawk in Postal (1982: 350-351) and for Tzotzil in Aissen (1987).

16 Nothing has been said precluding optional demotion of the 2 object to 4 in cases where no final 3 object 'forces' it via principle (3.105). The known criteria distinguishing 4 objects from 2 objects involve almost entirely phenomena for which 2 objects can successfully participate in constructions which 4 objects cannot. No known characteristic *positively* specifies an English 4 object. So it is difficult to determine whether the logical possibility of optional 2 object to 4 demotion is manifest. More generally, nothing so far shows that optional demotion of English 2 objects to 4 is illicit since in any environment where that happened, *non*instantiation of the option would leave an undemoted 2 object capable of manifesting the richer grammatical behavior of English 2 objects.

17 (3.110a, c) might both be irrelevantly grammatical on readings where what Larry is told is *not* the story, a reading which would not invoke the object raising or object deletion constructions.

18 Emonds and Whitney (2006) advance the fine of (ia) as a member of this class. But (ib, c) indicate that verb takes a 2 object not a 3 object, as:

(i)a.The judge fined Clyde 300 dollars.

b. Which motorcyclists did the judge fine 300 dollars?

c. The judge fined 300 dollars each of the motorcyclists who had threatened the marchers.

19 The assumption is consistent with this remark:

(i) Blansitt (1984: 136):

"A clause such as (18) would still be classified as bitransitive in spite of the fact that it does not have an alternative realization such as (19).

(18) He contributed fifty dollars to the church.

(19) *He contributed the church fifty dollars."

20 While blocking active cases like (ia), Condition (3.111a) might seem to permit the equally impossible (ib):

(i)a. *Frank donated the Center for Insect Rights $100,000.

b. *The Center for Insect Rights was donated $100,000 by Frank.

However, given the periphrastic passive analysis in Chapter 4, (ib) is banned since the account, determines that the inner clauses of periphrastic passives of 3 objects have final 3 arcs.

21 Harris herself took -tvis phrases to represent the RG relation chomeur (8). But there are arguments against that conclusion. One characteristic feature of the 8 relation has been that a phrase X which is a 1, 2 object or 3 object only demotes to 8 if a phrase distinct from X comes to head the relevant term arc, as e.g. a 2 object heads a 1 arc in a clause where the 1 demotes to 8. This idea is in effect built into the Local $\text{Successor}_{\text{III}}$ Condition of (3.46). Significantly, Harris (1981) showed that 3 objects in several Georgian structures obligatorily alternated with -tvis phrases where no other phrases came to head 3 arcs. These included ditransitive clauses, where, when 2 objects passivize, underlying 3 objects show up as -tvis phrases. In these contexts nothing else ends up with the properties of a 3 object. Hence the understood conditions on 8 arcs could not be satisfied. However, nothing precludes an analysis whereby (inter alia) in Georgian passives, 3 objects obligatorily demote to 5.

22 Green (1974) cites various cases of benefactive 3 objects, especially under the rubric *for-class 5*. I find most such examples ungrammatical, though, including:

(i) Green (1974: 95)

a. They're going to kill Reagan a hippie.

b. Sam promised to move his lover a mountain.

I do accept hower:

(ii) Green (1974: 96)

Kill me a dragon.

As Green pointed out, me here can denote the beneficiary of an act of bravery, with no implication of intended receipt of the dead dragon.

23 Thanks also to Marcos Rohena Madrazo for additional help with the Spanish data.

24 Emonds (1993) argues for the Null P Analysis but entirely on theoretical grounds. He essentially claims that the Null P Analysis is the best one formulable from the devices of Barrel (A). Such an argument cannot justify the analysis against proposals *not* drawn from Barrel (A), like the present treatment.

25 This analysis amounts to claiming the structure of the postverbal object word order in Spanish passives parallels that of English cases like (i), discussed in Chapter 6 below:

(i) At that time there were found several mammoth carcasses in the cave.

One observes that the invisibility of the English expletive there would yield a situation even more parallel to that in Spanish. And exactly that holds in locative inversion cases, also discussed in Chapter 6.

Expletive invisibility aside, the offererd analysis of the Spanish word order facts is also parallel to that for French cases like (ii):

(ii)a. Beaucoup de soldats ont été blessés.

"Many soldiers have been injured"

b. Il a été blessé beaucoup de soldats.

"It has been injured many soldiers"

26 The formulation of (3.147) involving the *ancestral* of the 1 arc successor_1 relation is due to the analysis I believe correct for periphrastic passives like those in English, French, Spanish, etc. I have described the French case in Postal (1992a), and consider English in Chapter 4.

27 Curme (1922 [1952: 535]) mentions a number of others, but ignoring details of their syntax, I cannot evaluate their contribution to the points in the text.

28 Thanks to Thomas Leu for help with the German data.

Edge-Based Model-Theoretic Syntax

Chapter 4 Periphrastic and Nonperiphrastic Passives

4.1 Remarks

Previous sections argued for a three way division among English objects, distinguishing 2 objects, 3 objects and 4 objects, each of which can occur as a single object. It was also claimed that ditransitive clauses manifest a surface 3 object and 4 object in that order, although more abstract analysis of such clauses differentially represents one or sometimes both of these nominals. Starting with the present chapter, the perspective of this volume changes somewhat. With the previous analysis of objects taken as a given, attempts are made (i) to document further ways in which this division simplifies and regularizes the statement of English grammatical facts and (ii) to explore various distributional data related to the three way object division but which do not just fall out from that analysis. This requires a certain amount of theoretical discussion in some cases remote from the issue of object types. Nonetheless, the overall discussion strengthens the conclusion that English clausal syntax cannot be properly characterized without adopting the three way distinction.

4.2 The Basic Overall Structure of Periphrastic Passive Constituents

Since much of the subsequent focus is on various types of passive structure, some general structural characterization of the English clausal passive construction is required. Providing that requires delving into general features of passive constructions as such. The focus will be on expressions like (4.1b):

(4.1)a. The students washed the car.

b. The car was washed by the students.

c. Was the car washed by Francine.

d. *The car washed by the students.

This construction falls into one of two major sorts of passive constructions attested in the world's NLs. One type, *synthetic* (nonreflexive) passives, is perhaps not found in English clauses (but see the discussion of middles below) or other well-known modern European NLs but exists in e.g. Latin (see Allen, 1874), Japanese (see Kuno, 1973, Howard and Niyekawa-Howard, 1974), Tzotzil (see Aissen, 1983, 1987), Halkomelem (see Gerdts, 1981), Turkish (see Knecht, 1986, Özkaragöz, 1986), Quiche (see Norman, 1978, Postal, 1986), Indonesian (see Chung, 1976a, 1976b) and Seri (see Marlett, 1984), to name a few of many NLs manifesting such constructions.

The other type is represented by the *periphrastic* passives of English, French, German, Spanish, etc. The two passive types have been informally characterized as follows:

(4.2) Siewierska (1984: 29)

> "Passives such as (1b) where the verb takes a special affix, here (n)ŋaili, are referred to as *synthetic* passives. This type of passive contrasts with (2b) where in addition to a change in verbal morphology an extra verbal, here byla – a form of to be – is introduced. Passive constructions like (2b) are called *periphrastic*."

The most visible contrast between periphrastic and synthetic passives is that in the former the minimal passive constituent cannot occur as an independent clause, as illustrated in (4.1d) for the English participial phrase. It must be embedded, in the most common and arguably standard (see below for others) case, under the auxiliary be. So one class of questions about periphrastic passives involves the relations between the lower constituent and the higher one.

A metagraph account of the French analog of the English periphrastic passive construction was developed in Postal (1985, 1992a). Here I sketch a modified version of the basic ideas. In a personal synthetic passive it is usually uncontroversial that the *final 1* of the passive clause corresponds to an object of some kind in the active correspondent of that clause. [1] This accords with the traditional idea that in a passive an object 'has become a subject':

(4.3) Jespersen (1924: 164).

> "Here what was the object (or one of the objects) in the active sentence is made into the subject, and what was the subject in the active sentence is expressed either by means of a prepositional group in English with *by* (formerly *of*), in French with *par* or *de*, in Latin with *ab*, etc., or in some languages simply by means of some case form (instrumental, ablative)."

It is natural to try to extend this idea to periphrastic passives, which might amount in effect to simply ignoring the auxiliary structure and treating the whole as if it were a single clause. I have engaged in such pretense from a purely presentational point of view to simplify discussions not aimed at the specific mysteries of periphrastic passive structures (e.g. in (3.148) of Chapter 3). But a key aspect of the analyses in Postal (1985, 1992a) and that advanced here is a rejection of any variant of this view.

For the clear sense in which The car represents a final 1 arc in (4.1b, c), it is a 1 arc of the auxiliary verb, was. Nothing known to me argues that it *also* heads a final 1 arc of the participial clause. So I

suggest that the clause defined by the participial verb, as opposed to that defined by the auxiliary, *has no final 1 arc*. While no good evidence for this negative claim is available from English, there is equally no good evidence that The car or anything else heads a final 1 arc of the inner clause.

Moreover, good grounds for the negative conclusion do exist for the *French* periphrastic passive; it is critical in explaining the impossibility of *reflexive* clitics in periphrastic passives noted in Kayne (1975: 350-351); see Postal (1990a: 134-139) for background.

(4.4)a. Françoise se décrira Jacques (à elle-même).

"Francoise will describe Jacques to herself"

b. Je (*se) décrirai Françoise à elle-même.

"I will describe Francoise to herself"

c. Françoise sera décrite à elle-même (par Jacques).

"Francoise will be described to herself (by Jacques)"

d. *Françoise se sera décrite (à elle-même) (par Jacques).

"Francoise will be described to herself (by Jacques)"

The question is why an anaphoric relation between initial 2 object and 3 object can only yield a grammatical output *without* a clitic in an active like (4.4b) and even in a passive like (4.4c), but not with one, as in (4.4d). The informal answer is this:

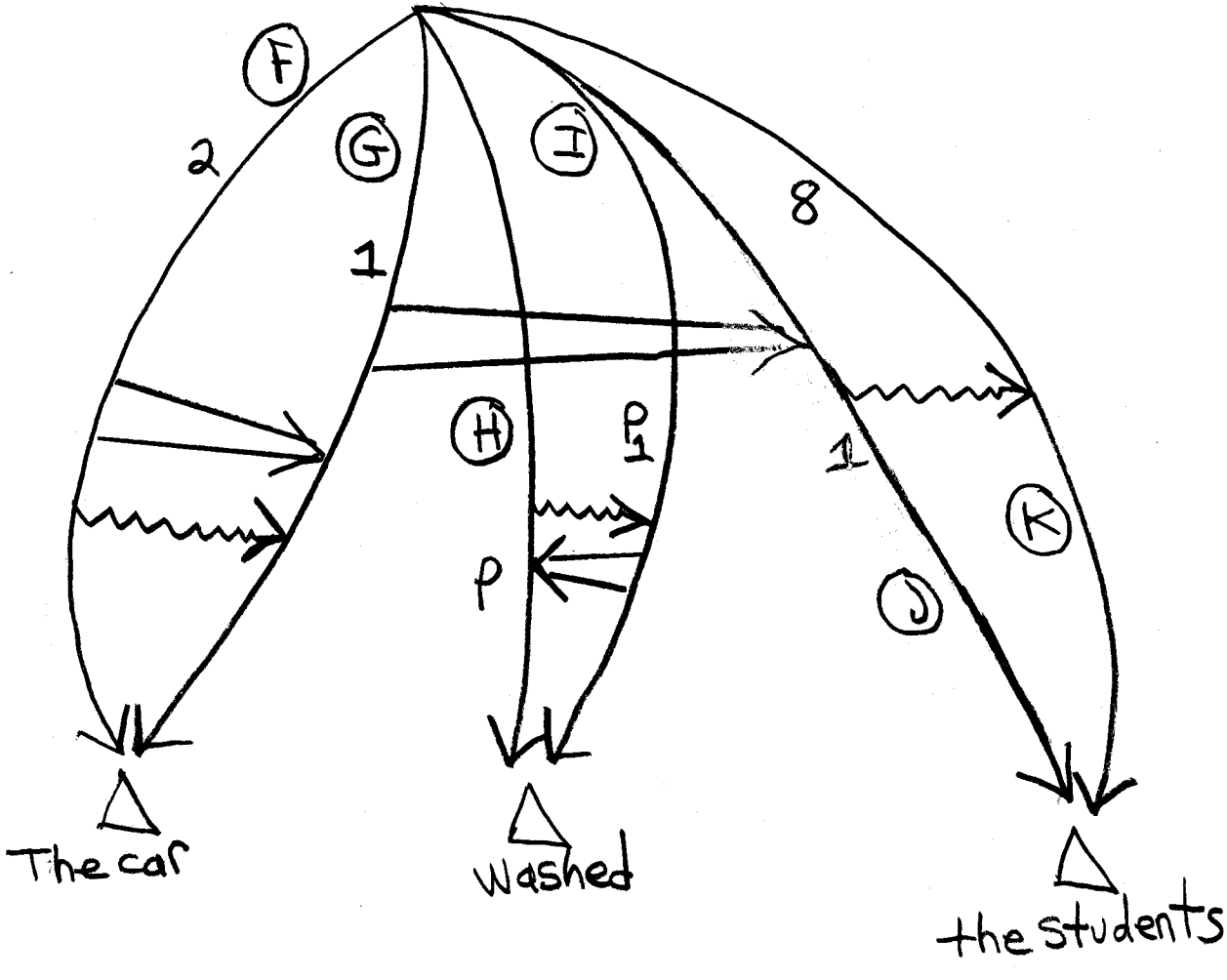
(4.5) A French reflexive clitic can only occur on the verb of a clause C whose *2 object or 3 object is anteceded by the final* 1 of C.

In a periphrastic passive like (4.4c), the participial clause arguably contains a 3 object anteceded by a 2 object. But under my controversial assumption about periphrastic passives, that clause in (4.4d) *has no final 1 arc*, hence no final 1, and (4.5) cannot be satisfied by the inner clause. [2] The outer, auxiliary clause has a final 1 but no 2 object or 3 object anteceded by it, the 3 object occurring only in the participial clause. Hence no clause in (4.4c) satisfies (4.5) and no reflexive clitic is possible.

Adopting the most general position possible, I infer (boldly) from this argument that the lower constituent in a French paticipial passive lacks a final 1 arc to the conclusion that this is an invariant characteristic of *all NL periphrastic passive inner clauses*, hence of English ones. It remains to elucidate what aspects of grammatical theory guarantee this.

That it is true though is represented by the proposal that the structure of the inner clause (4.1b) involves a metagraph fragment significantly like (4.6), which I fill in as the discussion progresses. This representation is modeled on that of a French passive analyzed in Postal (1992a: 311); see also Postal (1985).

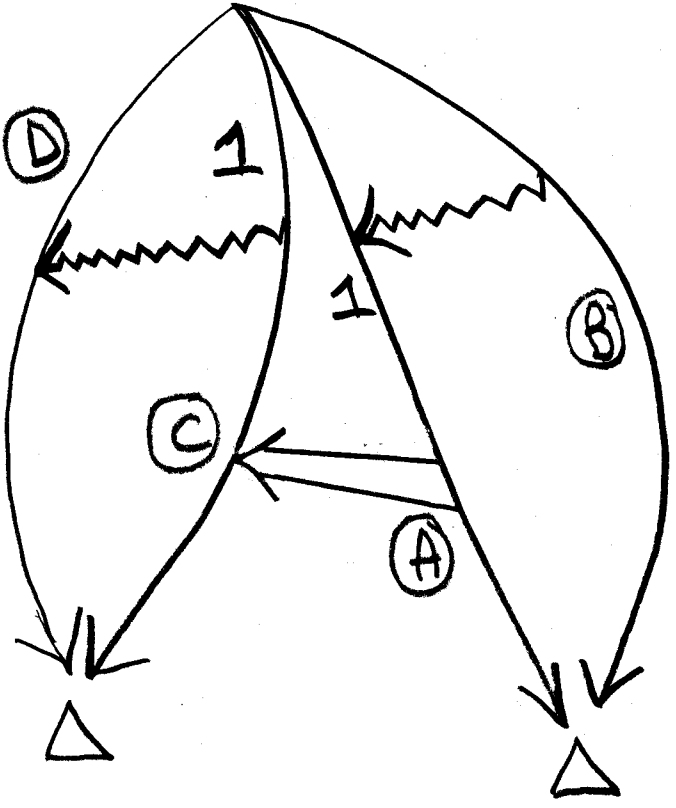
(4.6)


F
G
I
2
1
8
H
P1
1
K
P
J
The car
Washed
the students

For *purely diagrammatic* simplicity reasons, (4.6) *fails* to represent the flagging structure which the second version of the English Prepositional Phrase Control Condition in (3.54) of Chapter 3, would require for arc K (assuming 8 to be one of the edge labels in the full list it contains).

Before considering various questions such structures raise, I import from Postal (1986: 109, 133-135; 1996: 394) a claimed universal characterization of what a passive (clause) structure is. This is any constituent having the metagraph form in (4.6):

(4.7) **Proposed Universal Passive Configuration**


D
1
1
B
C
A

Based on (4.7), Postal (1986: 109, 133-135; 1996: 394) proposed in effect the following definitions, appealed to in what follows:

(4.8) **Definitions: *Prepassive Arc; Arc-Passive Arc; Passive Victim Arc; Passive Constituent***

If A, B, C and D are four distinct colimbs, then B is a *prepassive* arc, A an *arc-passive* arc, C a *passive victim* arc (Postal, 1986: 109 utilized *passive-destroyed arc),* D a *passive-induced* arc and the constituent defined by the tail node of A a *passive constituent (clause)* if and only if:

(i) A is a 1 arc local successor of B, and

(ii) A locally erases C, which is a 1 arc, and

(iii) D is a local successor$_{III}$ of C.

Hence in (4.6) the constituent defined by node 102 is characterized as a passive constituent, F as a prepassive arc, G as an arc-passive arc and J as a passive victim arc. A passive *constituent* is hence one defined by the tail node of an arc-passive arc, necessarily also a tail node of prepassive and passive victim arcs.

Given (4.8) (i) and the fact that J in (4.6) is a 1 arc, the erasure of J specified in (ii) should be a consequence of (3.44), the Forced Erasure Condition. And it is a consequence, since J is threatened by G, the arc instantiating variable A in (ii).

Proposal (4.7) characterizes a constituent as passive on the basis of its containing a 1 arc local successor which locally erases a 1 arc, independently of whether that local successor is a local successor$_{I}$ or local successor$_{II}$. The latter distinction can then be hypothesized to define the passive typology that Siewierska characterized above: synthetic passives are defined by 1 arc local successors$_{I}$, periphrastic passives like English (4.1b) by 1 arc local successors$_{II}$. Since arc passive arcs are always local successors, I can unequivocally speak informally of *arc passive$_{I}$* and *arc passive$_{II}$* arcs and of their predecessors as *prepassive$_{I}$* and *prepassive$_{II}$* arcs respectively.

To see how this view can be developed further, return to (4.6), focusing first on arcs H and I, the latter being a local successor$_{I}$ of the former. The idea exemplified is that passive participles, although corresponding to the heads of P arcs like other verbs, do not head *final* P arcs, but rather a type labeled P_1. This analysis, developed in Postal (1985, 1992a), assumes the following. Just as it is traditional to think, e.g. with respect to passives, as described by Jespersen in (4.3), that a phrase can be an object at

one 'level' and a 1 at another, thus that a single phrase can bear distinct relations within a single constituent, the proposal is that predicates have similar possibilities. So passive participles can differ from nonparticipial verbs not only in grammatical category and inflection, but also relationally. P_1 arcs then define a specific type of clause, restricted in ways I will try to spell out. I assume that P_1 arcs are members of a restricted class called *sousprédicationnel 'subpredicate'* in Postal (1985) and *Subpredicate* here. The overall membership of this class will not concern me here but see section 11.

I suggest that clauses involving P_1 arcs differ with respect to their contained nominal structures: unlike clauses with final P arcs, which must have final 1 arcs, clauses with P_1 arcs cannot have such. This requires inter alia that past versions of the so-called *Final 1 Arc Law* (see e.g. Perlmutter and Postal, 1984b; Johnson and Postal, 1980: Chapter 7, especially, 228) be reformulated. First approximations might be:

(4.9)a. If A is a final P arc, A has a neighbor which is a final 1 arc.

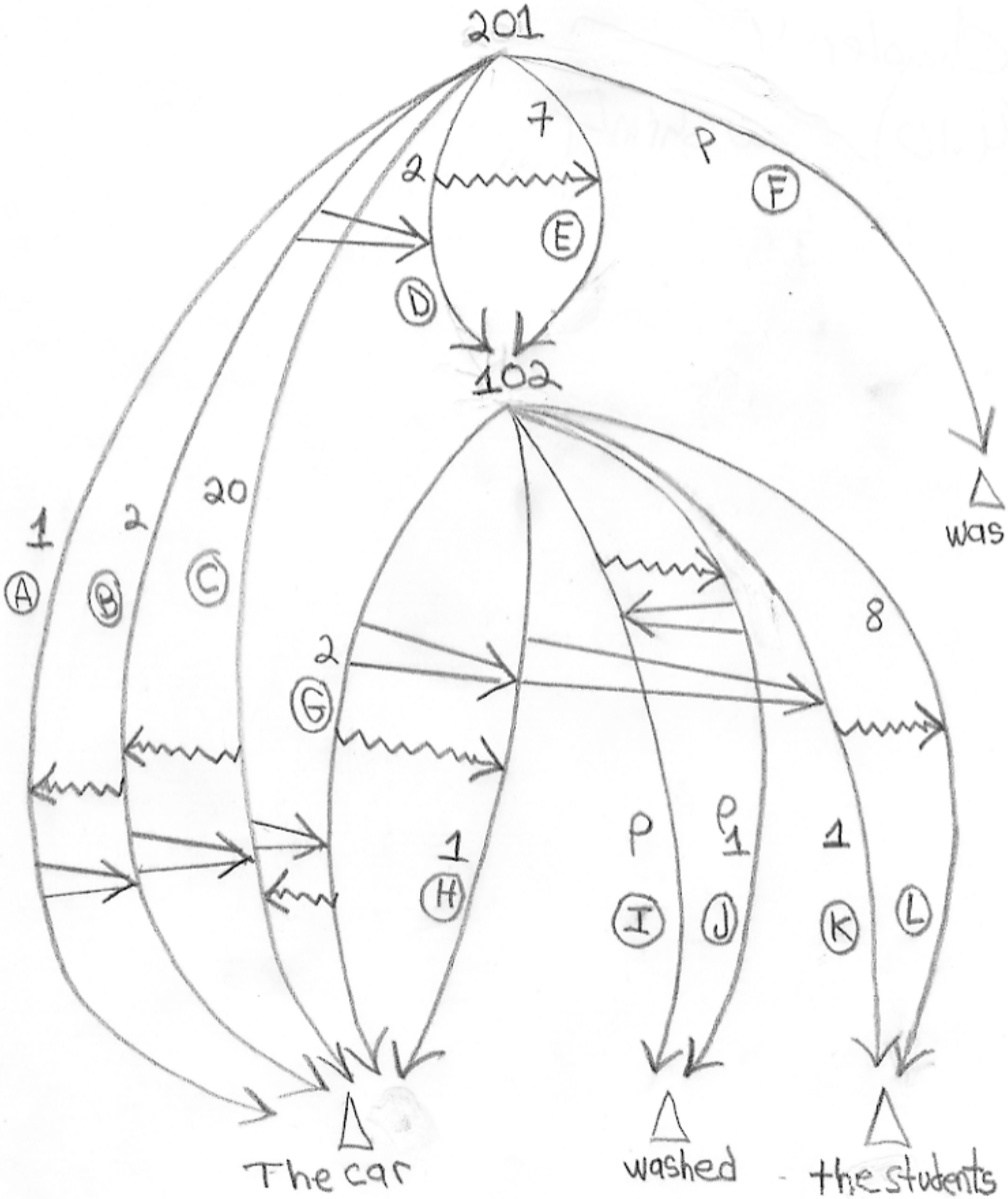
b. If A is a final P_1 arc neighbor of B, B is not a final 1 arc.

I argue presently that the *acceptable* consequences of (4.9) can be obtained from a single biconditional formulation.

An initial assumption, to be moderately altered for *clause union* cases just below, is that passive_{II} structures are lawfully associated with the double clause structure typical of periphrastic passives, while 1 arc local successor_I structures appear in the single clause passives in which the passivized object phrase, Z, is (more precisely, at least can be) a final 1 of a clause which contained the unpassivized Z. It can be seen that the former view is instantiated in (4.6) by the prepassive_{II} arc F and its local successor G. The latter's not being a final 1 arc permits the constituent defined by node 102 to be consistent with principle (9b) despite being a passive clause under definition (4.8).

Turn to the higher clause in which (4.6) would be embedded. Specification of this yields a more filled out structure like:

(4.10)


201
7
2
P
F
E
D
102
was
1
2
20
A
B
C
8
2
G
P
1
1
1
H
I
J
K
L
The car
washed
the students

Main clause arc C represents the entire participial clause as an initial 2 of its containing auxiliary clause. There is no strong evidence *for* such a view, which follows the parallel assumption of Postal (1992a) for the French case treated there. There is also none *against* it; the same can be said of the different assumption taking the analog of C to be a 1 arc or some other type. The present assumption takes the main clause with its auxiliary verb to be initially unaccusative rather than unergative. This seems in line with what is known of the semantics of unergatives, which tend to have initial terms which denote objects with minds. Since the participial clause shows no evidence of being, subsequent to the initial level, either a 1 or a 2 object, it arguably heads a final arc with a different edge label. I take the relation represented to be Semiclause, corresponding to edge label 7.

Nothing known to me strongly suggests that particular identity for arc D's edge label, but it is a reasonable choice at this stage because it distinguishes the relevant participial clauses from extraposed infinitives and <u>that</u> clauses for example. Both of the latter are taken here to head 9 arcs (see Chapter 9). The two types differ in that the latter cannot extract in the contrastive construction in (4.11), but participial clauses seem to:

(4.11)a. They said it had bothered her that Tom was a drunk (*and that Tom was a drunk, it had (bothered her)).

b. They said it was wrong to kick dogs (*and to kick dogs/*to do that it is (wrong).

c. They said the car had been washed by Tom and (washed by Tom, it had been).

Postal (1985) took the corresponding French participial cases to head a specified arc type (whose associated relation was called *Subobject*, with edge label was 7). I now use the term 'Subobject' for 4 objects, not recognized in Postal (1985). Another alternative, that the relevant arcs would be 8 arcs, representing the RG chomeur relation is not excluded but offers no advantages. Moreover, there are drawbacks, as there are no evident similarities between passive participial clauses and other phrases (e.g. passive <u>by</u> phrases) taken to instantiate the heads of 8 arcs.

A reasonable supposition is that 7 arcs, 8 arcs and 9 arcs, despite real differences, share various structural properties:

(4.12)a. All 7, 8 and 9 arcs are local $\text{successor}_{\text{III}}$ arcs or replacers of these.

b. All local $\text{successor}_{\text{III}}$ arcs are Achievable arcs (see 2.117i) of Chapter 2) and non-Term arcs.

c. All local predecessors of 7, 8, and 9 arcs are Core (1, 2, 3, or 4) arcs.

d. Each local $\text{predecessor}_{\text{III}}$ of a 7, 8 or 9 arc is locally erased by a W-equivalent local successor.

Consequences (4.12b, c, d) are already represented in (3.46) of Chapter 3, the Local Successor$_{III}$ Condition. Consequence (4.12a) can be imposed by:

(4.13) **The {7, 8, 9} Arc Condition**

If A is a 7, 8 or 9 arc, A is R-local sponsored by an equivalent local successor$_{III}$.

The ancestral 'R-local sponsor' is crucial here because it denotes both local successor$_{III}$s themselves (since every arc is its own R-sponsor and necessarily F-equivalent to itself) as well as replacers of such. The latter are by definition W-equivalent to their sponsors, which must be neighbors. The evidently speculative conditions which have been imposed on 7, 8 and 9 arcs are reasonably restrictive and assign a very limited role to the relevant relations (compared e.g. to the relations represented by the labels 1, 2 and 3). Specifically, they preclude these labels from appearing on initial arcs, successor$_{I}$ arcs or successor$_{II}$ arcs. [3]

Finally, the three main clause arcs head by the passivized DP <u>The car</u> need elucidation. The foreign successor$_{I}$ labeled 20 is novel; it is based on an attempt to subsume the erasure of an arc like D under the Forced Erasure Condition. The idea is that classes of raisings and extractions are in part defined by designated edge labels for foreign successor$_{I}$s. The label 20 would be that characteristic of raisings, taken to involve Central arc R-successors of the foreign successor, here represented by A and B. I assume that a grammatical principle determines that the local successor$_{I}$ of the 20 arc here is a 2 arc. That principle will depend on the fact that the 'host' arc for the raising in question is D, a 2 arc. The association of that status with D and not E depends on the fact that E only exists because of the raising itself. Formally, D is the 'host' arc because it is the ultimate R-local successor$_{I}$ support of the predecessor of the 20 arc, G. E is a local successor$_{III}$. As it is peripheral to the present discussion, I will not consider such raising issues further.

Summarizing, the analysis of periphrastic passive structures is a complicated matter because in current terms, the interconnections between at least the following properties need to be determined:

(4.14)a. There is a prepassive arc A which is a local predecessor$_{II}$; and:

b. There is a P_1 arc local successor$_{I}$ of a P arc neighbor of A; and:

c. A is a branch of a 7 arc (local successor$_{III}$), B; and:

d. There is an arc C which is a foreign successor$_{I}$ of A and a neighbor of B; and:

e. Most often (see below) there is a P-arc neighbor of C whose head is an *auxiliary* and C is an R-local predecessor$_{I}$ of a final 1 arc.

Assuming at least (4.14a-d) hold invariably, the key issue is to specify principles guaranteeing their co-existence. I can make only very tentative proposals.

First, a key assumption is that there is a principled connection between an arc passive$_{II}$/prepassive$_{II}$ arc and the non-final status of the neighboring P arc, initially representable as in:

(4.15) **The 1 Arc Local Successor$_{II}$/P$_1$ Arc Connection Condition (Version 1)**

If A is an arc passive$_{II}$ arc, and B is a P arc neighbor of A locally erasable by a P$_1$ arc, then B is a local predecessor of a P$_1$ arc.

While such a principle would lawfully connect (4.14a, b), (4.15) must be modified for several reasons.

Second, one could assume that a pattern of arcs like those instantiating variables I and J in 4.6) can only exist if they are branches of a 7 arc local successor$_{III}$.

(4.16) **The P$_1$ Arc/7 Arc Connection Condition**

If A is a P arc, (then there is a P$_1$ arc local successor$_I$ of A if and only if A is locally erasable by a P$_1$ arc and there is a 7 arc support of A).

This takes it to be a lawful situation that a 7 arc has branches like I and J in (4.10) and equally lawful that arcs like I and J are branches of a 7 arc. [4, 5] Desireably, this alone requires the two clause structure characteristic of periphrastic passives.

Jointly, (4.15) and (4.16) would link all of the properties of (4.14a-c). But they still do not determine that the passivized phrase, corresponding to the head of the prepassive and arc passive arcs, is also a superficial constituent of a higher clause. To enforce that property, the prepassive$_{II}$ arc must be forced to have a foreign successor$_I$ which is a neighbor of the 7 arc of which the prepassive$_{II}$ arc is a branch. This would connect the previous properties to that in (4.14d). Further, to capture (4.14e), it could be required that the foreign successor be the R-local predecessor$_I$ of a final 1 arc. One might thus posit:

(4.17) **The Required Foreign Successor$_I$ Condition (Version 1)**

If A is a prepassive$_{II}$ arc branch of a 7 arc B, there is a neighbor of B, C, which is a foreign successor$_I$.of A and the R-local predecessor of a final 1 arc.

The addition of condition (4.17) now seems to determine that all the properties in (4.14) but the auxiliary part of e. are systematically linked by general principles independent of parochial features of English grammar. Such a view so far ignores though a number of factors, among which are arguably periphrastic passive clause complements of *clause union* structures, which require a brief digression.

4.3 Clause Union Complement Passives

The adequacy of the account of periphrastic passives so far is challenged by what are arguably types of periphrastic passive partially distinct from the participial kind. French, for instance, manifests, besides the well-known participial type illustrated in (4.18a), the two varieties of what I consider infinitival passives found in (4.18b, c):

(4.18) a. Durand a été arrêté par les CRS.

"Durand was arrested by the riot police"

b. Durand s'est fait arrêter par les CRS. [6]

"Durand was/got arrested by the riot police"

c. Le juge a fait arrêter Durrand par les CRS.

"The judge had Durand arrested by the riot police"

These differ in various ways beyond the obvious morphological ones; for instance, as discussed in Postal (1985: 51), only the (4.18a) type permits its embedded verbal phrase to topicalize.

(4.19)a. et arrêté par les CRS, il l'a certainement été.

"and arrested by the riot police, he was"

b. *et arrêter par les CRS, il se l'est certainement fait.

"and arrested by the riot police, he was"

Parallels with (4.11b) are evident.

Structures like (4.18b, c) are special cases of the broader class of clause union structures which stimulated a large body of in particular relational literature; see e.g. Aissen (1979), Bordelois (1974), Burzio (1986), Cole and Shridar (1977), Comrie (1976), Davies and Rosen (1988), Dubinsky (1985), Gerdts (1986, 1990), Gibson (1980), Gibson and Raposo (1986), Kayne (1975), Kuroda (1965), Rosen (1981, 1983), Rouveret and Vergnaud (1980), Shibatani (1973) and Toman (1975). Past metagraph work on such, e.g. Johnson and Postal (1980), Postal (1985, 1989, 1996), took them to be defined as follows. Certain complement clause P arcs have a designated type of foreign successor_1 in the containing clause. These were called *Union arcs*, edge label U. It was assumed that all of the *internally unerased* neighboring arcs of such P arcs must have foreign successor_1 neighbors of the defining U arc. Therefore, clause union complement clauses have no *surface graph* existence; such structures represent the merging of the elements of a complement clause with its containing clause.

While it has been controversial whether cases like (4.18c) actually involve passive complements (see e.g. Legendre, 1986: 163 for a denial), I continue (see Postal, 1989: 32-35) to assume that they do. The type in (4.18b) is little discussed in the *English* literature; see Postal (1992b, 1996) and Chapter 5, Section 2.

The reflexive clitic argument based on (4.4) above supports the claim that, despite their lack of participles, the inner clauses in both (4.18b, c) are of the periphrastic type and lack final 1 arcs, as illustrated by the clause union cases in (4.20):

(4.20)a. On fera se décrire Jacques (à lui-même).

"One will have Jacques describe himself (to himself)"

b. On fera décrire Jacques à lui-même par l'infirmière.

"One will have Jacques described to himself by the nurse"

c. *On fera se décrire Jacques (à lui-même) par l'infirmière.

"One will have Jacques described to himself by the nurse"

d. Jacques s'est fait (*se)décrire à lui-même par l'infirmière.

"Jacques got described to himself by the nurse"

In (4.20a), Jacques is the final 1 of an active complement clause, rendering the reflexive clitic licit. The example shows the *absence* of a general prohibition against reflexive clitics on the embedded verbs of clause union structures. Under current assumptions, (4.20b, c) involve complement passive clauses. The impossibility of a reflexive clitic in either argues that such clauses manifest prepassive$_{II}$ arcs, lack final 1 arcs, and, ignoring *morphology*, are hence essentially of the type which yield participial passive clauses in non-clause union cases. [7] Moreover, clearly the clause union cases *partially* differ in other respects than reflexive clitics from the participial periphrastic ones. The former lack an immediately containing auxiliary clause, the passivized nominal need not, since it does not in cases like (4.20c), end up as a higher clause 1 and there is no reason to posit a 7 arc; moreover, the topicalization fact in (4.19) argues against it. [8] Arguably then, a viable account of periphrastic passives minimally needs to differentiate participial and clause union cases.

So the issue is how to maintain the typological assignment of French clause union passives to the periphrastic type despite the differences just elucidated while at the same time excluding them from key entailments valid only for the participial variety. The difficulty is that so far a periphrastic passive has been taken to cooccur with a P_1 local successor$_1$ of a P arc, yielding an *internally erased* P arc. Because of

the Unique Eraser Condition, such a P arc could not have a U arc foreign successor$_{I}$, which I continue to take as the defining feature of clause union structures. For that to be possible, the complement P arc predecessors of the higher U arcs must have no erasers internal to the complement.

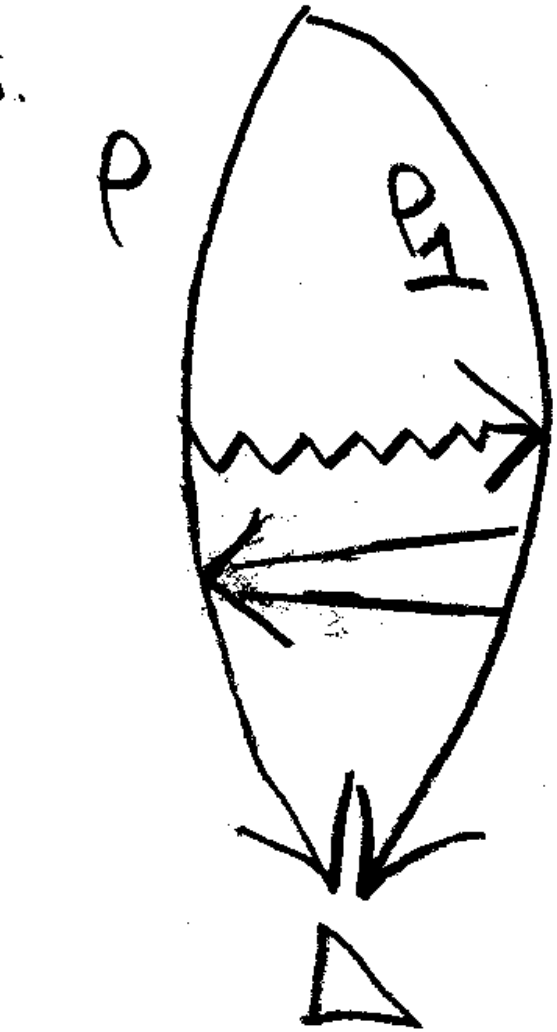
The ideas in (4.21) offer a possible solution to capturing both the similarities and differences between participial and clause union periphrastic passives:

(4.21) **Hypothesis: Subtypes of Periphrastic Passive**

While the 1 arc local successor$_{II}$ forming the prepassive arc of *any* periphrastic passive must be a neighbor of a P_1 local successor of a P arc, this successor can be either (i) a local successor$_{I}$ or (ii) a local successor$_{II}$.

That is, periphrastic passives manifest one of two different substructures:

(4.22)



b.

This assumption permits saying that while the *participial* periphrastic passives (in English, French, ...) are of type (4.22a), both sorts of French clause union passive structures are of type (4.22b). Given the absence of participial form for the verb of clause union passives, the participial morphology on the verb will evidently be associated with *final* P_1 arcs, not found in structure (4.22b).

Condition (4.15) does not specify the type (local $\text{successor}_{\text{I}}$ or local $\text{successor}_{\text{II}}$) of the P_1 arcs it characterizes and so is compatible with either, rendering the posit of the latter in (4.22b) consistent with that statement. The virtue of the structure posit in (4.22b) is that the P arcs in clause union passives having P_1 local $\text{successor}_{\text{II}}$s remain fully acceptable foreign $\text{predecessor}_{\text{I}}$s for the U arcs critically defining clause union structures. This follows since the concerned P arcs are not locally erased in the inner clause and thus induce no Unique Eraser violation by being foreign $\text{predecessor}_{\text{I}}$s of U arcs, as the metagraph view of clause union structures requires.

Return to statements (4.9a, b), attempts to characterize the conditions under which a clause needs a *final* 1 arc. First, contrary to (9a), internal to an analysis based on (4.22), clause union periphrastic passives contrast with participial ones in having final P arcs while still precluding final 1 arcs. Second, for clause union periphrastic passives, (9b) fails to determine that there is no final 1 arc even though the only P_1 arc is not final (no local $\text{successor}_{\text{II}}$ is). What all periphrastic passives have in common according to (4.22) is just having $\text{prepassive}_{\text{II}}$ arcs which are neighbors of P_1 arcs.

To state a proper version of the final 1 arc condition, it is though also critical to consider nonpassive clause union complements. Observe that nothing I have said bars final 1 arcs in *all* clause union complements. And that absence is well grounded as such claim would clash specifically with the same reflexive clitic generalization taken above to justify a $\text{prepassive}_{\text{II}}$ arc analysis of French clause union passives. For it is already shown by (4.4a) that nonpassive clause union complements can contain reflexive clitics, which I take to be possible because such clauses can contain final 1 arcs. This view is strengthened by an argument in Postal (1989: 101) based inter alia on observations of Fauconnier (1983) and Legendre (1986) involving intransitive verbs of the so-called *inherent reflexive* type, English variants of which were touched on in Chapter 1, section 6.

Fauconnier's key insight was that underlying the optionality of the reflexive clitic in cases like (4.23) is that unaccusative 2 object advancement to final 1 is optional in French clause union complements:

(4.23) On a fait (se) taire Louise.

"One made Louise be quiet"

So this indicates that present assumptions must not require final 1 arcs even in some nonpassive clause union complements. Legendre (1986) noted that Fauconnier's proposal is strongly supported by contrasts in the French analog of the English clausal object raising construction:

(4.24) Louise sera difficile à faire (*se) taire.

"Louise will be difficult to make be quiet"

As long known, only 2 objects can be targets in this French construction. That condition alone would be met for *both* variants of (25), since Louise is uncontroversially a final 2 object (of faire) in both. Legendre (1986) proposed that the contrast in (25) follows from a stricter condition on French object raising.

Translating into current terms, her proposal states that (i) every distinct R-predecessor of the 2 arc remote predecessor defining the construction must also be a 2 arc. That, combined with the fact that, as already indicated, (ii) reflexive clitics require antecedence by the head of a final 1 arc, would rightly block the long form of (25). For that could only satisfy (ii) if the unaccusative 2 arc colimb of the taire P arc had a 1 arc local successor$_1$, which would violate (i). [9]

Cases like the two forms of (25) are critical for formulation of the conditions on final 1 arcs. On the face of it, they seem to indicate that final 1 arcs in clause union nonpassive complements are not uniformly required. But I hypothesize that this reflects no optionality. Rather, in every environment containing a P arc a final 1 arc is either required or precluded, as specified in: [10]

(4.25) **The Final 1 Arc Condition**

If A is a P arc, A is a neighbor of a final 1 arc if and only if A is not a (local) predecessor of a P_1 arc.

The consequences of this are as follows. In non-clause union complements, a final 1 arc is required in all clauses lacking P_1 arc local successor$_1$s and blocked in all such clauses where the latter are present, so far, illustrated only by the inner clauses of periphrastic passives (but see the following section).

In clause union complements, it might have seemed that when the complement is a nonpassive, the clause must have a final 1 arc and that when it is a passive, it cannot have such. But this is not quite true because of cases like (25). Neither variant is a passive and yet, as indicated, there is evidence that the longer version has a final 1 arc but that the shorter one does not. The only way (4.25) can account

for that is via a claim that the final P arc in the short version of (25) has a P_1 arc local $successor_{II}$. In other words, the assumption is that at least in clause union complements some subset of unaccusative verbs can head P arcs with the same type of local $successor_{II}$s that clause union periphrastic passives have. While this might seem ad hoc here, the next section argues that English has unaccusative verbs (at least, born) which head P_1 arc local $successor_I$s of P arcs parallel to those found in passives. This takes the short version of (25) to be a clause union analog of an English born clause.

Next, return to (4.17). This was formulated only with the English/French non-clause union participial passive type in mind and is not adequate once clause union structures are taken into account. Moreover, it is also not adequate for the unaccusative born clauses treated in the following section, which behave with respect to issues of required foreign successors like the inner clauses of passives. I thus propose to replace that first version with something more general and less specified:

(4.26) **The Required Foreign $Successor_I$ Condition (Version 2)**

If A is a local $predecessor_{II}$ of a 1 arc, there is a Term arc B of which A is a branch and A has a foreign $successor_I$ which is a colimb of B.

Consider the differences between (4.17) and (4.26). First, to cover clause union structures, the latter version eliminates reference to 7 arcs, characteristic only of the participial cases. I assume, but will not discuss further, that this formulation is consistent with the independently needed principles for forced raising associated with all clause union structures. It is in fact consistent with past metagraph work on this topic. Second, for the same reason, it also eliminates the requirement that the foreign successor always have a final 1 arc R-successor. While this is wanted for standard participial passives, and for the clause union type in (4.18c), it is wrong for the clause union cases like (4.18b) and quite possibly also for those like (4.28b, c, d) below. The condition thus merely requires the local $predecessor_{II}$ of a 1 arc to have a foreign successor, leaving the ultimate relational status of the head of that successor to other principles which will not concern me here. Third, and critically, (4.26) generalizes from referencing $prepassive_{II}$ arcs to referencing local $predecessor_{II}$s of 1 arcs. This is needed to cover cases like the periphrastic *born* structures treated in the next section.

While the passive analysis given so far remains incomplete, it does offer a key insight into a fact which partly obscures the passive nature of French cases like (4.18c) and which has helped make it controver-

sial whether they are indeed passive clauses. That fact is the impossibility of the passive auxiliary in clause union cases (see Kayne, 1975: 251), e.g. compare (4.18c) to:

(4.27) *Le juge a fait être arrêté Durrand par les CRS.

The situation actually involves two questions: (i) why are passive auxiliaries bad in French clause union complements and (ii) why are passive clause union complements good in the absence of the passive auxiliary?

My best proposals at this point are these. The answer to (i) is that French does not allow any auxiliary to head a U arc (see Kayne, 1975: 252). This rules out (4.27). The answer to (ii) is that a passive auxiliary is allowed/required only immediately above a clause with a P_1 arc *local* $successor_1$ of a P arc, not found in clause union complements.

It remains undetermined what if anything accounts for the fact that the constituent containing a participial periphrastic passive clause is in most cases an *auxiliary* clause, a relatively clear claim even absent a precise theoretical notion of *auxiliary*, which I will not attempt to supply. Moreover, it is unclear that the connection between a participial periphrastic passive clause and a containing auxiliary clause is obligatory or lawful. For of course there are as well cases like (4.28b, c, d):

(4.28)a. The students washed the car.

b. The car got washed by the students.

c. Helen had/ordered/wanted the car washed by the students.

d. With the car finally washed by the students,...

In (4.28b), the passive structure is embedded below a nonauxiliary verb. This is not in doubt since English auxiliaries have distinctive properties which the verb <u>get</u> of (4.28b) lacks, in particular, that of permitting subject auxiliary inversion word order, postverbal negation and others. Moreover, the <u>get</u> of (4.28b) itself takes the auxiliary <u>do</u>, impossible for genuine auxiliaries.

(4.29)a. Was/*Got the car washed by the students?

b. The car was/*got not washed by the students.

c. The car did not *be/get washed by the students.

Case (4.28c) also shows a passive structure superficially embedded below a nonauxiliary verb, with no intervening auxiliary visible. Finally, the structure of (4.28d) is less clear, but it could threaten the claim that P_1 local $successor_1$ clauses do not permit final 1 arcs, since the apparent preverbal word or-

der manifested by the 1 here is normally associated with final 1s. So if the car in (4.28d) has the same S-graph status as in (4.28a), that is, is a final 2 object of the washed clause, why is its word order not that of a surface 2 object? [11, 12]

A key question is how to characterize these partially diverse constructions and one might ask whether there is any possibility they might be compatible with a claim that English passive clauses of the P_1 type *always embed directly below an auxiliary*. There appear to be two choices. First, the construction types in (4.28b, c, d) could be claimed to all involve an (evidently invisible) auxiliary structure just above the passive phrase, as in standard passives with explicit forms of be. This would require forcing the erasure of (among others perhaps) the arc headed by the auxiliary be. And it would have to be specified which kinds of structures permit/require such erasure, to prevent ill-formed cases, e.g. (4.30b, d):

(4.30)a. Francis hates her friends to be arrested by the secret police.

b. *Francis hates her friends arrested by the secret police.

c. Francis expected her friends to be arrested by the secret police.

d. *Francis expected her friends arrested by the secret police.

Alternatively, the specification linking a prepassive$_1$ clause to a higher structure must be complicated to permit/require not be, but a range of possibilities including get, have, want, etc

Not being in a position to work out either program, I will say no more about the issue. I note though that the somewhat weak principle (4.26) only requires that a type (4.22a) periphrastic passive clause head a Term arc and that its prepassive arc have a foreign successor in the containing clause. It says nothing about the ultimate relational status of the prepassive constituent in the main clause nor about the nature of the latter. It is thus compatible with either of the two possibilities sketched above.

4.4 Clauses Which Only *Look like* Periphrastic Passives

Some clauses manifest apparent periphrastic passive clause verbal morphology but are arguably nonetheless not passives. Such cases instantiate, I suggest, *periphrastic unaccusative structures*. English examples are illustrated by the verb born.

Postal (1986: 158) observed that although requiring the two clause periphrastic structure and passive participle morphology, this verb never occurs with the passive by phrase, an incompatibility also holding for its nominalization form:

(4.31)a. *Jerome borned in a field.

b. Jerome got/was born in a field.

c. *Jerome was born by a young mother.

d. the birth of/*by Jerome in a field

The fact in (4.31d) is typical of nominalizations of unaccusative verbs. Saying this verb manifests periphrastic passive clause verbal morphology means of course that it requires both the past participial form and a higher auxiliary or alternative like a form of get (see below) which passive verbs also permit.

My 1986 conclusion that this case represented a nonpassive clause manifesting in some sense passive clause morphology was buttressed by facts from Welsh, which has two different types of passive clause. One is personal, the other impersonal and they involve entirely different morphological complexes, one periphrastic, one not. Strikingly though, the Welsh verb 'born' occurs in clauses manifesting both, in each case with no analog of the English passive by phrase. These facts support the idea that the relevant clauses are not passives while showing that one cannot reasonably take the morphological similarities between the 'born' cases and passives in the two NLs to just be accidents. So the problem is how to state systematically that the morphological properties of passive structures manifest in lexically selected *non*-passive ones.

As touched on in the previous section, I propose to approach this issue by taking the P headed by born to have a P_1 arc local $successor_I$. More fully and precisely:

(4.32) Suppose B is a P arc headed by born. Then:

a. born is an unaccusative verb, hence B is a neighbor of an initial 2 arc and:

b. B must be a neighbor of a 2 arc local $predecessor_{II}$ of a 1 arc.

The specific lexical specification proper to born involved in (4.32a, b) can be imposed as:

(4.33) **The born Lexical Condition**

If A is P arc which is [{born,....}] zoned, A is a neighbor of an initial 2 arc and of a 2 arc local $predecessor_{II}$ of a 1 arc.

If, as sometimes speculated, initial unaccusativity is predictable from verbal semantics, the first part of the consequent of (4.33) would be unnecessary. The condition does not state that the required initial 2 arc and local $predecessor_{II}$ of a 1 arc must be the same arc, although nothing prevents that. Chapter 6 considers examples where born occurs with expletive there in which they are not, which is also the case in pronominal cases like:

(4.34) Marsha thought she had been born in a space ship.

Here, on the reading where Marsha antecedes she, according to the analysis in Chapter 1, section 6, the initial 2 arc of the complement clause, which overlaps the initial 1 arc of the main clause, is inherently replaced by a pronominal arc, and only the latter could have a 1 arc local successor$_{II}$.

All instances of arcs which can plausibly be taken to be local predecessor$_{II}$s which I am aware of are output arcs. This is for instance surely the case for the 2 arc local predecessor$_{II}$ of a 1 arc required with born. For one wants that to be a foreign predecessor$_{I}$ of an arc in the required higher (usually auxiliary) clause. Plausibly then, (4.35) holds:

(4.35) **The Local Successor$_{II}$ Condition**

If A is a local predecessor$_{II}$, A is an output arc.

While I cannot give a factual argument for (4.35), neither do I know anything conflicting with it. And it has the virtue of vastly decreasing the class of possible local successor$_{II}$ structures.

One now wants the P arc headed by born to have a P_1 arc local successor$_{I}$ because if it does, the overall behavior of born clauses will fall under the principles worked out for participial periphrastic passives. To achieve that condition (4.15) needs to be slightly generalized to:

(4.36) **The 1 Arc Local Successor$_{II}$/P_1 Arc Connection Condition (Version 2)**

If A is an 1 arc local successor$_{II}$, and B is a P arc neighbor of A locally erasable by a P_1 arc, then B is a local predecessor of a P_1 arc.

This replaces reference to arc passive$_{II}$ arcs with reference to 1 arc local successor$_{II}$s. The modified version requires the P arc born heads to have a P_1 arc local successor. Since the type of the latter is unspecified, in principle, it could be either a successor$_{I}$ or a successor$_{II}$. But, since English, unlike French, has no construction in which P arcs have foreign successors, only the former possibility will survive, making born clauses parallel to periphrastic passive inner clauses in having 1 arc local successor$_{II}$s and final P_1 arcs.

Under the assumptions I have made, born clauses are treated as parallel to participial passive ones, modulo the fact that they lack initial 1 arcs. Each contains an object arc local predecessor$_{II}$ of a 1 arc, a P_1 arc local successor of a P arc and no final 1 arc. In these terms, the morphological parallelism is hardly surprising. And if one makes parallel assumptions for Welsh, the analogous conclusion would follow.

Possibly though, in a variation from what I have said about born clauses, lexical specification (4.32b) might be unnecessary. There could be a condition *requiring* the 1 arc local successor$_{II}$ it mentions:

(4.37) **The Obligatory 1 Arc Local Successor$_{II}$ Condition**

If A is an output arc with closed 2 quace and not the neighbor of an output 1 arc, A is the local predecessor$_{II}$ of a 1 arc.

This not only predicts the condition on born but on lots of other cases as well, including e.g. French ones like the short form of (4.23). Section 10 below suggests that such a condition is more widely relevant to English as well. The reason why the condition invokes an arc with closed 2 quace and not the more specific 2 arc has to do with its interaction with the English Adjectival Clause Relational Poverty Condition introduced in (4.99) below and modified in (5.56). At issue is covering pseudopassive non 2 arc neighbors of participles converted to adjectives.

Condition (4.37) amounts to a speculation that an intransitive 2 arc cannot simply be an output 2 arc unlinked to a local successor. Assuming there is no demotion, if such a 2 arc lacks a 1 arc local successor$_{I}$, or fails to sponsor an arc which does, it is required to have the local successor$_{II}$ analog. This would mean that while the claim that every clause has a final 1 arc is false, a wide class of clauses, perhaps all, must nonetheless have some kind of 1 arc, even if they have no initial 1 arc.

It might seem necessary to specify that almost no other English nonpassive verbs beside born even *permit* a partially passive-looking structure like that found with born. But Chapter 5, section 4 suggests that the phenomenon may be more general than first appears, because it is masked in most cases by an adjectival structure overlay. If that view is correct, the really unique characteristic of born is not that it *allows* its P arc to have a P_1 local successor$_{I}$, but that it *requires* this. Many other unaccusative verbs merely allow that possibility and then, if the option is taken, require what is discussed in section 11 under the rubric *adjectival conversion*.

4.5 Spanish Again

Recall that the 3 object to 2 advancement rule posited in Chapter 3, Section 9, feeding the rare Peruvian Spanish construction (only) seemingly permitting direct passivization of its 3 objects just required the advanced 3 object to have a 1 arc R-successor$_{I}$ and not, more restrictively, a 1 arc local successor$_{I}$. Under the plausible assumption that the prepassive$_{II}$ analysis of periphrastic passives given in the preceding part of this Chapter holds for Spanish cases as much as for French or English ones, this could be stated instead as:

(4.38) **Peruvian Spanish 3 to 2 Advancement Control (Version 2)**

If A is a 2 arc local successor$_{I}$ of a 3 arc, then conditions X hold and A is a prepassive$_{II}$ arc.

Given earlier principles, (4.38) guarantees that the 2 arc local successor$_{I}$ has a 1 arc local successor$_{II}$, and that the 2 arc has an immediately higher foreign successor$_{I}$, which is a neighbor of a 7 arc support of the prepassive arc. These conditions are all arguably met to the same extent in Spanish cases, both those of Peruvian Spanish and more standard varieties, as in English. The newer version of the Spanish rule determines, although the original one did not, that the relevant 3 object to 2 advancement is only legitimate in passive clauses and not for instance in cases where the 2 arc local successor$_{I}$ has some higher clause final 1 arc R-successor independently of passivization. Most crucially, formulation (4.38) determines that the 2 arc local successor cannot sponsor an expletive arc which would have a 2 arc local successor$_{I}$ being the prepassive arc. That predicts the word order fact in (3.145d) under the assumption that the postverbal DP order in Spanish passives involves demoted 2 objects which have been displaced by (invisible) expletives, as in the account in the following section.

Balancing these positive features, (4.38) fails to determine that the foreign successor of the prepassive arc needs to have a final 1 arc local successor in an auxiliary clause. This is the same weakness noted for English cases. Part of the problem is dealt with by the Final 1 Arc Condition, which determines that an unembedded auxiliary clause needs a final 1 arc.

4.6 Passive Victim Arc Constraints

In (4.8) of section 2 above, a passive victim arc is defined as one erased by the passive clause defining arc passive arc. There are no doubt strong limitations on possible passive victim arcs. Many such constraints were attributed in earlier work to a principle called *The 1 Advancement Exclusiveness Law*. Extensionally, in current terms, this would require disallowing passive victim arcs which are 1 arc local successor$_{I}$s. See Perlmutter and Postal (1983, 1984a), Farrell (1993, 1994).

Another constraint arguably precludes passive victim arcs which have *expletive* heads:

(4.39)a. It frightens me how angry she is/the degree to which she is angry/that she has a gun.

b. *I am frightened by it how angry she is/the degree to which she is angry/that she has a gun.

Roughly, in current terms, passive victim arcs have to be *initial* 1 arcs. But this cannot be literally true given overlapping arc accounts of arc antecedence like that in section 6 of Chapter 1. For in such terms, clause (4.40) contains a passive victim arc which is a pronominal replacer of an initial arc, not the initial 1 arc, which is erased by the initial 2 arc also headed by Jane in the main clause:

(4.40) It bothered Jane that Vernon had not been impressed by her.

Fortunately, the concept *Viable arc* was introduced in Chapter 1 precisely for such cases and picks out the relevant arc type.

Perhaps then the various constraints can be stated as in (4.41):

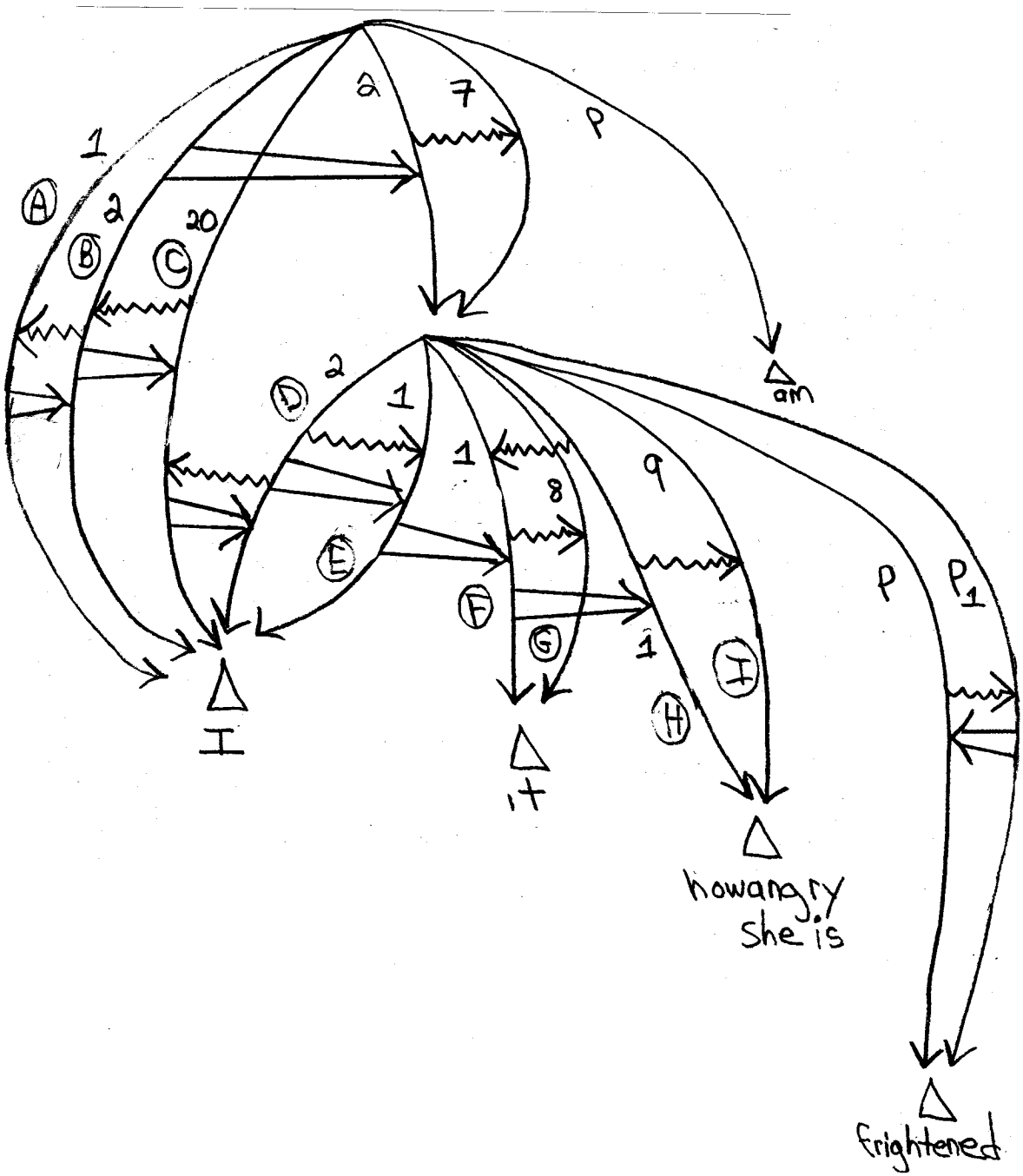
(4.41) **The Passive Victim Arc Condition**

If A is a passive victim arc, A is a viable arc.

This condition allows a passive victim arc to be an initial arc which has no inherent anaphoric replacer, or to be the inherent anaphoric replacer of an initial arc. But (4.41) would not permit a 1 arc local successor$_1$ to be a passive victim arc.

Consider whether (4.41) could block passive victim arcs with expletive heads. The proposals in e.g. Johnson and Postal (1980) defined an expletive nominal as the head of an arc B locally sponsored by a colimb A, where B does *not* replace A. Arcs like B were called *Ghost (arc)s*. In general, ghosts and their sponsors were required to be Term arcs. In these terms, given (4.41), it might seem that no ghost could be a passive victim arc, because ghosts were neither initial arcs nor inherent replacers of such, hence would apparently not be viable arcs. But consider a supposed representation of this situation as in fragment (4.42) for (4.39b):

(4.42)


1
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2
B
20
C
2
7
P
D
2
1
1
8
9
E
F
G
1
H
I
P
P1
am
I
it
how angry
she is
frightened

Here the passive victim arc is F, which is not an initial arc and which one would *want* to be a ghost arc. Unfortunately, that characterization could only work under the assumption of Johnson and Postal (1980) that replacers were defined as having two sponsors, rejected in the present framework. As things stand, given the definition of Replace in (1.43), F *is* a replacer of H, hence a viable arc. Appeal to (4.41) as is cannot block expletive arcs which are passive victim arcs and no account of the failure of these two arc types to intersect is yet visible.

A modification of earlier views of expletives is thus motivated on that ground alone. Moreover, certain modifications are in addition partly parallel to that underlying the earlier posit that the foreign successors associated with flagging represent a designated arc type (60 arcs). Moreover, although space limitations preclude serious discussion, I would suggest parallel posits that each raising or extraction involves a designated arc type as successor, along the lines of:

(4.43) **Novel Views of Raisings and Extractions**

a. If A is a Nominal arc and B is a *foreign* successor$_I$ of A, then B is a 20 arc or a 30 arc.

b. Each 20 arc C is a foreign successor$_I$ having an output Central arc R-predecessor, D, and if C is not a predecessor of a 20 arc, C is a local predecessor$_I$ of a Central arc W-equivalent to D.

c. Each 30 arc F is a foreign successor$_I$ having an output Central arc R-predecessor, G, and if F is not a predecessor of a 30 arc, F is a local predecessor$_I$ of an Overlay arc.

This would mean that each raising involves a sequence of one or more 20 arc foreign successor$_I$s initiating with an output Central arc and terminating in a Central local successor$_I$ of a 20 arc W-equivalent to the initiating Central arc. Each extraction would involve a sequence of one or more 30 arc foreign successors initiating with an output Central arc and terminating in an Overlay arc local successor$_I$ of a 30 arc.

Returning to expletives then, suppose one assumes:

(4.44) a. There is an edge label unique to nonsuccessor arcs headed by expletives, call it XPL;

b. Each XPL arc is locally sponsored by a nonoverlapping (non-Oblique) Central arc colimb;

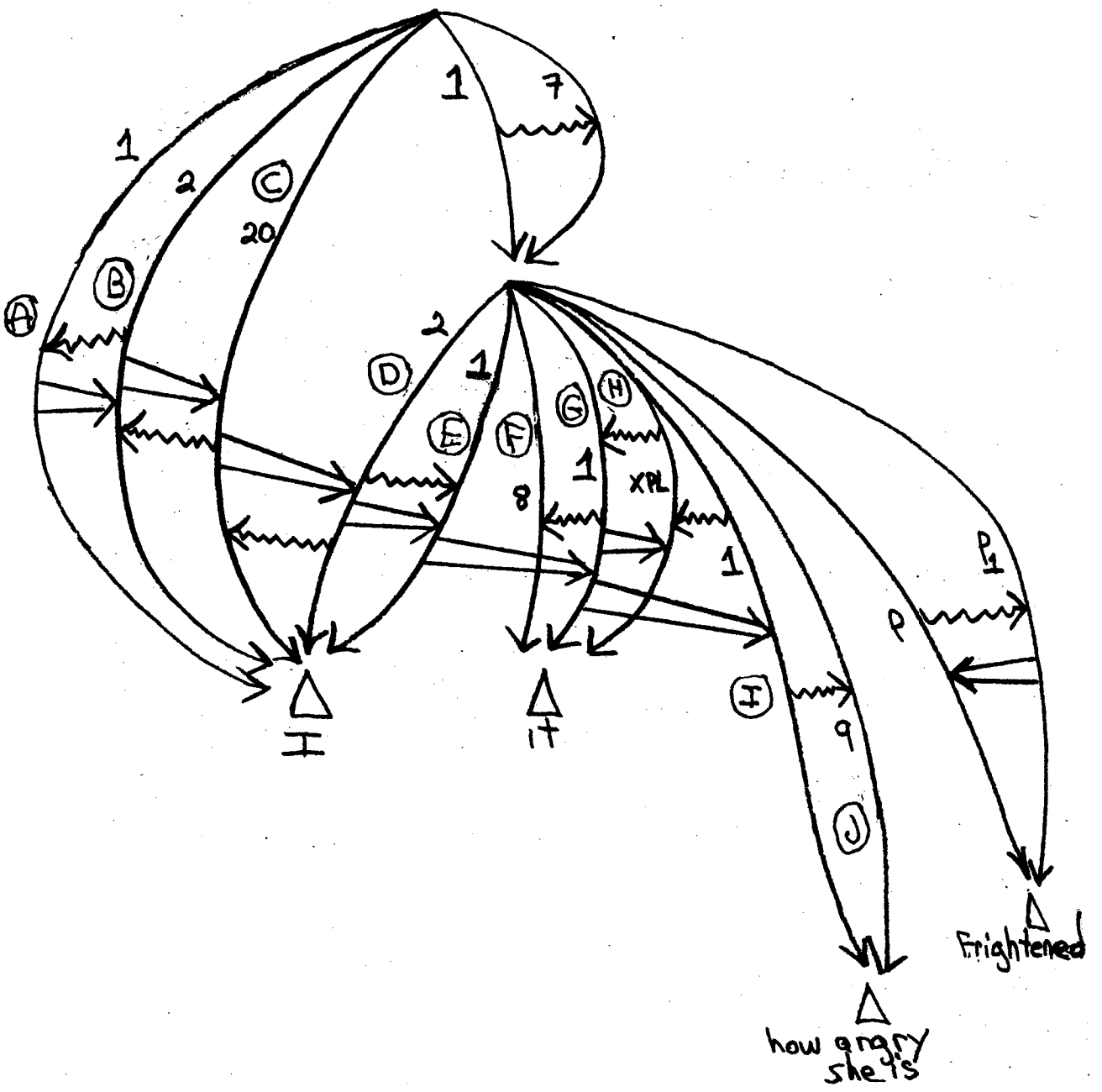
c. Each XPL arc A has an R-local successor$_I$ W-equivalent to A's sponsor. [13]

XPL arcs would be the present version's extensional equivalent of the ghost arcs of Johnson and Postal (1980). It might well be correct to strengthen the specification Central arc to e.g. Core arc, since most known expletive nominals seem to be 1s or 2 objects. A few known cases which do not fall under this characterization are plausibly 3 objects or other types taken as involving demoted 2 objects or 3 objects (e.g. that in <u>I will see to it that he is arrested</u>. The latter, I take to be a 5 object,

which could, with no violence to the characterization of English 5 objects, be taken to be a demoted 2 object.) But some instances of English clausal extrapositon arguably involve XPL arcs locally sponsored by 4 arcs; see Chapter 9. If that is correct, Core arc may be the narrowest constraint here.

Under these assumptions, no XPL arc can be a successor and if the XPL arc in (4.39b) is sponsored by the initial 1 arc, then it must have a 1 arc local successor$_1$ to satisfy (4.44c). But if that 1 arc local successor is a passive victim arc, condition (4.41) would be violated, as seen in the modified representation for (4.39b) in (4.45):

(4.45)


A
B
C
D
E
F
G
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J
1
2
20
7
2
1
8
1
XPL
1
9
P
P1
I
it
how angry she's
Frightened

Here, G is the passive victim arc; but it is a local successor$_1$ of H, hence not a viable arc, blocking such structures. There is now no question of G being a replacer, since it is not W-equivalent to its local sponsor, H. Under the new XPL assumptions then, condition (4.41) *does* offer the basis for the nonexistence of expletive passive victim arcs.

A key advantage of the view of raisings and expletive cases just sketched is that it reduces all issues involving the interaction of congruent W-equivalent Central arcs to those involving local successor$_1$s. This was *not* the case in Johnson and Postal (1980), where e.g. in present terms, ghost arcs and foreign successors could, roughly, threaten other arcs. That is now impossible since no foreign successor or 'first' arc defining an expletive need be allowed to be a Central arc.

4.7 Middles as Synthetic Passives

One criterion appealed to in previous chapters to distinguish 2 objects from 3 objects or 4 objects was the possibility of functioning as the target for middle clause formation. English middles, discussed in e.g. Ackema and Schoorlemmer (1995), Fagan (1988, 1992), Keyser and Roeper (1984, 1992), Roberts (1987) and Stroik (1992, 1995, 1997, 1999), include such sentences as:

(4.46) a. The bottle breaks easily.

b. That kind of beer doesn't brew rapidly.

c. Soft materials don't cut easily.

d. Such buildings don't finish quickly.

e. Those people don't fool easily.

f. Such problems don't solve easily.

g. That novel won't translate rapidly.

The basic properties of English middle clauses relevant to present concerns include the following:

(4.47) a. They are synthetic not periphrastic.

b. Their main verbs are transitive.

c. While they seem to correspond semantically to agentive nonmiddle clauses with the same verbs, no agent phrase can be expressed (in the way a <u>by</u> phrase expresses the underlying 1 of an English periphrastic passive). [14]

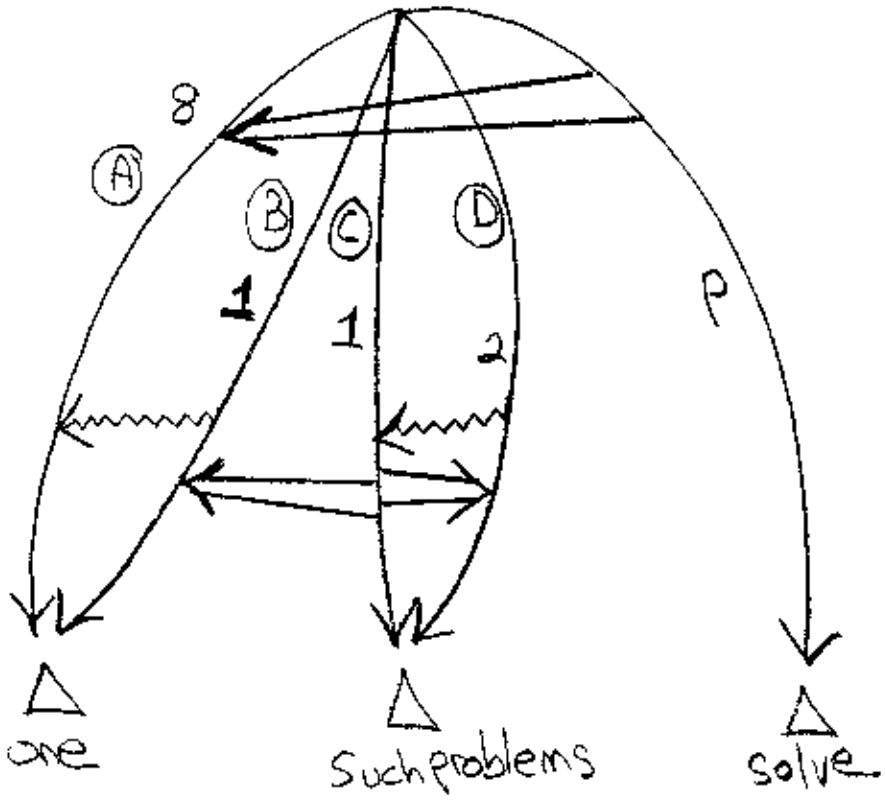
d. The clause is usually required to contain an adverb.

e. The final 1 of a middle corresponds semantically and selectionally to the object of the corresponding nonmiddle active.

f. There are relational constraints on the target DP of the sort cited in earlier chapters.

These basic syntactic properties are representable by taking middles to be a type of synthetic passive, that is, in current terms, one based on arc passive$_I$ arcs. This yields (4.48) as the core metagraph structure of (4.46f): [15]

(4.48)


8
A
B
C
D
1
1
2
P
one
Such problems
solve

The basic limitations on the construction are then initially expressible as in (4.49):

(4.49) **The *English* Synthetic Passive (Middle) Condition (Version 1)**

If A is an arc passive$_{I}$ arc, B a neighboring passive induced arc and C a neighboring predpassive arc, A is the local successor of a 2 arc, C erases B, whose head constituent is generic <u>one</u>.

Several remarks are in order.

First, that the underlying 1 of a middle is generic <u>one</u> is supported by observations about anaphora in Stroik (1992, 1995, 1999). Typical facts include:

(4.50)a. Memos to oneself/*myself/*ourselves/*yourselves/*herself/*themselves compose easily.

b. One easily composes memos to oneself/*myself /*yourselves/*herself/*themselves.

Under the assumption, facts like (4.50a) can follow from the principles operative in (4.50b). Second, my specification of this fact is entirely informal and has to remain such. Third, that the passive induced arc, A in (4.48), is specified in (4.49) as erased by the neighboring P arc gives the right answer here, that is, yields property (4.47c). It states that all English synthetic passives are *short passives*.

I did not earlier discuss the fact that English periphrastic passives can be either long or short. I would though posit an optional erasure of the passive induced arc in such by the neighboring P_1 arc. The conditions bearing on the head of the erased arc are complex and beyond the present discussion.

But the posited erasure in both passive types raises a theoretical problem. Grammatical theory cannot allow the erasure of passive induced arcs whose heads correspond to just random constituents, e.g. not one like <u>The world's greatest magician</u>. There must thus be constraints on the local successor$_{III}$s which can be erased so that only a very limited set of nominals can function as their heads. For in all cases, the understood nominal is very general, unspecific, etc. The characterization of this class was grappled with in Johnson and Postal (1980: Chapter 9) with limited success. Unfortunately, I can offer nothing better here.

A number of NLs related to English arguably have constructions analogous to English middles. These include French and German, where one finds e.g.:

(4.51) French

a. Ruwet (1972: 99)

Les imperialistes, ça se déteste.

The imperialists, that self detests

"Imperialists are hated"

b. Authier and Reed (1996: 513)

Ces sakés japonais se boivent frais en été.

These sakes Japanese self drink cold in summer

"These Japanese sakes are supposed to be drunk cold in the summer"

(4.52) German

a. Curme (1922: 331)

Das begreift sich leicht.

That understands self easily

"That is easily understood"

b. Steinbach (1998)

Dieser Käse schneidet sich sehr gut.

This cheese cuts self very good

"This cheese cuts well"

The relevant factor in these cases is the presence of overt *reflexive* morphology, the reflexive verbal clitic se in the French case, the reflexive DP sich in the German one. [16]

Such sentences illustrate another dimension of passive typology at least partially independent of the synthetic/periphrastic passive distinction. This is the division between *reflexive* and *nonreflexive* passives, a distinction described informally as in (4.53a) by Siewierska, who then displayed the examples in (4.53b-d):

(4.53)a. Siewierska (1984: 162)

"Passive clauses such as the Russian (ic) which display similar morphological marking to reflexive clauses have been called reflexive passives."

b.. Rebenok –ø umy-l -sja

child-nom wash: perf past -refl

"The child washed himself"

c. Devock-a my-la pol-ø

girl-nom wash:imperf-past floor-acc

"The girl was washing the floor"

d. Pol-ø my-l -sja devock-oj

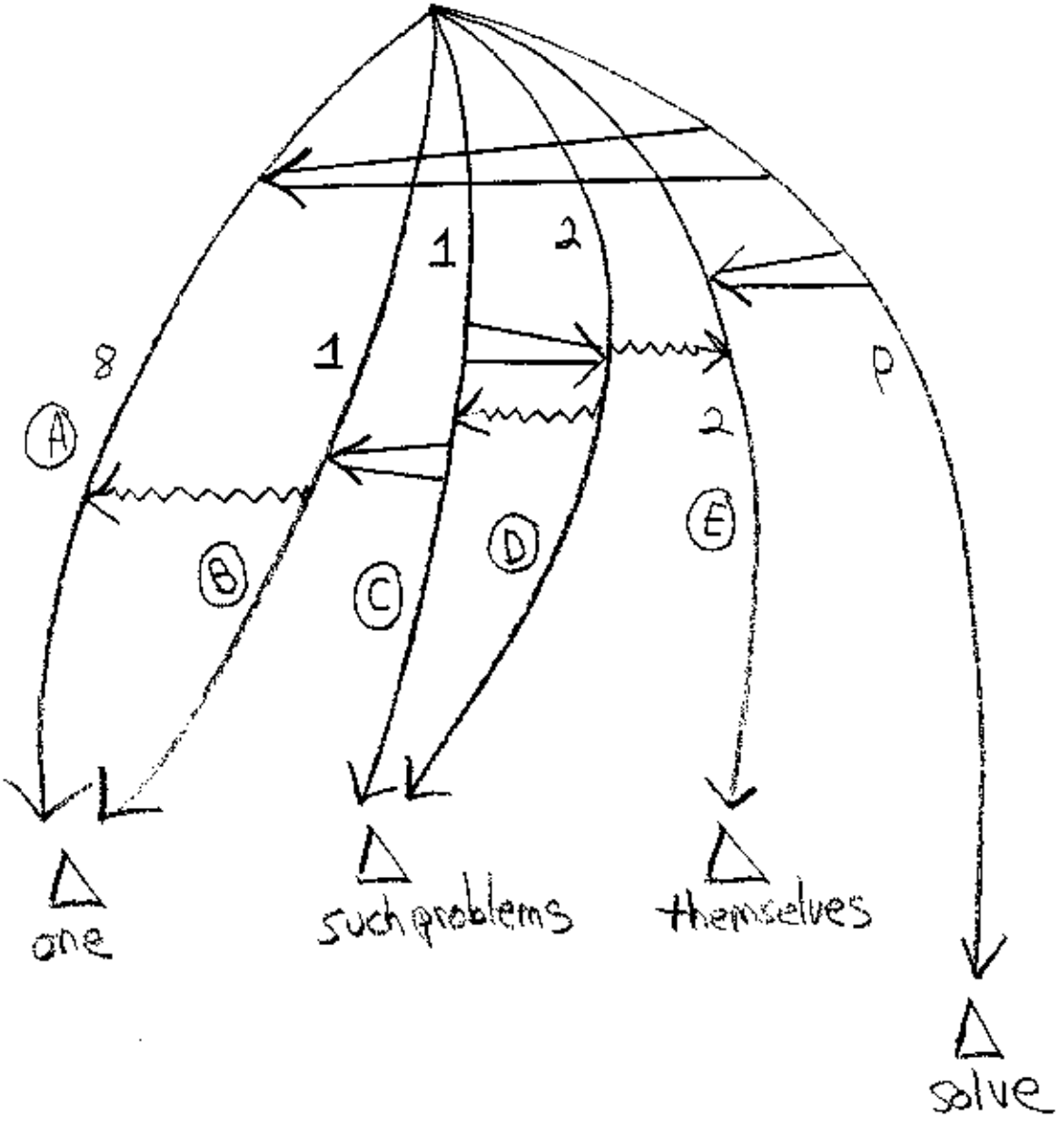
floor-nom wash:imperf refl girl-inst

"The floor was being washed by the girl"

The key issue raised by (4.51), (4.52) and (4.53) is how to account for the fact that crosslinguistically one type of passive recurrently displays the same reflexive morphology found in 'true' reflexives. A metagraph based theoretical account of the grounds leading to this is found in Johnson and Postal (1980: Chapter 11, section 8). While I believe that analysis was essentially correct, I will not consider the matter in depth. It would not be surprising, however, if reflexive passives were exclusively a sub-type of synthetic passive. The apparent absence of cases of reflexive periphrastic passives was noted in Postal (1992a). I have not seriously studied whether this holds systematically crosslinguistically; but I suspect it does.

Possibly, *English* middles should be viewed as reflexive passives *with invisible reflexives*. This would mean replacing (4.48) by something like:

(4.54)


8
1
1
2
2
p
A
B
C
D
E
one
such problems
themselves
solve

In this case, arc E would be a copy arc. Arc passive$_{II}$ structures expanded to include a copy arc structure reveal a point which I take to be key to the probable nonexistence of reflexive periphrastic passives. In such cases, the erase arrow linking C and D in (4.54) would of course be reversed. But that means that E could not be seconded by C. Rather, it would be seconded by the foreign successor$_{I}$ of D in the higher clause. That would mean that while a copy arc, E would not be a locally seconded pronominal arc and hence would not be reflexive (given the proposal about that notion in (1.62) of Chapter 1).

After writing the above paragraphs, I fortunately saw Troseth (2006), which argues convincingly that English has middle clauses with *overt* reflexive morphology, e.g.:

(4.55)a. This book reads itself.

b. Red velvet cake makes itself.

c. The holes dug themselves.

d. The dress washed itself.

Each of these corresponds to a middle without overt reflexive, formable by replacing the <u>self</u> form with e.g. <u>easily</u>. The existence of such cases with a clearly middle like interpretation lends considerable support to a *reflexive* passive analysis of English middles. If all English middles are reflexive passives with structures like (4.54), the question arises as to the conditions determining the erasure of reflexive arcs like E in only *some* of them. However, I have no insight into such conditions.

The parallelisms between English middles and reflexive passives in French, German, etc., render the reflexive passive analysis for English at least highly plausible. One point supporting the view that middles in these other NLs are a type of passive can be stressed. While in German and modern standard French, the underlying 1 cannot be overtly expressed, Authier and Reed (1996) observed that this is permitted in variants of Quebec French and indicate that this was also possible in earlier stages of continental French (as noted in Martinon (1927: 302; cited in Ruwet, 1972: 110). These facts serve to approach the structures of middles and undoubted passives in a clear way. Just as it is known there are NLs whose passives do not permit expression of the underlying 1, as well as those, like English, which do, just so there are middles of these two types. There is thus no inherent linkage between underlying 1 expressability and middle/nonmiddle status. That means that the inexpressibility of the 1 of an English middle (if, contra Stroik's position discussed in note 15, such are inexpressible), cannot count against its being a type of passive.

Return to principle (4.49). One would like this to interact with the three way relational analysis of English objects I have proposed to properly predict the consequences in (4.56):

(4.56)a. No Array 1 clause has a middle correspondent.

b. No Array 2 clause has a middle correspondent.

c. No ditransitive clause has a middle correspondent whose 1 represents the first object.

d. No ditransitive clause has a middle correspondent whose 1 represents the second object.

Consequence (4.56a) should follow from the fact that Array 1 single objects are 4 objects, consequence (4.56b) from the fact that Array 2 single objects are 3 objects and consequences (4.56c, d) from the fact that the two objects of ditransitives are a 3 object and a 4 object.

Given the requirement in (4.49) that the prepassive arc of a middle be a 2 arc, all of (4.56) might indeed seem to be consequences. While not without a significant degree of validity, this claim encounters a genuine problem linked in particular to my claim that the 4 objects (second objects) of English ditransitives are demoted 2 objects. The same problem would arise under my speculation that (even some) 4 objects of Array 1 are demoted 2 objects. For the question then arises why the 2 arcs defining that earlier 2 object status cannot serve as the prepassive arcs for middles. In some sense, the demotion to 4 must bleed this possibility, but the exact nature of that bleeding has not been explicated. Since the same problem arises for periphrastic passive interactions with these 4 objects, I delay discussing this issue until it arises as well in section 2 of the next chapter for periphrastic passives.

There are other problems with (4.49), which is, after all, only a necessary condition characterizing viable English middles. Many sufficiency conditions no doubt remain to be specified. For instance, contrasts like those in (4.57)-(4.59) have not been accounted for:

(4.57)a. Frank proved such theorems.

b. Such theorems don't prove easily.

c. Frank proved such things to be possible.

d. *Such things don't prove easily to be possible.

(4.58)a. Marianne prevented such a breakdown.

b. Such breakdowns don't prevent easily.

c. Marianne prevented such a dispute from breaking out.

d. *Such disputes don't prevent that easily from breaking out.

(4.59)a. Susan grabbed extraterrestrial tentacles.

b. Extraterrestrial tentacles don't grab easily.

c. Susan grabbed the extraterrestrial by the/its front tentacle.

d. *An extraterrestrial doesn't grab easily by the/its front tentacle.

Pairs like (4.57b, d) and (4.58b, d) show that the following proposal is not correct:

(4.60) Fagan (1988: 195, note 19)

"K&R account for the fact that middles do not allow raising in the same way they treat preposition stranding in middles; namely, they argue that Middle Formation is a core rule of syntax and that it therefore subject to exceptional rules like S'-Deletion, which must apply in order for raising to occur:

(i) *John believes to be a fool easily. (K&R (1984, 407))

However, middles like those in (i) can be ruled out for the simple reason that the verbs that occur in them do not allow Middle Formation even with NP complements:

(ii) *John believes easily."

Even if true that Fagan's (i) is blocked simply because the main verb precludes middles (for unknown reasons), (4.57) and (4.58) show that such an account is not general enough to capture the systematic incompatibility between middle formation and raising to object.

One might guess that beyond (4.49) an object which 'feeds' middle formation in C must be an *initial* constituent of C of some kind, since that condition is evidently not met in the ungrammatical cases of (4.57)-(4.59). But that view cannot be literally true, specifically given the assumption of Chapter 1 that semantically relevant pronominal antecedence depends on overlapping initial arcs some of which are inherently replaced. Because such replacers can be the final 1 arcs of middles, as in:

(4.61) Such people assume they don't fool easily.

This is readily understood such that <u>Such people</u> antecedes <u>they</u>. Needed then is a way of picking out all and only those arcs which are either initial arcs or their inherent pronominal replacers, or R-local successors of either of these.

Happily, such was already provided in Chapter 1 via the notion *Indigenous*. So I modify (4.49) to incorporate that notion and make other modifications for reasons which will emerge:

(4.62) **The *English* Synthetic Passive (Middle) Condition (Version 2)**

If A is an output 1 arc neighbor of a prepassive$_1$ arc B, and C is a neighboring passive induced arc, then B is an indigenous 2 arc, A is an R-local successor of B, C is locally erased by a predpassive arc and the constituent defined by C's head is generic <u>one</u>.

This statement, which *ignores* the possible reflexive characteristic of middles, makes two critical claims about English middle clauses. First, their prepassive arcs must be indigenous 2 arcs and second, their output 1 arc must be an R-local successor of that prepassive arc, in other words, must share the head node of the prepassive arc. There is, as seen shortly, no analog of the first condition for periphrastic passives and there could not be an analog of the second, since the inner clauses of periphrastic passives contain no output 1 arcs.

Revised principle (4.62) would block (4.57d) and (4.58d), since the objects of (4.57c) and (4.58c) are raised constituents (1s) of the complement clauses; further, (4.59d) would also be rendered ungrammatical under the motivated assumption that the object of (4.59c) is a raised genitive. In each case, the phrase which ends up as the head of the output 1 arc of a middle clause would therefore wrongly not head an R-local successor of *any* indigenous arc in that clause, hence, trivially, not the required indigenous 2 arc. This follows since an indigenous arc is an R-local successor of a viable arc, the latter either an initial arc or inherent replacer of one.

The output and indigenous conditions in (4.62) arguably also basically account for another fact about English middles: their final 1s can never be expletives. Consider:

(4.63)a. One doesn't easily prove that two and two is seven.

b. That two and two is seven isn't easily proved.

c. It isn't easily proved that two and two is seven.

d. ?That two and two is seven doesn't prove easily.

e. *It doesn't prove easily that two and two is seven.

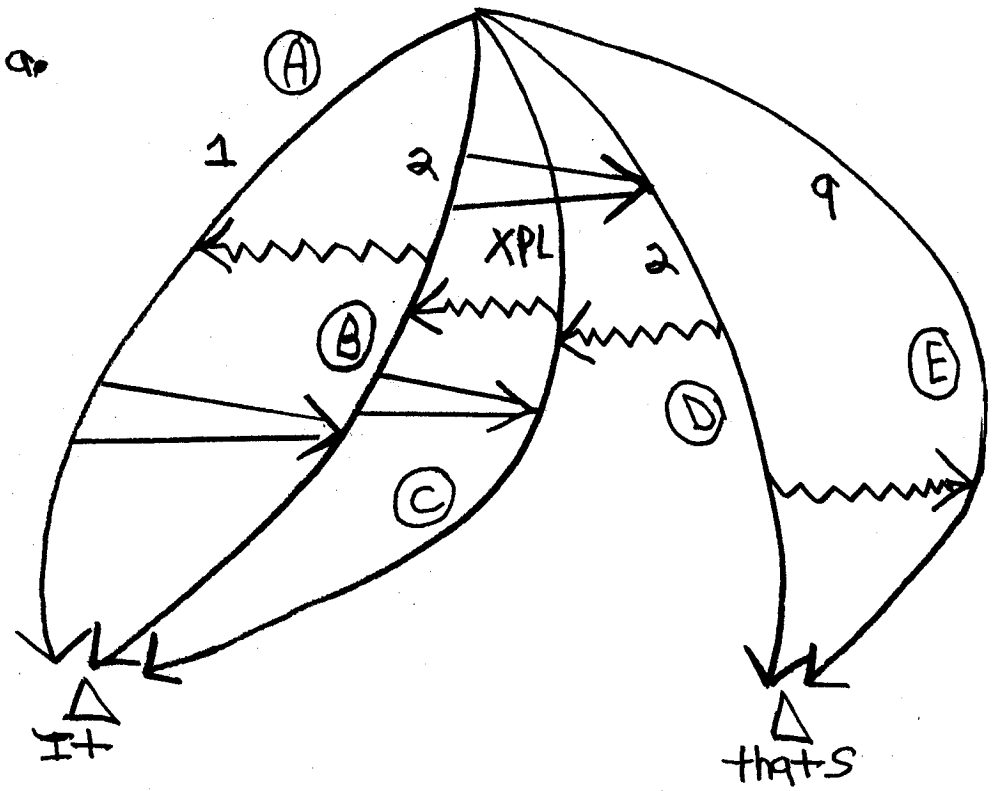
The ungrammaticality of the middle (4.63e) is striking given the grammaticality of the parallel periphrastic passive (4.63c).

The badness of (4.63e) follows from the combination of the indigenous and output requirements in (4.62), as follows. The assumptions in (4.62) permit at least two distinct analyses for (4.63e). The metagraph analysis of expletives like that in (4.63c, e) consistent with (4.44) above could seemingly have them head XPL arcs sponsored by the indigenous 2 arc whose head corresponds to the complement

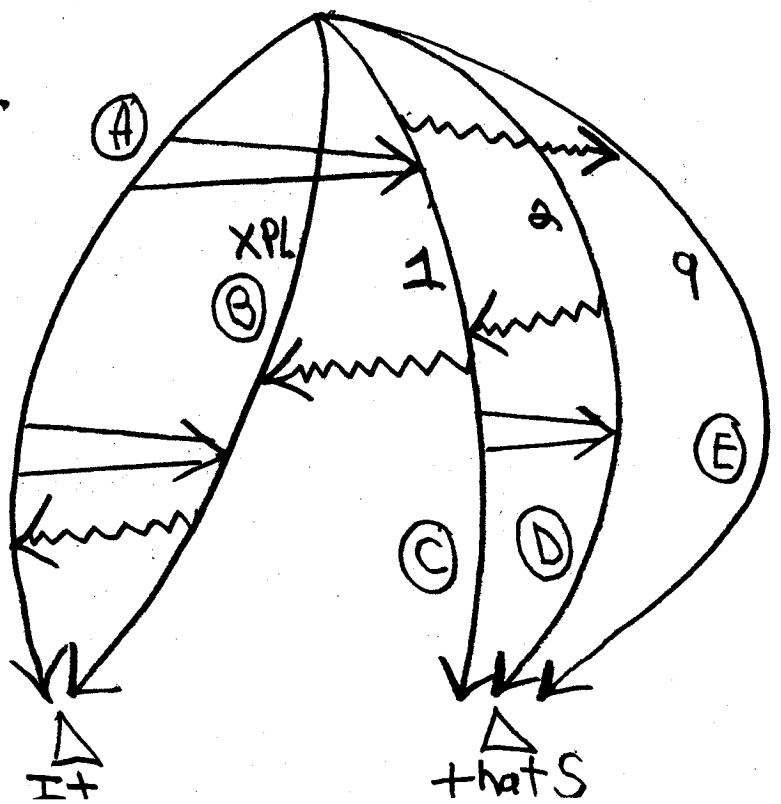
that clause, etc., or by the 1 arc local successor$_1$ of that indigenous 2 arc. Thus focusing on essentials and with *that* + S abbreviating the complement, two possible expletive analyses of (4.63e) are:

(4.64)

a.



b.



Significantly, both (4.64a, b) fail to satisfy (4.62); in (4.64a) the output 1 arc, A, also the final 1 arc, is an R-local successor$_I$ of itself, of its 2 arc predecessor and of the XPL arc, but of no other arc; none of these three is indigenous. Arc D is indigenous but A is not an R-local successor of D; hence, the condition is not met. In (4.64b), the output 1 arc, A, also the final 1 arc, is an R-local successor$_I$ only of itself and the XPL arc, not of the prepassive arc D. So again condition (4.62) is not met.

The considerations just advanced for the interaction between middles and expletive <u>it</u> of the extraposition type hold without alteration for expletive <u>there</u>. Relevant are contrasts such as:

(4.65)a. For that reason, they fool many inspectors.

b. For that reason many inspectors are frequently fooled.

c. For that reason there were fooled many inspectors.

d. For that reason many prisoners fool easily.

e. *For that reason there fool easily many prisoners.

Taking expletive <u>there</u> to head arcs sponsored by Central arcs with distinct heads accounts for (4.65e) in the same way as the facts in (4.63) are treated. Chapter 6 provides further discussion of expletive <u>there</u>. This supports the idea that (with limited exceptions) all instances must head XPL arcs with 2 arc R-local successor$_I$s; only an analysis parallel to (4.64b) could then satisfy (4.62); but that has been seen to be blocked.

In the examples cited to justify (4.62), the output 1 arc of the clause was also its final 1 arc, and one might wonder why the condition does not specify the property *final* instead. The reason links to the very justification for distinguishing the concepts Output arc and Final arc touched on in Chapter 1. It is provided by cases where the output arc is a foreign predecessor$_I$ in a construction with a resumptive pronoun:

(4.66)a. Such officials bribe cheaply.

b. Such officials sound like they bribe cheaply.

In such cases, the final 1 arc of the lower clause is headed by a resumptive pronoun, here <u>they</u>, and that arc is not an R-local successor of the prepassive 2 arc. But the raised phrase, here <u>Such officials</u>, heads the output 1 arc which is such an R-local successor. Hence the current formulation properly permits (4.66b), while an alternative with a specification 'Final' instead of one referencing the output property would wrongly block (4.66b) in the same way it blocks expletive cases like (4.63e).

Since condition (4.62), with its more flexible indigenous condition, does not require that the final 1 of a middle clause be specifically an initial 2 object of that clause, it is properly consistent with the grammaticality of middles of objects in various object alternation pairs, including those Levin and Rappaport Hovav (2005: 186-187) call the *locative* alternation and the *with/against* alternation:

(4.67)a. Devon smeared butter on the toast.

b. Such spreads don't smear easily on soft breads.

c. Devon smeared the toast with butter.

d. Such breads don't smear easily with hard b utter.

(4.68)a. Devon smashed the stick against the fence.

b. Such objects don't smash easily against fences.

c. Devon smashed the fence with the stick.

d. Such fences don't smash easily with sticks.

And the same holds for the alternation seen in Chapter 3, section 2:

(4.69)a. Devon entrusted the ray gun to Myra.

b. Such ray guns don't entrust often to children.

c. Devon entrusted Myra with the ray gun.

d. Such people don't entrust often with ray guns.

Principle (4.62) properly allows middles of both variants of all these cases even if, as I would assume, the 2 objects in the *c.* forms represent advancements from initial obliques or 3 objects of the sort found in the *a.* examples. The condition on middles requires the key phrase in a middle to be an indigenous constituent and a 2 object, but not necessarily the head of a viable 2 arc. Informally, it requires that the target of a middle correspond to the head of an initial arc of the middle clause or to the head of an inherent replacer of an initial arc, but not that the required initial arc be a 2 arc.

Further, principle (4.62) combines with earlier assumptions to determine the middle facts in (4.70):

(4.70)a. Mike fed the gorilla mashed bananas.

b. Mike fed the gorilla.

c. *Such gorillas don't feed mashed bananas easily.

d. Such gorillas don't feed easily.

e. Mike wrote the gorilla (a postcard).

f. *Such gorillas don't write (postcards) easily. (ignore irrelevant nonmiddle (agentive) reading)

These facts, specifically the contrast between (4.70d) and the short version of (4.70f), follow from the assumptions supported in Chapter 3, section 2, that the object in (4.70b) is a final 2 object, that in the

short version of (4.70e), a final 3 object; that permits the indigenous condition to be met in the former but not in the latter.

The discussion of middles in this section, specifically the appeal to the notion indigenous arc, in effect contributes significantly to undermining a number of arguments in Farrell (1994). While Farrell does not discuss middles, he advances four arguments distinguishing positions he characterizes as *alternative initialization* vs. *revaluation*. This is relevant in particular to alternations like those in (4.67)-(4.69), where I have posited that the *a*. forms involve an initial 2 arc and an initial oblique arc, the *c*. forms a 2 arc local successor$_{I}$ of the oblique arc and an 8 arc local successor$_{III}$ of the 2 arc. In Farrell's terms, my approach is one of revaluation. He advocates instead taking all the forms to involve initial arcs; in my terms then, there would be no 2 arc local successor$_{I}$s in any of (4.67)-(4.69). The logic Farrell appealed to for all four arguments was uniform and would apply mutatis mutandis to middle facts.

For each argument, Farrell considered the interaction of a particular construction with a variety of objects he considered to be 2 objects, displaying certain restrictions on the distribution of those objects in that construction. Consider one case, which involves phenomena appealed to in Chapter 2, the possibility of a verbal clause object appearing in an <u>of</u> phrase in a corresponding nominalization. The only constraint I posited was that such objects had to be 2 objects. But Farrell argues in effect that such a condition is too weak, and that 2 objects resulting from raising or the existence of expletive 2 objects fail to permit nominalized counterparts; in his terms, only initial 2 objects are legitimate. [17]

The following indicates the data and his conclusion:

(4.71) Farrell (1994: 122)

> "Among the constructions that do not occur within nominalizations are those that involve the "creation" of a new direct object. That is to say, clausal constructions involving raising to 2 or a dummy entering as a 2 have no nominalized counterparts, as the following examples illustrate.
>
> (74)a. I expect the president to be there.
>
> b. *my expectation of the president to be there
>
> (75)a. They believe these people to be lying.
>
> b. *a belief of these people to be lying
>
> (76)a. The students hated it that the grades were not posted.
>
> b. * the hating of it that the grades were not posted

(77)a. I doubt it that such a thing could ever happen.

b. *my doubt of it that such a thing could ever happen

The (a)-examples in (74) and (75) show raising-to-object within clauses headed by verbs. The (b)-examples show that this construction is not well-formed in the corresponding nominalizations. (76) and (77) illustrate a parallel restriction on the insertion of dummy *it* as a 2 that displaces a clausal complement. Whatever overall account of nominalizations in English should prove to be ultimately correct, it will have to incorporate (or yield the effects of) the following constraint.

(78) *Constraint on Nominalizations in English*

Given a constituent c headed by a nominalized verb, a 2-arc with tail c is an initial 2-arc." [18]

While I agree with the data, in current terms, Farrell's argument fails. The restrictions cited are representable in a general way *even under the 'revaluation' approach I adopt*. For such restrictions can be taken to manifest the property that the verbal clause 2 arc which has some kind of successor in the nominalization is an *indigenous* 2 arc. This has all the consequences in the cases Farrell cites that his initial arc condition does and is no more complex. The facts he cites are entirely parallel abstractly to the restrictions noted for middles, where the prepassive arc also cannot be one which arises through raising or insertion of an expletive.

Farrell advances three other arguments along the same lines. One involves object raising, another adjective formation from verbal roots, and the third so-called depictive predicates. In each case, he attempts to justify a constraint involving appeal to initial 2 arcs. But I discern no reason why an indigenous 2 arc account cannot serve the needed purposes; to the extent that this is right, one need not accept that his discussion genuinely attacks the 'revaluation' approach, a metagraph version of which is assumed throughout the current work. [19]

An additional observation buttresses the last conclusion. Part of the evidence Farrell advances for his position assumes that a ditransitive first object is a 2 object advanced from an earlier relation and hence not an initial 2 object. That is, he accepts the 3 object to 2 advancement view. So some of his cases where an initial 2 condition blocks something because they putatively involve a 2 object which is a 'revalued' phrase and hence not an initial 2 object are, in present terms, not 2 objects at all. Since the entire thrust of the present work supports the view that such objects are rather 3 objects, contrary to Farrell (1994), they are irrelevant to arguing for an *initial* 2 object condition on any construction. Put differently, Farrell's appeal to the *initial* 2 object property is from the current perspective in part

another misleading consequence of the failure to recognize the 3 object status of the first objects of English ditransitive clauses.

4.8 Remarks on Antipassives

Productive *antipassive* constructions are found in numerous NLs, English not among them. These are nonpassive variants of transitive clauses in which the DP representative of the initial 1 manifests as the final 1, while the presumed 2 object manifests as a non-2 object (perhaps an 8). The structure is clearest in NLs with ergative case marking, where instead of the ergative marking of a final 1 found in a true transitive, the final 1 of an antipassive clause is marked with absolutive/accusative case, normally associated in such NLs with 2 objects. There are then patterns like:

(4.72)a. Normal Transitive clause

DP (Erg) DP (Absolutive)

b. Antipassive clause

DP (Absolutive) DP (Some other case, e.g. Instrumental).

Postal (1992a: 316-318) suggested that antipassive clauses should be taken to involve 2 arc local successor$_{II}$s of 1 arcs, which erase independently existing found 2 arcs colimbs of those 1 arcs. This proposal yields a metagraph fragment like (4.73c) for the Greenlandic antipassive example (4.73b), from Sadock (1980) discussed in Baker (1988: 129). This corresponds to the canonical transitive (4.73a):

(4.73)a. angut-ip arnaq unatar-paaa

man-Erg woman-Absol beat INDIC:3sS/3s/O

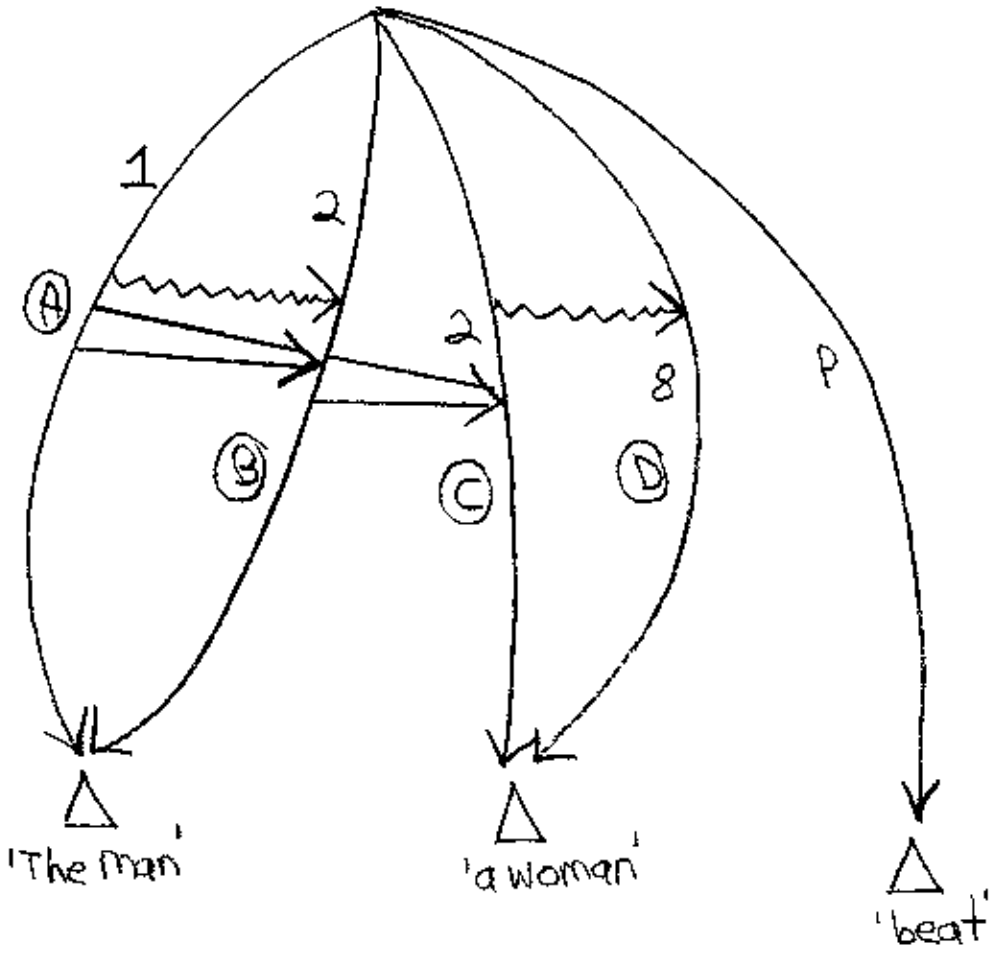
"The man beat the woman"

b. angut arna-mik unata-a-voq

man-Absol woman-Instru beat-APASS-INDIC-3sS

"The man beat a woman"

c.


1
2
A
2
8
P
B
C
D
'The man'
'a woman'
'beat'

The account in this chapter offers certain improvements over the structure suggested in Postal (1992a), already an improvement over earlier metagraph antipassive suggestions, but various problems also emerge. [20] Positively, the Forced Erasure Condition, renders it principled that in (4.73c) B erases C, where previously nothing guaranteed that. The erasure is required since B threatens C. The analysis also nicely brings out precisely the way in which an antipassive structure is an opposite of a passive, more precisely of one involving a prepassive$_{II}$ arc. For where the latter manifests a 1 arc local successor$_{II}$ of (usually) a 2 arc erasing a 1 arc, the former manifests a 2 arc local successor$_{II}$ of a 1 arc erasing a 2 arc.

Antipassive clauses highlight the issue of the basis for the absolutive case marking of the surface 1s of antipassives, in contrast to the ergative case marking of regular transitive 1s. While I cannot treat this issue in detail, principle (4.75) based on the following concept seems plausible:

(4.74) **Definition: *Successor-linked***

A is *successor linked* to B if and only if A is either a successor of B or a predecessor of B

(4.75) **The 2 Quace Marking of 1 Arcs Condition**

If A is an output 1 arc and is local successor-linked to a 2 arc, A has closed 2 quace.

This claims that any locally unerased 1 arc local successor of a 2 arc or 1 arc local predecessor of a 2 arc is edge labeled <1, 2>. Given that, the suggestion is that the regular rule for accusative/absolutive case marking in ergative case marking systems is, roughly, that the heads of output arcs with closed 2 quace receive this marking, that is, (nonquirky) 2 arcs and those non-2 arcs marked with 2 quace by (4.75) (or any other principles determining quirky 2 quace if there are such). Hence the absolutive/accusative marking on the final 1 of Greenlandic (4.73b) and on the final 2 of (4.73a). Moreover, the proposal also predicts that absolutive/accusative case will be found on the 1s of synthetic passives (true in Greenlandic; see Perlmutter and Postal, 1983: 7) and on the 1s of unaccusative clauses. It fails though as such to predict that this tends to be the case marking of *all* intransitive 1s in ergative systems. [21] In an accusative system, *regular* absolutive/accusative case marking would be limited to the heads of 2 arcs and thus would never assign final 1s absolutive/accusative case.

The current analysis of antipassives encounters an important observation of Baker (1988: 137-138); this involves the interaction of antipassivization with advancements to 2 in the same clause. A priori, alternative antipassivization structures could exist in such cases, with antipassivization itself demoting either the earlier 2 object or that due to the advancement. But Baker insightfully noted that in several

NLs, including Chamorro and Greenlandic, the second alternative is impossible. Only the 2 object *not* representing advancement appears to be demotable under antipassivization.

(4.76) Baker (1988: 137)

"It is striking that antipassive shows exactly the same pattern. For example, Central Arctic Eskimo has "dative shift" verbs, in which either the theme or the goal argument may appear like a direct object in having absolutive case and triggering verbal agreement ...

(134)a. Anguti-up titiraut nutarar-mut tuni-vaa.
man-ERG pencil(ABS) child-ALL give-3sS/3s0
"The man gave the pencil to the child."

b. Anguti-up titirauti-mik nutaraq tuni-vaa.
man ERG pencil-INSTR child(ABS) give-3sS/3s0
"The man gave the child the pencil."

Based on the structure (134a) in which it is the direct object, the theme 'pencil' can be made oblique by antipassive with no difficulty:

(135) Angut titirauti-mik nutarar-mut tuni-si-vuq.
man (ABS) pencil-INSTR child-ALL give-APASS-3sS
"The man gave the pencil to the child."

However, antipassive cannot cause the goal NP 'child' to become oblique, in spite of the fact that it is the object in (134b):

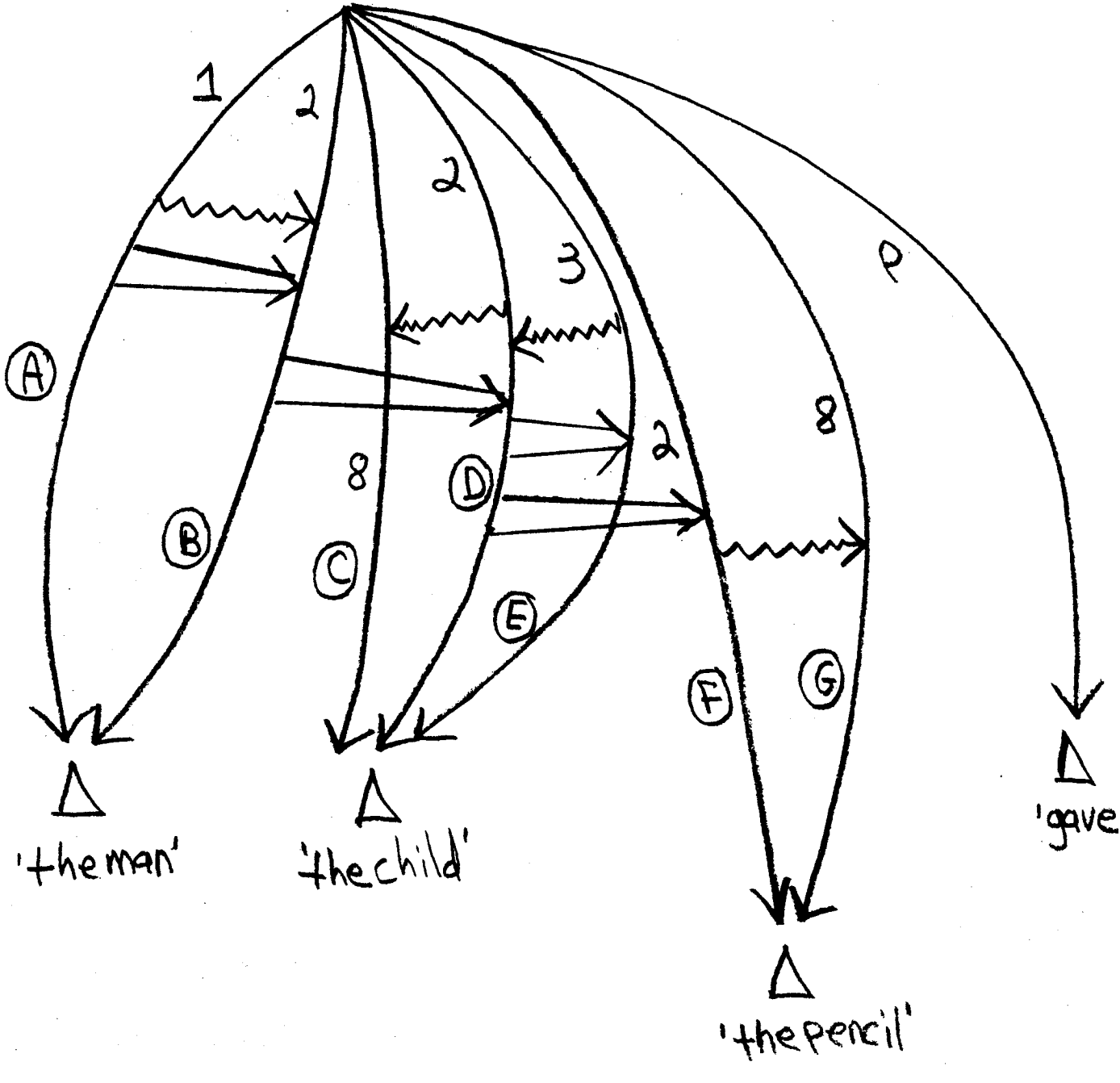
(136) *Angut titirauti-mik nutarar-mik tuni-si- vuq.
man (ABS) pencil-INSTR child-INSTR give-APASS-3sS
"The man gave the child the pencil."

A similar situation holds in Chamorro (Gibson (1980))."

So, the question is why this state of affairs holds.

Focus on a metagraph fragment required for Baker's (136), which would be as in (4.77):

(4.77)


1
2
2
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P
A
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2
8
D
B
C
E
F
G
'the man'
'the child'
'gave
'the pencil'

Here, if one ignores arc B and its sponsor and erase relations, all is well; the 3 arc E has a 2 arc local successor$_{I}$ D, which is required by the Forced Erasure Condition to erase F, since D threatens F. This would then provide an appropriate structure for Baker's (134b), which is grammatical. But his ungrammatical (136) manifests in addition antipassivization, in present terms, the local successor$_{II}$, B. Since B threatens D, the Forced Erasure Condition requires B to erase D, as specified, and (3.46), the Local Successor$_{III}$ Condition, requires D to have a local successor$_{III}$, here C. Despite the ungrammaticality, nothing specified so far seems to be violated.

One idea is that the situation Baker observed might parallel the constraints on passive victim arcs, represented in (4.41), the Passive Victim Arc Condition. Just as passive victim arcs were seen to be unable to be local successors, Baker's discussion might motivate a parallel principle for the arcs erased by the local successor$_{II}$s defining antipassives:

(4.78) If A is a 2 arc locally erased by an 2 arc local successor of a 1 arc, A is a viable arc.

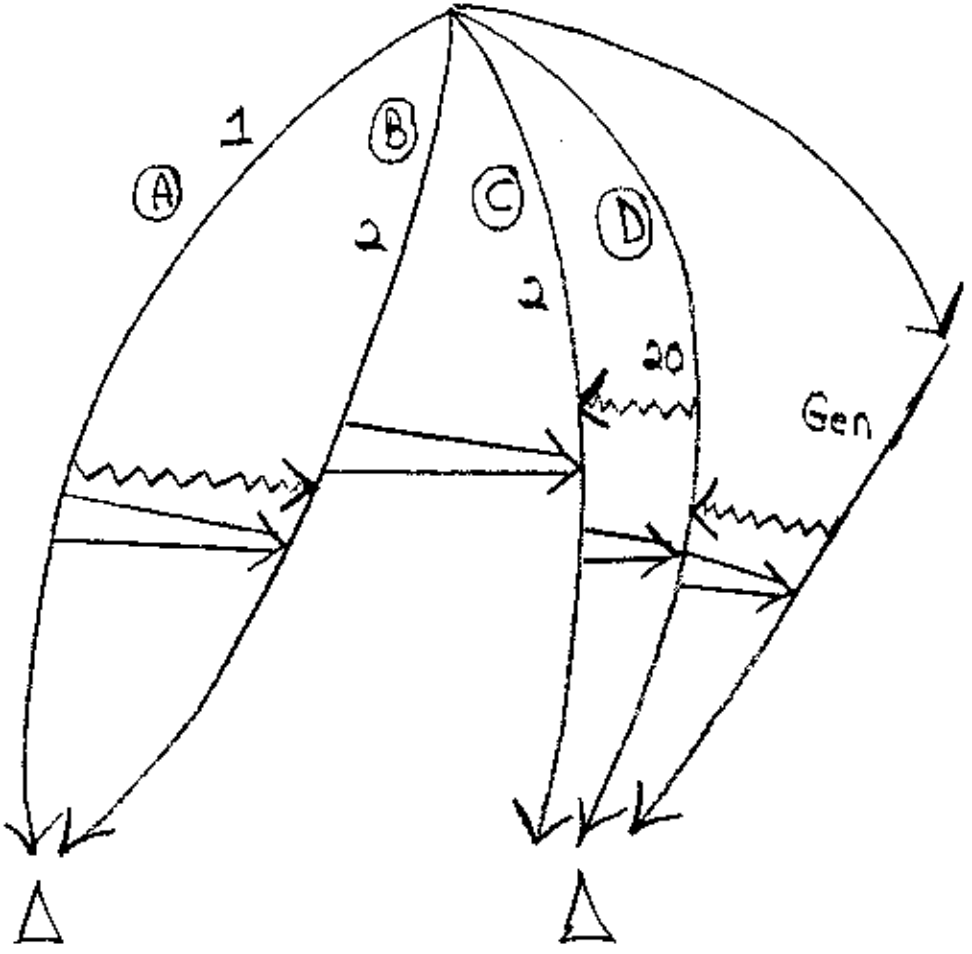
This claim and (4.41) could even be combined into a single condition. And if both are valid generalizations, they should be unified, to something as general as:

(4.79) If a local successor locally erases a colimb A, A is a viable arc.

This principle would block any structure parallel to (4.77) because local successor D is not a viable arc and yet must, according to the Forced Erasure Condition, be erased by B.

While (4.79) is attractive, I doubt that such a condition can be universally maintained; even (4.78) alone is problematic. The condition determines that in no antipassive clause can a raised possessor object be the one demoted by the defining local successor$_{II}$. For in that case, the e.g. 2 arc which is erased could not be viable, as the structure would include the fragment:

(4.80)


A
1
B
2
C
2
D
20
Gen

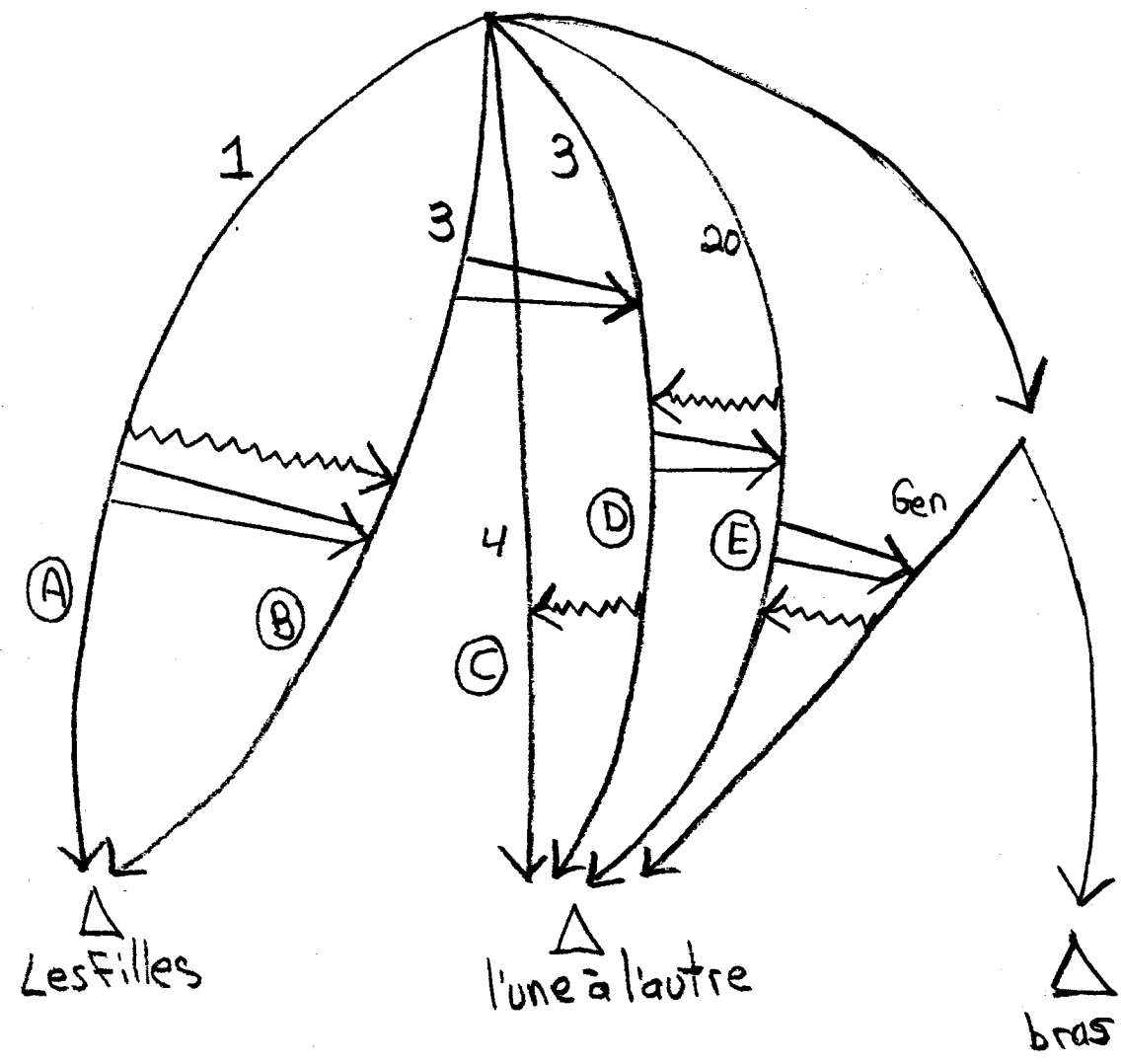
And this structure violates (4.78), as C is not a viable arc. Seeming to support the condition then is that Baker (1988: 375-376) observed the absence of cases where antipassivization would demote a raised possessor, citing Chamorro as an NL where this might be a priori *expected* but is in fact impossible.

Despite that, principle (4.78) is incompatible with various aspects of the analysis of French possessor raising/reflexive cliticization in Postal (1990a), for the latter amounted to a type of antipassive analysis, albeit one with a 3 arc local successor$_{II}$ erasing a 3 arc. It required for various cases what would be in present terms 3 arc local successor$_{II}$s of 1 arcs locally erasing nonviable 3 arcs, and even nonindigenous 3 arcs. This would for instance be true of the possessor raising structure (4.81a), for which the analysis of Postal (1990a) in effect required in present terms a structure fragment like (4.81b):

(4.81)a. Les filles se sont tapoté le bras l'une à l'autre.

"The girls tapped each other on the arm"

b.


1
3
3
20
4
A
B
C
D
E
Gen
Les Filles
l'une à l'autre
bras

Since D here is erased by the local successor$_{II}$ B, (4.78) requires that D be a viable arc. But as the local successor$_{I}$ of a foreign successor, D is not even indigenous; so (4.78) cannot be satisfied. Without giving up the system of analyses of Postal (1990a), which still seem to me reasonably well motivated, I see no way to preserve a *universal* status for (4.78) against such cases. That leaves Gerdts' and Baker's important observations about Halkomelem, Greenlandic and Chamorro still without an account in current terms.

Another approach which abandons (4.78) (hence (4.79)) altogether, even as a rule of particular NLs, would seek a distinct theoretical basis for Gerdts' and Baker's observations in the following circumstance. Cases like (136) would, due to (3.46), the Local Successor$_{III}$ Condition, instantiate a situation where two distinct colimb (2) arcs have local successor$_{III}$s. Suppose then the following holds:

(4.82) **The Congruent Local Successor$_{III}$ Uniqueness Condition**

If A and B are congruent local successor$_{III}$s, A is identical to B.

This would block cases like Baker's (136) but only if something forces the two relevant local successor$_{III}$s to be W-equivalent. So far, nothing does but note that appeal to (4.82) would rightly leave French cases like (4.81) unblocked even under an analysis like that of Postal (1990a), as there is no basis in such a case for recognizing two neighboring W-equivalent final Central arcs. [22]

Moreover, an approach to the constraint on antipassivization Baker highlighted based on (4.82) might also address Baker's citation of the absence of cases in which antipassivization (as standardly understood) would in my terms demote a 2 object determined by possessor raising. The only relevant case cited was from Chamorro, based on the description in Gibson (1980). That description suggests though that the failure of Chamorro antipassivization to target a raised possessor can plausibly be attributed to the presence of two congruent W-equivalent local successor$_{III}$s.

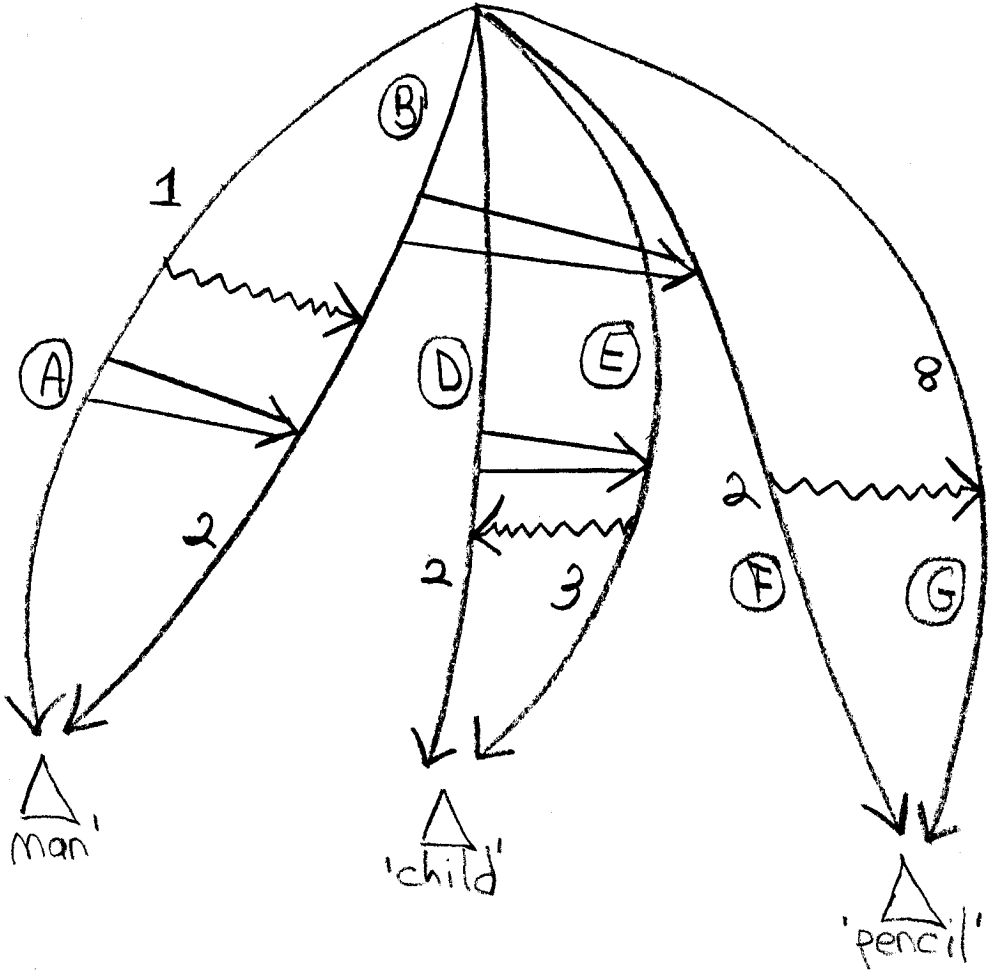
For Gibson showed that (i) Chamorro possessor raising is only possible from 2 object hosts, (ii) the raised phrase ends up as a 2 object; (iii) the host phrase appears in an oblique case; and (iv) that case is the same as that antipassivization targets appear in. Taking that case as diagnostic of arcs with some fixed Central edge label then determines that antipassivization of a raised possessor would yield distinct neighboring local successor$_{III}$s with that edge label. The structural contrast with grammatical French possessor raising cases like (4.81) is notable. For in the latter, under the given analysis, while the possessor raising host is a 2 object, the local successor$_{II}$ of a 1 arc defining the analog of antipassivi-

zation is a 3 arc, as is the arc it erases (that headed by the possessor). And there is at most one local successor$_{III}$ present, consistent with (4.82).

The open question then is what could force the local successor$_{III}$s in the antipassive cases to be W-equivalent and hence subject to blockage by (4.82). It might suffice that the local predecessor$_{III}$s are W-equivalent. If not, perhaps the weaker property that the local predecessors are both are Term arcs might be relevant. I cannot further these speculations here.

To conclude the discussion of interactions of antipassive like structures and advancements, it is so far plausible that the blocked cases Baker (1988) noted are a function of condition (4.82), modulo the logical gap just discussed.

A final remark on the topic of antipassives: another structure related to antipassive issues is rightly not allowed by current assumptions, namely one like:
(4.83)


B
1
A
D
E
8
2
2
2
3
F
G
'man'
'child'
'pencil'

Here, the antipassive defining arc B erases not the local successor D but the viable arc F. This alone accords with the Forced Erasure Condition, since B threatens F which is erasable by it. But B potentially threatens D and threatens it as well, since D is also is erasable by B. This violates the Forced Erasure Condition, since B fails to erase D. So it is claimed that the appropriate output from (4.83) would be ungrammatical in any antipassive manifesting NL. Although I can cite no explicit discussion, the consequence seems highly plausible. For (4.83) represents something characterizable as a *finally transitive antipassive* structure, one which would arguably determine e.g. both the presence of the antipassive morphology on the verb and yet have a final 2 object, here 'child', presumably in the absolutive/accusative, and, according to my earlier proposal, a final 1 in that case as well.

Suppose though, that in addition to the relations represented, B did erase D. Then condition (3.46), the Local Successor$_{III}$ Condition would force D to have a local successor$_{III}$, and the result would have the properties of (4.77), presumably then violating (4.82), subject to the same hedges already indicated.

4.9 Appendix: Remarks on Adjectival Clauses

Section 2 of this chapter observed that expressions other than periphrastic passive inner clauses might represent subpredicate structures containing P arcs with local successor$_I$ members of the same arc subset as P_1 arcs. A plausible case of this involves adjectives, as suggested in (4.84):

(4.84)a. Frank *(is) angry.

b. Neutrons *(are) invisible.

c. Most Russians *(are) familiar with vodka.

Adjectival inner clauses appear to share with periphrastic passive ones the impossibility of occurring as independent clauses, the possibility of occurring embedded directly below the auxiliary <u>be</u> and the fact that a phrase from the adjectival clause ends up as final 1 of the auxiliary clause.

One can approach this similarity to participial passive clauses by positing that adjectival clauses also contain some kind of Subpredicate arc R-local successor$_I$s of P arcs. For the French analogs, Postal (1985) posited that adjectives head P_1 arc local successor$_I$s of P arcs. While not clearly wrong, this view arguably provides only a partial analysis. Although it captures significant similarities between pure adjectival and participial passive clauses, it provides no clear means for handling certain differences. Importantly, for English, it yields no account of *adjectival passive* clauses.

The latter category, discussed in e.g. Bresnan (1978, 1982a), Dryer (1985), Levin and Rappaport (1986), Siegel (1973, 1974), Wasow (1977, 1981) and Williams (1981), is illustrated in (4.85):

(4.85)a. Jerome remains unhappy/unindicted by any grand jury.

b. Jerome seems happy/unloved by his neighbors.

The presence of uncontroversial adjectives like (un)happy shows these contexts accept adjectives, and the presence of un-, a prefix affixable only to adjectives, shows that the participial cases are also adjectival. Moreover, the environments in (4.85) do not accept arbitrary passive participles, suggesting that some of those form adjectival passives and some not. This is supported by overlap between those not occurring in (4.85) and those not permitting adjectival un-. See (4.86).

(4.86)a. *Jerome remains hated by everyone.

b. *Jerome seems ignored by his colleagues.

c. *Jerome seems praised by his colleagues.

d. *Jerome is unhated.

e. *Jerome was unignored.

f. *Jerome will be unpraised.

If adjectives simply headed P_1 arc local successor$_1$s of P arcs, like passive participles, these facts would be difficult to express.

Moreover, an even sharper problem is that while (4.85a, b) represent adjectival passive clauses, they are limited to verbal roots which form nonadjectival passive participles. English allows no passive analog at all for pure multiargument adjectives like angry, fond, loyal, etc. Considering this fact a consequence of a universal linguistic impossibility would be mistaken, as nothing known precludes in principle pairs like e.g. (4.87a, b):

(4.87)a. Carol was proud of Hank.

b. *Hank was proud by Carol.

One can be reasonably confident of this because an Indo-European NL, Welsh, does allow related pairs significantly like (4.88a, b):

(4.88) Awbery (1976: 170)

a. Mae Wyn yn hoff o afalau
Is Wyn fond of apples

b. Mae'n hoff gan Wyn afalau
Is fond by Wyn apples
"Wyn is fond of apples"

Example (4.88a) is a common periphrastic adjectival clause, with auxiliary Mae. Example (4.88b) is though arguably a periphrastic impersonal passive based on the same pure adjective root found in (4.88a). The presence of gan, the same form used to flag what I take to be passive 8s in Welsh verbal passives, both personal and impersonal, argues that (4.88b) is a passive. This is further supported by Awbery's (1976: 172-173) argument that the same reflexive constraint found in verbal cases is also characteristic of the pattern into which cases like (4.88b) fall. That is, the DP in the gan phrase cannot antecede a reflexive.

Since impersonal passives with pure adjective roots seem to be an NL possibility, why would personal ones not also be? Yet English, although having adjectival passives, lacks passives formed on pure adjective roots. One proposal for explicating that would recognize a further Subpredicate edge label, P_A, together with assumptions (4.89a, b):

(4.89)a. Pure adjectives head initial P arcs and in general *require* those to have P_A local successor$_I$s; [23]

b. Passive (participle) adjectives like those in (4.85) head initial P arcs, P_1 local successor$_I$s of those and P_A local successor$_I$s of those P_1 arcs;

In these terms, a pure adjective heads an initial P arc which has a P_A arc local successor$_I$; an adjectival passive participle heads an initial P arc which has a P_1 local successor having in turn a P_A arc local successor$_I$. I assume then that all adjectival clauses have *final P_A arcs*. In these terms, what Bresnan (1982a: 21) called *participle-adjective conversion* (hereafter just *conversion)*, represents the existence of a P_A arc local successor$_I$ of a P_1 arc. Given that, the constraint barring passives of pure adjective clauses needs to pick out those with P_A local successors of P arcs, which excludes adjectival passive clauses based on participles of verbal roots.

It would then seemingly be necessary to subsume P_A arcs under the specifications involving P_1 arcs in certain conditions. Condition (4.16) links P_1 arcs to 7 arc supports, which I also assume should hold for P_A arcs...that is, adjectival clauses correspond to the heads of 7 arcs. If so, the two occurrences of 'P_1 arc' in (4.16) could be replaced by 'Subpredicate arc'. Condition (4.25), which precludes a final 1 arc with clauses having P_1 arcs could also be generalized to Subpredicate arc and would thus embody the assumption that this also holds for adjectival clauses. Recalling the French facts in note 2, one sees that this idea is strongly motivated for that NL, supporting the generalization. Condition (4.36) links 1 arc local successor$_{II}$s to P_1 arcs. Since I believe this linkage also covers P_A arcs, its two occurrences of 'P_1 arc' should also be replaced by 'Subpredicate arc'.

The view of adjectival clauses I have sketched raises certain issues. It is relatively unproblematic in single argument adjectival clauses like (4.90):

(4.90) Louise is overweight.

One can simply assume that Louise heads an initial (as well as final) inner clause unaccusative 2 arc associated with overweight. Condition (4.37) then forces this to have a 1 arc local successor$_{II}$, inducing the same further restrictions discussed for periphrastic passives and born clauses above.

But adjectival clauses with obligatorily mind-possessing single arguments like that in (4.91) are more problematic:

(4.91) Karen is sad/grouchy.

Plausibly, such predicates should be unergatives; but their viable 1s cannot yield final 1s (because of a generalized (4. 25)) and would presumably need to have 2 arc local successor$_I$s.

Even more problematic are multiargument adjectival clauses like that in (4.92a, b):

(4.92)a. Ernest is proud of Greta.

b. The sum of those integers is equal to this integer.

c. The sum of those integers equals this integer.

In these cases, the DPs that must head arcs with foreign successor$_I$s are arguably the main clause 1s. This is particularly motivated for the case of (4.92b), given its relation to (4.92c). The latter suggests that the object of to in (4.92b) corresponds to an initial object not to an initial 1, while the auxiliary 1 of (4.92b) corresponds to a 1 of (4.92c). Moreover, the logical parallelism between pairs like (4.92b, c) suggests that the adjectival inner clauses of cases like the former are multiargument structures. This raises the possibility that the 1 of the auxiliary in (4.92b) is also the initial 1 of the adjectival clause. If so, as in (4.91) that viable 1 must evidently demote to some kind of object, presumably a 2 object. Both required demotions can be forced by:

(4.93) **The *English* Pure Adjectival Clause Viable 1 Arc Condition**

If A is a viable 1 arc neighbor of a P_A arc local successor$_I$ of a P arc, A is a local predecessor$_I$ of a 2 arc.

For the present, I would not assume this condition is universal, although beyond English, it might well have analogs in other European NLs.

The now required demotion permits even those adjectival clauses having viable 1 arcs to be consistent with the expanded form of condition (4.26), precluding final 1 arcs with P_1 arcs and now P_A arcs. It

interacts with condition (4.37) to determine that the head of such a viable 1 arc will nonetheless head a local predecessor$_{II}$ of a 1 arc. This will rightly combine with an expanded version of condition (4.26) to determine that the final 2 arc of such an adjectival clause has a raising foreign successor$_{I}$ which in the cases cited, as for normal auxiliary cases of periphrastic passives, is the R-local predecessor of a final 1 arc.

A significant consequence of the embodied claim is that even English 'transitive' adjectival inner clauses, which otherwise would have viable 1 arcs capable of being passive victim arcs, cannot have such. For since each viable 1 arc in such a clause must have a 2 arc local successor$_{I}$, the Unique Eraser Condition precludes its being erased by an arc passive arc. That renders it impossible for any viable 1 arc in a pure adjectival clause to be a passive victim arc. Simply put then, the suggestion that the heads of viable 1 arcs in adjectival clauses must demote to 2 explains the absence of English passive clauses based on pure adjectives. That claim also covers the nonexistence of what one might call *adjectival middles*, like the purely hypothetical (4.94b):

(4.94)a. Venusians were frequently proud of their planet.

b. *Such planets are (frequently) proud (frequently).

One might reasonably ask whether the analysis of pure adjectival clauses sketched here offers any insight into the fact that such clauses intersect with neither the expletive <u>there</u> nor locative inversion constructions (see Postal, 2004: Chapter 1):

(4.95)a. At that time (there) were living in those woods several dangerous vampires

b. *At that time (there) were very angry several dangerous vampires.

(4.96)a. In some counties (there) had suddenly appeared a number of strange looking aliens.

b. *In some counties (there) had suddenly been popular a number of strange looking aliens.

It might simply seem to be a brute fact that expletive <u>there</u> or its invisible locative inversion analog is not permitted to originate in a clause with a final P_A arc. This covers both pure adjectival clauses, adjectival passives, and compounded adjectives based on the form –<u>able</u>:

(4.97)a. Many important documents were read at that time.

b. At that time (there) were read many important documents.

c. At that time many important documents remained unread.

d. *At that time (there) remained unread many important documents.

e. *At that time (there) were unreadable many important documents.

However, suppose the incompatibility between the expletive structures and adjectival clauses hinges not directly on properties of the expletive but on the properties of the DP the expletive relates to, that which would otherwise be an auxiliary clause 1. As an approximation, suppose that such 'displaced' DPs (must) head output arcs of a type which are incompatible with a neighboring P_A arc.

This supposition is plausible for several reasons. First, I already concluded that adjectival clauses do not permit final 1 arcs. Rather, it has been assumed that viable 1 arcs must have 2 arc local successor$_{II}$s and that other adjectival clauses involve initial 2 arcs which can be output arcs and final arcs. And there is also no straightforward evidence that adjectival clauses allow output 3 arcs or output 4 arcs. Notable is the contrast between the existence of final (hence output) 3 arcs and 4 arcs in nonadjectival passive clauses, their absence even from adjectival passives parallel to verbal passives of those types:

(4.98)a. They were sent the packages/them by Claudia.

b. *They remain unsent the packages/them.

c. The packages were sent them by Claudia.

d. The packages remain unsent to them.

e. *The packages remain unsent them.

These factors suggest that a general condition limiting the class of output Central arcs possible in adjectival clauses, that is, clauses with final P_A arcs, could account for the incompatibility between adjectival clauses and expletive <u>there</u>:

(4.99) **The *English* Adjectival Clause Relational Poverty Condition (Version 1)**

If A is an output Core arc neighbor of a P_A arc, A is a 2 arc.

Recall that Core arcs consist of all and only those with the edge labels 1, 2, 3 or 4. Since it has already been proposed that adjectival clauses permit no output 1 arcs, the additional force of (4.99) blocks as well their association with output 3 arcs and 4 arcs.

This condition seemingly accounts for bad adjectival cases like (4.98b, e) since under present assumptions, each of these involves output 3 arcs and 4 arcs, one headed by the passivized phrase, the other headed by the unpassivized object. Chapter 5, section 4 argues though that a modest revision of (4.99) is required which reformulates it in terms of quace.

Condition (4.99) can of course block the expletive there and locative inversion cases only on the assumption that the local successor$_{III}$ arc determined by the presence of expletive there for the DP it displaces is required to be a Core arc with edge label other than 2. And the only plausible choice is that these local successor$_{III}$s are 4 arcs, a conclusion defended in Chapter 6, section 5.

There is no reason to regard maintenance of (4.99) as problematic given that other sorts of expletives besides there happily occur in English adjectival clauses; these include weather it, ambient it, and extraposition it:

(4.100)a. It is rainy in lowland New Guinea.

b. It is lovely on top of that mountain.

c. It is worrisome that his head has expanded to twice its former size.

For there is no reason to conclude that anything in the inner clauses of (4.100a, b) other than the it represents the head of a final Core arc, and it is straightforward to take the it to head a final 2 arc in the inner clauses. Case (4.100c) is a bit less clear but ultimately unproblematic. In current terms, the complement clause would head a final 9 arc; see Chapter 9. So all that is necessary to maintain a version of (4.99) which both blocks adjectival cases with there while allowing e.g. (4.100c) is that the edge label of the arc headed by DPs displaced by there is a 4 arc and distinct in edge label from that of the final arc headed by the extraposed clause in (4.100c).

One further set of issues about adjectival clauses merits comment. This relates to the claim in (4.93) that viable 1 arcs of adjectival clauses are required to have 2 arc local successor$_{I}$s. The question arises at least abstractly about the consequences of such local successors in adjectival clauses containing independently existing 2 arcs. Verbal/adjectival parallels like those in (4.92) and (4.101) suggest that there might be such:

(4.101)a. A equals/parallels/differs from B.

b. A is equal to/parallel to/different from B.

Quite possibly then, such 'transitive' adjectival clauses involve local successor$_{III}$s of independent 2 arcs required (given the Forced Erasure Condition and the Local Successor$_{III}$ Condition) by interaction with the posited 2 arc local successor$_{I}$s of viable 1 arcs. It would remain open what the edge labels of the local successor$_{III}$s are in specific cases.

The same considerations are relevant to the few cases like (4.102a) of superficially unflagged objects of adjectives:

(4.102)a. Grenoble is near *the Swiss border*.

b. Grenoble's nearness to/*of the Swiss border

Assumptions to this point render it impossible for the highlighted DP in (4.102a) to be analyzed as heading a final 2 arc in the adjectival clause. For the claim is that the DP which is a final 1 of the higher auxiliary heads an output 2 arc (with a 1 arc local successor$_{II}$) in the adjectival clause. Hence if the Swiss border were head of an output (and final) 2 arc, there would be a Stratal Uniqueness Condition violation. Notably then, the nominalization facts in (4.102b) are not characteristic of 2 object nominalizations. So it is at least as plausible to take (4.102a) to involve the sort of flagged DP found in (4.102b) idiosyncratically missing its expected P as to take it to involve a nominalized 2 object. Since English 2 objects are never flagged, the analysis of such cases could not then yield any stratal uniquness issue.

In support of this view, recall from Chapter 2, that the slang NPI forms jack, squat, etc., occur in the positions of inanimate 2 objects and 4 objects (but not in those of inanimate 3 objects). If then the post-near DPs represented 2 object (or 4 object) positions, one would expect that they could accept one of the slang forms. But those seem as bad to me in a prepositionless DP after near as with one preceded by to:

(4.103) That Godforsaken island isn't near (to) anything/*jack/*squat.

So I conclude that cases adjectival near are not incompatible with the analysis suggested in this section, according to which the only final Core arcs possible in adjectival clauses are 2 arcs

Notes to Chapter 4

1 This is though *not* the case in so-called *impersonal* passives or in other passive clauses with expletive final 1s. English seems to lack the former, found productively in e.g. German, but it does have the latter (see Chapter 5), as in (i):

(i) There were then sent to Rose a number of unsigned love letters.

The distinction between personal and impersonal passives crosscuts that between synthetic and periphrastic passives. A rather intricate account of the structure of impersonal passives is sketched in Johnson and Postal (1980: Chapter 10 and Postal (1986) and I will say nothing further about them here.

2 One finds a blockage on reflexive clitics parallel to that in passive (4.4d) on the auxiliaries of pure adjectival clauses:

(i) Lucien est loyal à lui-même.

(ii) *Lucien s'est loyal (à lui-même).

"Lucien is loyal to himself"

This obviously suggests that the inner clauses here also lack final 1 arcs. See section 11.

3 I have not specified much of anything determining which edge label a specific local successor$_{III}$ has? Just below, substance is provided for the conditions underlying the presence of a 7 arc. It is possible that 9 arcs are found only when their predecessors are erased by R-local successors of expletive arcs or foreign successors. If so, 9 arcs would be closely tied to either the introduction of expletives or raisings and, moreover, to the special case where the tail node of the 9 arc represents a full complement clause. While 7 arc tails also represent complement clauses, these structures do not involve expletive introduction.

One could of course propose that there is a unique edge label for *all* local successor$_{III}$s, as in RG and early metagraph grammar work, and perhaps allow some of these to have different quace edge labels to represent the differential behavior of the different types.

4 It may be wrong to limit 7 arcs exactly as in (4.16). There might be a nonunary set of P arc local successor types of which P_1 is only one member. I pursue this issue via the discussion of clause union complement passives in section 3 and of adjectives in section 11.

5 The erasable condition is required under the assumption that some clauses involve P arcs with *Central arc* (e.g. 2 arc) local successors. If so, in such clauses, there are multiple P arc colimbs, one headed by a so called *light verb*. Some such clauses have passive variants, e.g.:

(i)a. Frank made preparations for a bad storm.

b. Preparations were made by Frank for a bad storm.

I would assume there are two P arcs in (ib), one headed by <u>preparations</u>, the other by <u>made</u>. A rule like (4.16) must require only the latter to have a P_1 arc local successor. This is guaranteed by the locally erasable condition, under the assumption that the other P arc is locally erased by a 2 arc, and is thus not erasable by a P_1 arc.

6 Sentences like (4.18b) have as well an expected causative reading: 'Durand had himself arrested by the riot police'.

7 The notion of local successor$_{II}$ permits the present treatment to recognize passive clauses whose arc passive arcs can never be final 1 arcs. This achieves the goals of the sort of treatment of French clause union passive clauses sought by e.g. Legendre (1986) without having to deny that cases like (4.18b, c) and (4.20b) are passive clauses. That unhappy conclusion in that work is necessitated by its lack of an analog of the notion Local Successor$_{II}$.

8 While the passivized 2 object ends up as a final 1 in the main clause of clause union passives like (4.18b), in the (4.18c) type, a passivized 2 object emerges as a main clause final 2 object. On the assumption that these cases involve prepassive$_{II}$ arcs, hence final 2 arcs, this is the regular result for complement final 2 objects in clause union structures of all sorts, including active transitive, ditransitive and unaccusative complements.

The difference between the two French clause union passive types lies, I believe, in the fact that the (4.18b) type has a main verb with no semantics and no initial 1 arc, while the (4.18c) type has a main verb with causative meaning and an initial 1 arc. Thus in the former, faire functions like the passive auxiliary of a participial passive.

9 Despite the account's virtues, Legendre's condition on French clausal object raising is probably too strong. Under the assumption that the final 2 object of (ib) results from advancement from a 3 object like that found in (ia), a view argued in Postal (1982), her proposal claims that (iic) is ungrammatical:

(i)a. On a fourni beaucoup d'uniformes aux troupes.

"One furnished many uniforms to the troops"

b. On a fourni les troupes avec des uniformes.

"One furnished the troops with many uniforms"

c. Ces troupes seront difficiles à fournir avec des uniformes.

"These troops will be difficult to furnish with uniforms"

But she observes (1986: 157, note 12) that Fauconnier accepts some sentences parallel to (ic); the specific example was:

(ii) Pierre qui habite en Australie sera facile à aviser de notre arrivée.

"Pierre who lives in Australia will be easy to inform of our arrival""

Moreover, while Legandre accepts the analysis of the (dés)obéir passives (see Chapter 5, section 2) in Postal (1986: Chapter 2), an analysis involving 3 object to 2 advancement of the passivized DP, she does not consider the fact documented there that (dés)obéir equally permits object raising:

(iii) Cet ordre/Cet officier sera difficile à (dés)obéir.

"That order/officer will be difficult to (dis)obey"

My conclusion is that the entailments from Legendre's stronger object raising condition are entirely correct for 1 arc R-predecessors of the target arc for object raising, but that the condition on other arc type R-predecessors is weaker and has not so far been adequately formulated. Since the elements relevant to the current discussion are limited to 1 arc cases, I will say nothing further.

10 Postal (1989: 101) proposed a weakening of the Final 1 Arc Law which allowed clause union complements containing final P arcs to fail to contain final 1 arcs. This involved appeal to the notion of a *pseudosurface* arc, one which is a neighbor of an unerased arc. Since *every* arc in a clause union complement was claimed to be erased, P arcs in such could never be pseudosurface arcs and were not required to have final 1 arc neighbors. Given present assumptions, appeal to pseudosurface arcs is unmotivated, the concept dispensable.

11 One possibility is that the absolutive <u>with</u> construction of (4.28d) involves raising of the output 2 of the participial clause into a higher constituent, to be a surface sister of <u>With</u>, not of <u>finally.....</u> Given the theoretical constraints on word order suggested in Chapter 1, section 5, this would leave the raised object linearly ordered only with <u>with</u> in (4.28d). There would thus be no preverbal ordering of a surface 2.

12 Whatever else they show, structures like (4.28b, c, d), support the view that the passive morphological properties of a verb like <u>born</u> are nonaccidental. For <u>born</u> occurs in all three of those contexts

(i) a. Jerome finally got born.

b. The gods had Jerome born in a trailer.

c. Sally wanted her son born in a trailer.

d. With Jerome finally born in the trailer, Sally can return home.

13 Perlmutter and Postal (1983: 107) claimed that the principle called there the *Nuclear Dummy Law* blocked passives where, in current terms, the passive victim arc was headed by an expletive. That principle restricted expletives to heading only 1 and 2 arcs. I do not believe such a claim is, though, viable even for English. The highlighted expletive in (ia) surely heads an arc which is neither a 1 arc or a 2 arc and others, including those in (ib, c) arguably head 3 arcs:

(i)a. They will see to *it* that he is brought to justice.

b. They never gave it any thought that she was a witch.

c. I take it that you are a werewolf.

d. *It was taken that you are a werewolf.

Given condition (7.13) of Chapter 7, the English Periphrastic Non-2 Object Passive Condition, the latter assumption accounts for the badness of the single object passive (id).

14 Specification of the ancestral in (4.44c) rather than a direct requirement of a local successor_1 is motivated by the view of *impersonal* passives in Johnson and Postal (1980, Chapter 10), Postal (1986, Chapter 4) and by the posit in this work of XPL arcs as underlying all expletives

15 While (4.47c) probably represents conventional wisdom, Stroik (1992, 1995, 1999) argued for a conclusion that in my terms means that in at least some middles the initial 1 can be expressed in a <u>for</u> phrase. Relevant cases include:

(i) Stroik (1999: 121)

a. Bureaucrats bribe easily for Bill.

b. That book read quickly for Mary.

(ii) Stroik (1992: 136)

a. Books about herself read quickly for Mary.

b. *Books about oneself read quickly for Mary.

Stroik takes contrasts like (ii) to show that <u>Mary</u> can be the underlying 1 of the verb, a view favored by parallels like:

(iii)a. Books about herself were read quickly by Mary.

b. *Books about oneself were read quickly by Mary.

The problem with Stroik's argumentation for me is that, while no doubt (iiia) is enormously better than (iiib), I find middles with the sort of <u>for</u> phrases at issue to almost all be marginal or dubious at best. More precisely, this property adds to the rather significant independent unnaturalness of many middles. Overall then, it is unclear what to conclude about Stroik's claim. But see note 16.

16 An alternative to taking English middles to be synthetic passives would take them to be *inversion* structures, those in which an underlying transitive clause is realized such that a viable 1 arc has a final 3 arc local successor$_{I}$, a viable 2 arc has a final 1 arc local successor$_{I}$. For discussion of inversion cases in RG terms, see e.g. Harris (1981, 1984), Perlmutter (1984), Postal (1989) and the brief description in Chapter 3, Section 2.

An inversion structure shares with a synthetic passive the fact that a 2 arc cooccurring with a viable 1 arc has a 1 arc local successor$_{I}$. But it differs in that that successor does not erase a 1 arc and thus does not qualify as an arc passive arc, failing to render the structure a passive. Additionally, the 3 arc local successor defining an inversion cluase is a successor$_{I}$ not a succcessor$_{III}$ characteristic of passives. These differences, though perfectly real and formally characterized in metagraph terms (see Chapter 5, section 3 for relevant details), may have only rather subtle testable consequences. So it is difficult to find evidence bearing on the choice between an inversion analysis with an erased 3 arc and a synthetic passive analysis with an erased 8 arc.

However, an inversion analysis would better fit the anaphoric and other facts cited by Stroik (1992, 1995, 1999) discussed in note 15. Perhaps the for phrases advanced by Stroik as realizations of underlying 1s in middles support an inversion analysis. The dual reasoning for such a conclusion might take the following form:

(ii)a. Negatively, the heads of English 8 arcs whose predecessors are erased by arc passive arcs are flagged with by not with for.

b. Positively, the flag for sometimes alternates with the flag to, characteristic of English 5 flagging, as in (iiia), and the relevant structures are of the type whose cognates in other NLs are arguably inversion structures. Note the unequivocal 3 object in the French correspondent of (iiia) in (iiib):

(iii)a. That is important for/to Charles.

b. Cela (lui) est important, à Charles.

In the present context, not much is at stake with respect to whether English middles are synthetic passives or inversion structures, and for simplicity I assume the former *with no implication that Stroik's conclusion about the possibility of overt realization of underlying 1s is wrong.*

17 That Ruwet's French example involves left dislocation of Les impérialistes with concomitant presence of a resumptive pronoun ça is irrelevant here; (4.51b) illustrates that this is not an inherent feature of French middles.

18 The idea that the DP appearing in an of phrase as a function of English nominalization must be an *initial* 2 object of the corresponding verb dates at least to Pullum (1976: 297).

19 This is not to say that none of Farrell's data raise any problems for the current view or that I have accounts for all the distributions he cites. His arguments from depictive predicates and adjective formation in particular involve factors I don't fully understand. But I do not think these issues are nearly strong enough to support the theoretical weight he puts on them, given the fact that his assumption that ditransitive first objects are not 3 objects is untenable and that much of the work of his appeal to initial 2 arcs is achievable via appeal to indigenous arcs.

20 The earliest suggestion in such terms was that of Postal (1977); this took an antipassive clause to have a 2 arc local successor$_{I}$ of a transitive clause 1 arc, with that 2 arc forcing a distinct 2 arc to have a local successor. In turn then, the 2 arc local successor$_{I}$ had a 1 arc local successor$_{I}$. This view was in effect maintained in Johnson and Postal (1980, e.g. p. 242). One theoretical basis for the complex three arc proposal was that at that time, the notion of local successor$_{II}$, central to the present view of antipassivization, was rejected. This earlier proposal was sharply revised and simplified in Postal (1992a), by taking the 2 arc local successor in an antipassive to be a local successor$_{II}$, requiring the active 1 to head only two arcs.

21 There are various ways to determine the absolutive marking of unergative final 1s in those ergative case systems which display this feature. Most obviously, taking advantage of (4.75), one could require all unergative final 1 arcs to have 2 arc local successor$_{II}$s, a kind of *partial* antipassive for intransitive clauses. While fully stipulative, this at least determines the facts.

22 The viability of a generalization of (4.82) banning all distinct congruent local successors regardless of type deserves study, but that is not possible here.

Edge-Based Model-Theoretic Syntax

Chapter 5 Passivization Targets: I

5.1 The Adequacy of Simple 2 Object Restrictions

The present chapter studies what active clause DPs can 'feed' the existence of passive clauses, more precisely, what active clause DPs can correspond to the final 1s of grammatical periphrastic passive (and middle) clauses. It might seem that via principle (4.62) of Chapter 4, the question for middles has already been answered. But there is more to say, specifically involving the relations of middles to pseudopassives and to the second objects of ditransitives.

Given the characterization of passive clauses and definitions in (4.8) of Chapter 4, the question of the phrases which 'feed' passivization to a significant degree reduces to the issue of what consituents can head periphrastic or synthetic passive prepassive arcs. [1] Descriptive and theoretical accounts of English passives, where I largely focus on the periphrastic variety, invariably begin with the subclass linked to single object clauses. As Chapter 2 documented, these are the clauses of Array 0, Arrays 1 and 2 having been shown to be incompatible with both periphrastic and nonperiphrastic passivization of their single objects. Under the basic assumptions of this study, Array 0 passivized objects are 2 objects.

One might generalize that state of affairs to informal condition (5.1a) or even to (5.1b):

(5.1)a. The only English objects which passivize are 2 objects, i.e., all English (periphrastic) prepassive arcs are 2 arcs.

b. The only objects which passivize in *any* NL are 2 objects, i.e., all (periphrastic) prepassive arcs in every NL are 2 arcs.

Moreover, not only 'might' one propose (5.1a, b), these assumptions are in effect traditional ideas; for instance, only (5.1a) could possibly justify Curme's (1931: 99) direct conceptual leap from the existence of English pseudopassives (that is, prepositional passives, see below) like <u>That territory has long been fought over</u> to his otherwise unargued conclusion that 'so that the object is no longer a prepositional object but a direct object of the compound verb', an idea taken over, as touched on below, in most Barrel (A) treatments of pseudopassives. Principle (5.1b), hence (5.1a), was also accepted in early RG work like Perlmutter and Postal (1977, 1983), Postal (1982) and is explicit in the derivative lexical-functional grammar of Bresnan (1982a: 20). The idea also was deeply built into the

view of passives in most of Postal (1986), but then abandoned in the final section chiefly on the basis of data from Quechua. Postal (1985), written contemporaneously with Postal (1986), also rejected the restriction to 2 object targets, on the basis of French facts from the se faire passive construction.

Acceptance of (5.1) represented a continuation of RG assumptions like e.g.:

(5.2) Perlmutter and Postal (1983: 17)

"Our claim is that the RN of *every* passive clause in *any* human language has a nominal bearing the 2-relation and the 1-relation in successive strata." (emphases added: PMP)

Promulgation of this idea appears to me in retrospect as an overly conservative refusal to abandon an a priori concept. For not only did evidence of the excessively restrictive character of (5.2) emerge *after* the publication of Perlmutter and Postal (1977, 1983), reasons for rejecting it were actually available before these articles were written.

A German student (see Huber, 1974) in Perlmutter and Postal's 1974 Linguistic Institute class (which represented the earliest public airing of RG ideas) observed that German arguably has passives of 3 objects, as also noted in such traditional grammars as Curme (1922 [1952: 297]). Thus the author of this work discusses what he called 'a peculiar passive construction' which, in contrast to the standard periphrastic passive of 2 objects which utilize the auxiliary werden, utilizes one of several other main verbs including bekommen, kriegen or erhalten. Examples he gave indicate that in this construction, the passivized phrase is a 3 object: [2]

(5.3)a. Bekamen Sie das Geld drahtlich angewiesen?

"Was the money wired to you?"

b. Jedermann erhielt 15 Patronen zugezaehlt

"Each man was dealt out fifteen cartridges"

c. Ich kriege meine Muehe redlich bezahlt

"I am well paid for my trouble"

Chapter 3 referred to more recent mentions of this construction type in Ackerman and Webelhuth (1998: 224-226), Müller (1995: 240-243) and Wilkinson (1983). These auxiliaries are not only possible with the passivization of ditransitive 3 objects, they are impossible with the passivization of 2 objects, although apparently possible for some speakers with intransitive 3 object passivization:

(5.4) Müller (1995: 241-242)

a. *dass Antje gekusst kriegt (cf. dass jeder Antje kusste)

"that Antje got kissed" "that everyone kissed Antje"

b. ??dass Antje geholfen kriegt (cf. dass jeder Antje half)

"that Antje got helped" "that everyone helped Antje"

One could construct an account of passives like (5.3a-c) seemingly compatible with (5.2) by invoking an otherwise invisible 3 object to 2 advancement 'feeding' passivization but barred from actives. But that view integrates poorly with the association of passives of 3 objects with a characteristic auxiliary choice and is, as far as I know, unmotivated other than by doctrine (5.2), that is, is unmotivated by any known facts *of German*. And the idea clashes with German facts like those considered in section 10 of Chapter 3. I no longer recall whether Perlmutter and Postal (1977, 1983) were driven by the hope that *apparent* passives of non-2 objects could in every case ultimately be reduced to consistency with (5.2) by some kind of advancement analysis. [3] But the present work in particular argues that such hope is vain even for English, where an advancement to 2 analysis of what are taken here to be passives of 3 objects can be shown to be not only unmotivated but contraindicated. This is especially clear from the behavior of expletive there and its null variant, discussed in detail in Chapter 6.

5.2 Pseudopassives and Pseudomiddles

While (5.1)/(5.2) appear to properly determine that the objects of Arrays 1 and 2, which have been seen to be 4 objects and 3 objects respectively, cannot passivize, there are several fundamental reasons why (5.1a) in particular nonetheless cannot be correct. The first involves *pseudopassives* (a term dating at least to Mihailovic, 1967: 319, who cited no precursor) or *prepositional passives* such as (5.5b, d, f):

(5.5)a. Most countries in that region should not count on significant rainfall this year.

b. Significant rainfall should not be counted on by most countries in that region this year.

c. The police fired at the protesters.

d. The protesters were fired at by the police.

e. Children should not jump into other people's pools.

f. Other people's pools should not be jumped into.

The standard Barrel (A) approach to pseudopassives, following Curme's (1931: 99) idea, assumes a mechanism of *reanalysis* taken in effect to convert a PP object into a 2 object and its associated P into part of a verbal complex, reducing pseudopassives to ordinary passives of 2 objects. But Postal (1986: Chapter 6; 1996; 2004: 258-264) and Baltin and Postal (1996) argued that reanalysis cannot provide a tenable analysis of pseudopassives. I will not repeat the arguments here. But various daunting

problems with viewing pseudopassives as necessarily involving complex verbs with incorporated Ps are visible in (5.6):

(5.6)a. The bridge was flown under by the daredevil pilot.

b. The bridge was flown over, and then, but only then, I am pretty sure, under.

c. The bridge was flown *over* once, *under* twice and, according to uncle Fred, *through* from north to south multiple times.

d. The bridge was flown over and thereafter, and only thereafter (I am pretty sure), under.

e. Communism was fought for.

f. Communism has been fought not only for but also repeatedly against.

g. The burning house was rushed into by the firemen.

h. The burning house was rushed ((right) back) into.

i. Burning buildings should be rushed neither into nor out of.

j. The burning house was rushed out of and soon after (I guess) (back) into.

k. Burning houses should be dashed out of, never into.

If a pseudopassive clause like (5.6a) manifests a complex verb, e.g. flown under, then the post-flown over parts of (5.6b, c) would involve ellipsis of *only part of a verb*, otherwise unknown. If fought for in (5.6e) is a complex verb, what then is not only for in (5.6f)? Are all those elements verb-internal? If rushed into in (5.6g) is a verb, is rushed right back into also one in (5.6h) and rushed neither into nor out of a verb in (5.6i)? And again in (5.6j, k), viewing pseudopassivization as creating complex verbs including Ps would require allowing for ellipsis of verbal subparts.

Moreover, Christopher Collins observes that Google searches reveal many pseudopassives where adverbials intervene between participle and 'stranded' P. While these are all ungrammatical for me, many American English speakers evidently accept them:

(5.7)a. I just watched the film "Immortel" that **was talked so much about** on this forum. **...**
www.spinquad.com/forums/showthread.php?t=729 - 87k -

b. We can not even call Beyond Good and Evil a cult-hit because it **was talked so little about**.
s6.invisionfree.com/BGE2_Revolution/ar/t346.htm - 20k -

Consideration of data like (5.6) and (5.7) seems to show that reanalysis is not a serious approach to the structure of pseudopassives.

Moreover, a point about pseudopassives not explicitly made in the works cited emerges clearly in a framework which distinguishes passives of 2 objects from passives of non-2 objects. For independently

of reanalysis questions, pseudopassives turn out *not* to share key properties of 2 object passives, extensionally speaking, of the passives of Array 0 clauses. Put differently, an analysis of pseudopassives as 2 object passives, even if, contra Postal (1986) and Baltin and Postal (1996) it were otherwise adequately constructable for data like (5.6) and (5.7), would make incorrect predictions about their interactions with other grammatical phenomena.

I consider several arguments for this conclusion in Chapter 6. A most striking basis for it is a well-documented observation; see Baltin and Postal (1996: 134-135, note 9), Fagan (1988: 194-195), Felbaum and Zribi-Hertz (1989: 45), Huddleston (2002a: 308, note 63), Keyser and Roeper (1984: 400) Pollock (1979: 126-127, note 22) and Roberts (1987: 222). This is that there are no *middle* analogs of pseudopassives, let us say then no *pseudomiddles*. The point is well put as follows:

(5.8) Fagan (1988: 193):

> "Second, contrary to K&R's claim, preposition stranding in middles is just as ungrammatical as it is in ergatives. Although (53b) is less acceptable than (53a), this difference is not due to preposition stranding. Both examples are syntactically ill-formed as the result of preposition stranding."

Fagan's (53a), quoted from Keyser and Roeper (1984), was:

(5.9) ?The room breaks into easily.

I agree entirely that it is ill-formed and worse than Keyser and Roeper's annotation indicated. Other data are equally sharp:

(5.10)a. Frank contacted/wrote to such women.

b. Such women aren't contacted/written to often.

c. Such women don't contact/*write to often.

(5.11)a. They studied/looked into secret deals like that.

b. Secret deals like that were studied/looked into.

c. Secret deals like that don't study/*look into easily.

(5.12)a. One deceives/lies to naïve people easily.

b. Naïve people can be deceived/lied to easily.

c. Naïve people deceive/*lie to easily.

(5.13)a. One can mock/sneer at such views very easily.

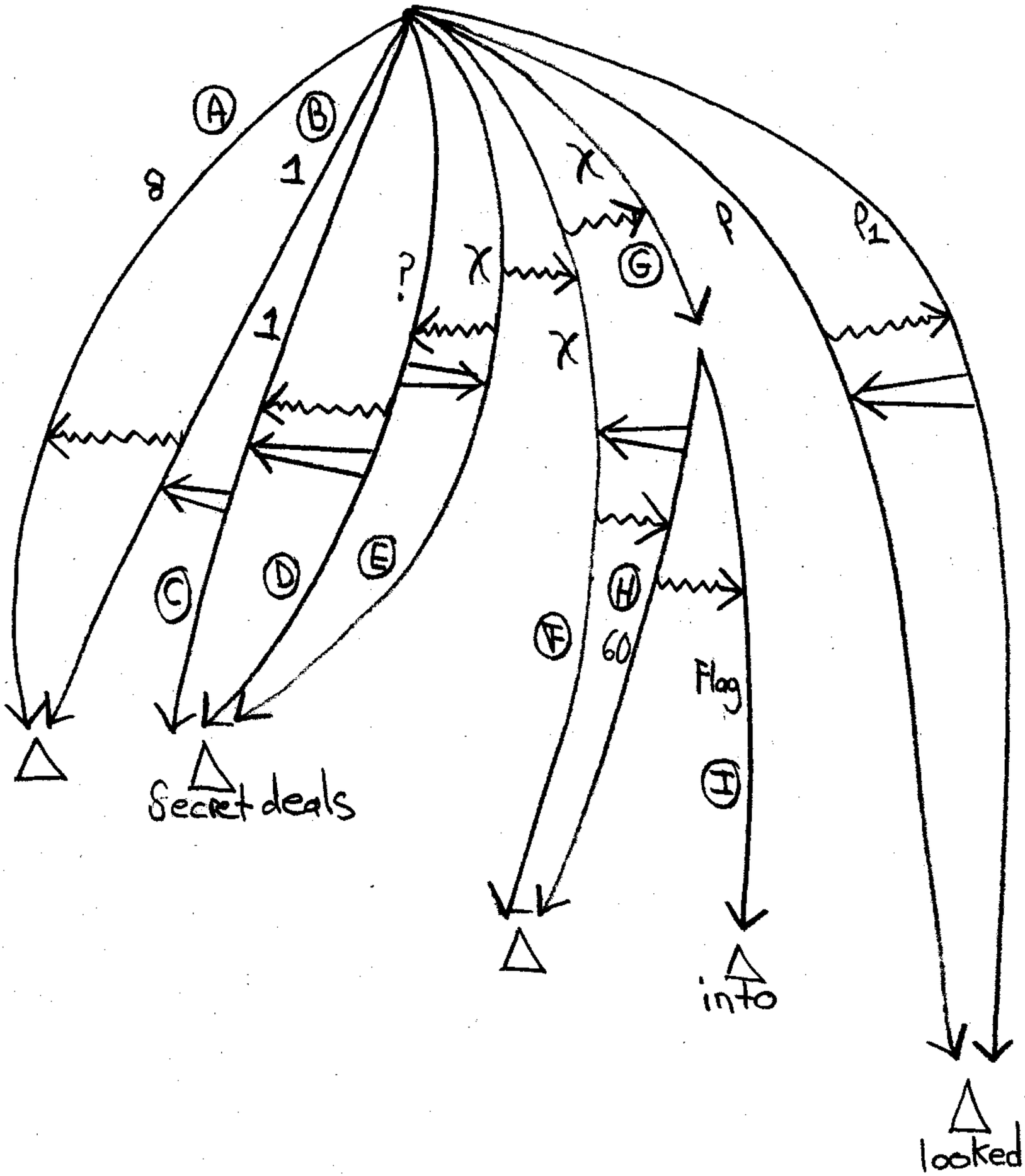
b. Such views can be mocked/sneered at very easily.

c. Such views mock/*sneer at very easily.

So a key question is why there are no pseudomiddles.

An answer requires a general characterization of the structural features of pseudopassives independent of the question of their prepassive arc's edge labeling. Since this was spelled out in Postal (1986, 1996), I will be brief. The central idea is that the prepassive arc is a local successor$_1$ of, usually, an Oblique predecessor. Crucially, the predecessor of the prepassive arc is replaced by an arc whose head will, as represented in the discussion of anaphora in Chapter 1, Section 6, be reflexive. This follows since the replacer, a copy arc, is seconded by a neighbor, the prepassive arc. The invisible (see below) reflexive is the only nominal inside the PP represented by the stranded preposition characteristic of a pseudopassive. So a relevant partial structure of the inner clause of e.g. the <u>look</u> variant of (5.11b) would be:

(5.14)


A
B
8
1
1
?
X
X
X
G
P
P1
C
D
E
H
F
60
Flag
I
Secret deals
into
looked

Arcs A, B, C are familiar from earlier discussions. The key elements are D, E, F. Arc D, whose edge label is temporarily (see below) left unspecified, is a local successor$_1$ which, as becomes clearer in Chapter 7 (see condition (7.2)), provides a prepassive arc meeting the conditions on periphrastic prepassive arcs which an arc like E, with an Oblique edge label, does not. That is, the active correspondent of a pseudopassive like (5.11b) contains only arcs like E, none like D. In different terms, such successor$_1$/predecessor$_1$ pairs yield a structure permitting passivization from an active base which as such *could not have permitted it*. Arc F is a replacer of the local predecessor$_1$ of the prepassive arc; it is a copy arc in the terminology of Chapter 1, (1.55). Its obligatory character accounts for why pseudopassives manifest the (truncated) PPs that they do.

Structures including D and E *without* the copy arc would yield nonexistent passives like (5.15):

(5.15) *Deals like that were looked.

No universal principle requires the copy arc missing from such cases, since advancements which obligatorily feed passivization *without linkage to a copy arc*, as in the only hypothetical (5.15), are attested. One is represented by periphrastic passives of the objects of the French verbs (dés)obéir 'to (dis)obey'; see Postal (1986: Chapter 2). These verbs do *not* take 2 objects but only what I consider 3 objects and 5 objects. So no *active* clause based on either of them has a surface 2 object; see (5.17a). Moreover, in general, French periphrastic passives can *only* target 2 objects. Yet with (dés)obéir, both types of *non-2* object can nonetheless passivize, yielding examples like:

(5.16)a. Lucille a été désobéi par ses domestiques.

"Lucille was disobeyed by her servants"

b. Cet ordre sera obéi par le colonel.

"That order will be obeyed by the colonel"

Such facts can be handled by recognizing that French grammar allows an advancement to 2 for the 3/5 objects of these verbs but almost no others, an advancement linked to an additional requirement that passivization satisfies. This requirement is also satisfied by object raising structures like (5.17b), though not by simple actives like (5.17a):

(5.17)a. *Ses domestiques ont désobéi Lucille. (ok: Ses domestiques ont désobéi à Lucille).

"Her domestics disobeyed Lucille"

b. Lucille était difficile à désobéir.

"Lucille was difficult to disobey"

In short, arguably, the condition would be something like (5.18):

(5.18) **The** *French* **Intransitive Lexical Advancement to 2 Condition**

If A is a 2 arc local successor$_1$ of a 3 arc or a 5 arc, B, and not the neighbor of a viable 2 arc, then A is [{(dés)obéir, ...}] zoned and the R-predecessor$_1$ of a final 1 arc and B is not copied. [4]

This significantly parallels my proposal for English pseudopassives except that instead of requiring a copy pronoun, it explicitly forbids one. Perhaps the latter specification follows from something more general in French grammar, rendering (5.18) then somewhat redundant. The (dés)obéir cases were analyzed in detail in Postal (1986: Chapter 2), which included some discussion of dialect variants requiring a more restricted formulation than one parallel to (5.18). One might observe too that the description of the (dés)obéir cases as involving *advancement linked to a further 1 arc R-successor* condition is fundamentally parallel to that given for the atypical (for Spanish dialects) Peruvian Spanish facts in (3.150). [5]

Given the abstractness of the analysis and nearly eight decades of broad acceptance of reanalysis (see Curme, 1931: 99), many may find it extremely implausible that English pseudopassive clauses manifest advancement and invisible pronouns, as represented in (5.14). However, such skepticism encounters the fact that French sentences, analyzed in Postal (1996), manifest in clearer ways than (5.16) does the structure type posited here for English pseudopassives.

The French construction involves inter alia examples like: [6]

(5.19)a. Marie s'est fait moquer/parler/rire d'elle (par tout le monde).

'Marie self is made mocked/spoken/laughed of her (by everyone)'

"Marie got made fun of/spoken about/laughed at (by everyone)"

b. Même **Darwin s'est fait moquer de lui** lorsqu'il a suggéré ...

hypo-dev.etat-ge.ch:10180/.../C_Pedagogie/ Disciplines/Biologie/BIOexercices/fichiers/tableau_baleines.htm

« Even Darwin got made fun of when he suggested....

c. Dans sa jeunesse, Fernand **s'est fait rire de** lui par toutes les filles de son village,

www.freewebs.com/steveb2/journaldund%E9traqu%E9.htm

"In his youth, Fernand got laughed at by all the girls of his village"

Appreciating examples like (5.19) requires understanding the French clause union periphrastic passive type (touched on in Chapter 4, section 3) in which the inner (lower) clause is an infinitive and the outer (upper) clause contains a main verbal form of one of several verbs including faire and voir associated with a reflexive clitic; see Postal (1992a, 1996) for relevant references to the French literature.

While this form of passivization in general targets 2 objects and 3 objects, the sentences here cannot be analyzed as involving any 2 object or 3 object target *which exists in the corresponding active clause*. Rather, as in English pseudopassives, the target DP must otherwise appear in a PP, here only one with de, as the closest active correspondents of (5.19) are (5.20):

(5.20) Tout le monde a moqué/ri de Marie.

"Everyone made fun of/laughed at Marie"

Since such PPs represent the relation I take to be 6, Postal's (1996) proposal was that French pseudopassives, for pseudopassives they were claimed to be, represent a restricted type of 6 object to 3 advancement, with an obligatory copy pronoun ending up as object of a final PP. A principal restriction is that the resulting 3 arc must be prepassive, in current terms moreover, prepassive$_{II}$.

An approximation to the relevant constraint might be:

(5.21) **The *French* Pseudopassive Condition (Version 1)**

If A is a local successor$_{I}$ of an External Object arc, B, then A is a prepassive$_{II}$ 3 arc, [{moquer, parler, rire,...}] zoned, and B is a copied 6 arc.

Many details of the proper analysis of these French cases need explication, including the justification for taking the prepassive arc to be a 3 arc; see Postal (1996).

One thing missing from (5.21) is a specification of the fact that the relevant construction has to be a subtype of clause union case. This is arguably unnecessary given the discussion in Chapter 4, section 3, of French clause union complement periphrastic passives. Such a specification would only be necessary to preclude participial passive and middle analogs of actual French pseudopassives, which are entirely impossible; compare (5.19) to:

(5.22)a. *Fernand a été ri de lui par toutes les filles de son village.

"Fernand was laughed at (him) by all of the girls of his village"

b. *Un type pareil, ça se moque de lui tout le temps.

"A guy like that, he gets made fun of all the time"

But the relevant distributions follow from the fact that both French participial passives and middles *require prepassive 2 arcs*. The specification in (5.21) that the prepassive arc is a 3 arc therefore necessarily picks out the types of French passives that occur in clause union complements.

Condition (5.21) then controls advancement of external objects in intransitive clauses, restricting this to cases where the predecessor is a copied 6 arc and the resulting local successor a prepassive 3 arc. In short, the formulation says that the only such advancement in French intransitive clauses is the copy variety advancement of 6 objects to 3, and must yield passivization. By limiting variable B to External Object arcs, the rule rightly says nothing about 3 arc local successor$_l$s of 1 arcs, which arguably exist in a range of inversion clauses. It also says nothing about 3 arc local successor$_l$s of 2 arcs or 4 arcs. I know of no such cases, but will not consider here what might block them.

Despite its specificity, (5.21) is still too limited in important respects. Most clearly, the specifications that any arc instantiating variable B is a 6 arc and copied are inadequate for grammatical *possessor* cases like (5.23):

(5.23)a. Fernand s'est fait rire de son gros nez.

"Fernand got laughed at his large nose"

b. *Fernand s'est fait rire du gros nez.

"Fernand got laughed at the large nose"

"Fernand's large nose got laughed at"

c. Mais, tu vois, les gais **se font rire de** leurs g[u]eules, **...**

forum.forumactif.com/ftopic68667-0-asc-60.htm - 122k

"But you see, gays get laughed at [their faces..."

In such clauses, French pseudopassivization intersects the possessor raising construction. The latter has the two standard distinct forms in (5.24a, b) one with, one without a resumptive pronoun:

(5.24)a. On lui a tordu le nez.

"One twisted his/her nose"

b. On lui a tordu son gros nez.

"One twisted his/her big nose"

It appears that (5.23a) corresponds to type (5.24b), extended to the host 6 object.

That is, normally French possessor raising is possible only from 2 objects and certain locative obliques, with the raised phrase manifesting as a 3 object, as in (5.24). Linking (5.23a) to cases like (5.24b) permits subsuming them under the view in (5.21) that the prepassive arc in a French pseudopassive is a 3 arc. Indeed, the possessor variants offer a strong argument for taking the prepassive arc in the simpler pseudopassive cases like (5.19) to be a 3 arc since this appears to be the only choice for those

like (5.23a). Moreover, (5.23a) resembles the simpler cases in that a copy pronoun is obligatory, as (5.23b) is impossible.

But other aspects of (5.21) do not hold for (5.23a). The latter does not manifest a 3 arc local successor$_{I}$ *of a 6 arc*, nor does it involve the copying *of a 6 arc*. Rather the arc copied in (5.23a), as in (5.24b), is arguably a Gen arc. Still (5.23a) does share with the simpler French pseudopassives having a 6 object 'source' for the passivized phrase.

Statement ((5.25) represents the most adequate generalization I can construct covering both the plain and possessor variants of French pseudopassives:

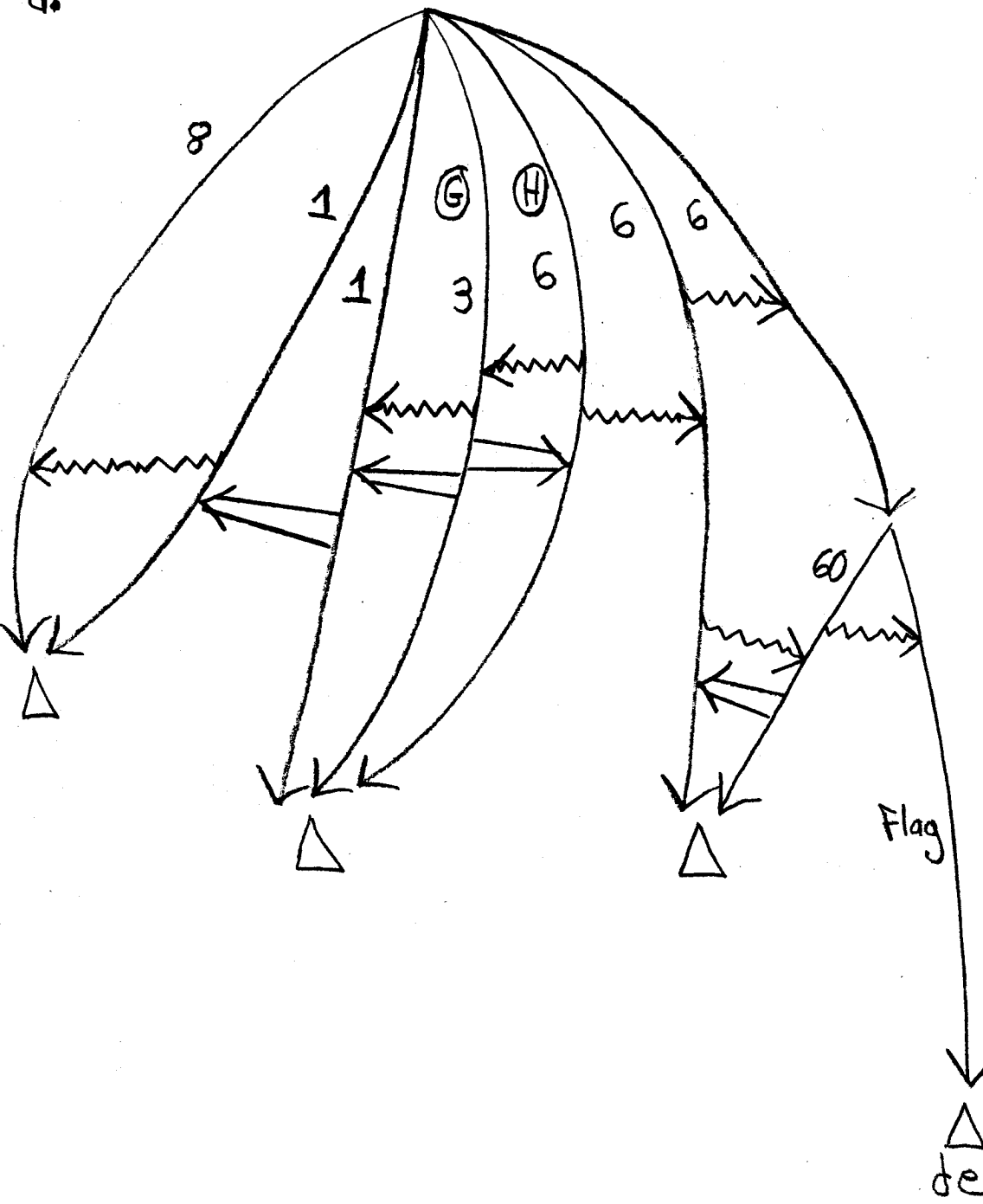
(5.25) **The *French* Pseudopassive Condition (Version 2)**

If A is a local successor$_{I}$ of B and R-successor of C which is an R-branch of an External Object arc neighbor of A, D, then if D is not a Loc arc, D is a 6 arc, C is copied, A is a prepassive$_{II}$ 3 arc and [{moquer, parler, rire, ...}] zoned.

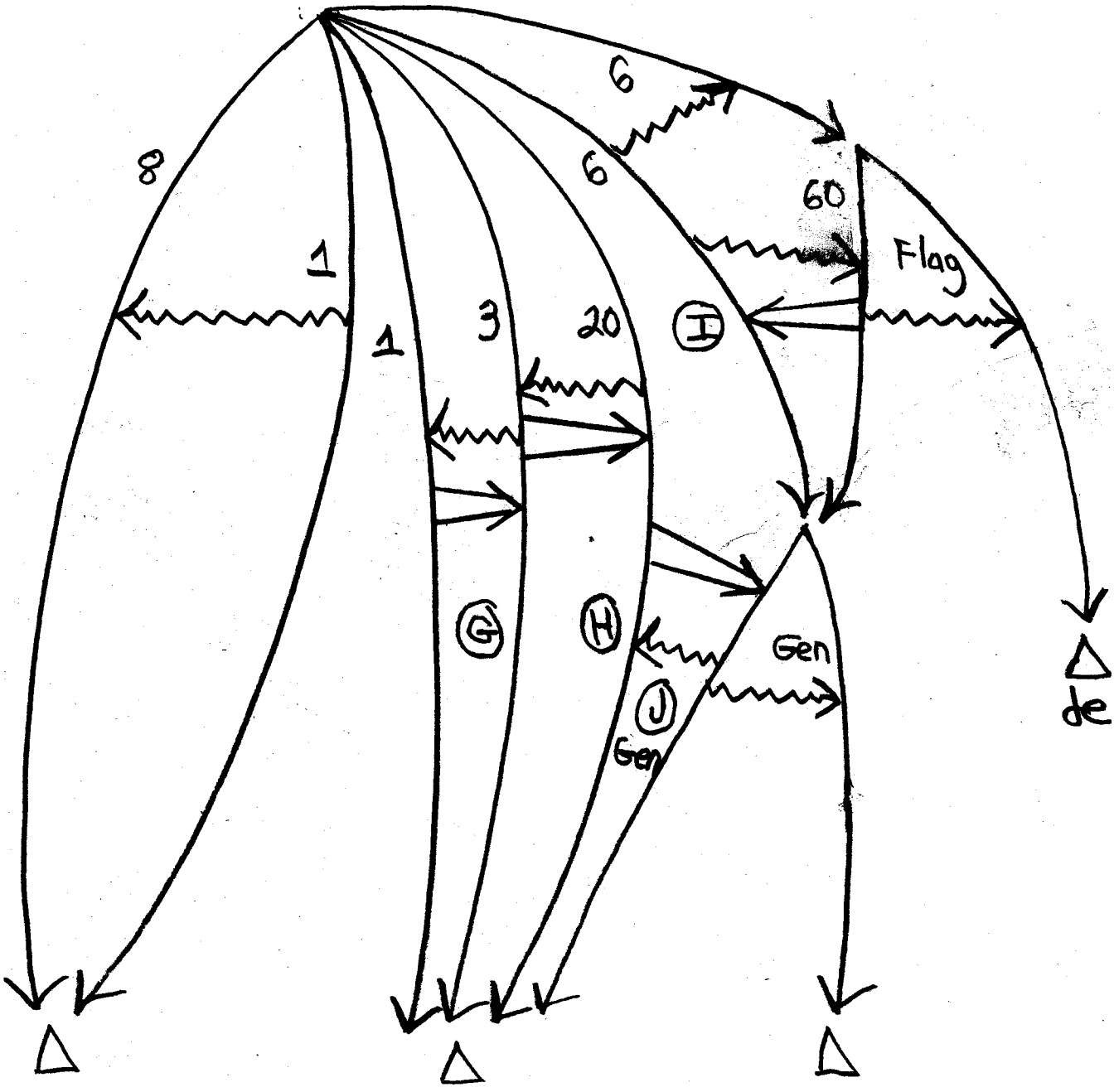
This formulation takes advantage of the fact that since both R-Branch and R-successor are ancestrals, every arc is its own R-branch and its own R-successor. Thus an R-branch or R-successor of a 6 arc can be that 6 arc itself, permitting (5.25) to cover the cases characterized by (5.21). For the simpler cases, (5.25) specifies that the 3 arc is the R-successor$_{I}$ of a 6 arc and that it is that 6 arc that is copied, while for the more complex ones, it only says the 3 arc is the R-successor$_{I}$ of a branch of a 6 arc and that that branch (in fact, a Gen arc) is copied. [7] So (5.25) generalizes over metagraph fragments of both the forms (5.26a, b), where I ignore many irrelevant features:

(5.26)a. simple case

a.



b.



In (5.26a), arc H instantiates all of the variables B, C and D of ((5.25) while G instantiates A. H is an R-branch of a 6 arc since it *is* a 6 arc and is an R-successor of a 6 arc for the same reason. And as required, its local successor$_{I}$, G is a prepassive$_{II}$ 3 arc.

In (5.26b), H instantiates variable B, J instantiates variable C and I variable D. Here J is an R-branch of a 6 arc, since I is a 6 arc and J a branch of it, and J is copied as required. Moreover, G, which instantiates variable A in (5.25), is a prepassive$_{II}$ arc. Condition (5.25) provides a clear (though hardly isolated) illustration of the fundamental role that arc relation *ancestrals* play in the formulation of grammatical generalizations in the present framework.

While ((5.25) mentions nothing specific about the possessor raising construction, which requires its own independent specifications, (5.25) does nonetheless control which 6 arcs in particular can have Gen arc branches with 3 arc R-successor$_{I}$ neighbors. These must be 6 arcs which are [{moquer, parler, rire, ...}] zoned. Since French possessor raising in general involves 3 arc R-successors of Gen arcs, the rule does control possessor raising for the unique case of raising out of 6 objects. For any possessor raising out of a 6 object not satisfying that zoning condition will violate (5.25). Condition (5.25) then captures the generalization that those verbs permitting the more complex possessor raising type of pseudopassive structure are coextensive with those which permit the simpler variety. And, while hardly elegant, ((5.25) characterizes a set of complex and highly restricted constructions.

A key implication from French for the analysis of *English* pseudopassives is that where the presence of an English copy pronominal form must in my terms be taken to be disguised by its invisibility, the French analog is necessarily overt. French sentences like (5.19) then arguably show that the essence of the analysis type proposed here for English pseudopassives, a copy advancement obligatorily linked to obligatory passivization, has to be sanctioned by grammatical theory independently of English pseudopassives. This undermines a rejection of the present English pseudopassive analysis based on a claim that it appeals to structures beyond known grammatical patterns.

Returning to English structure (5.14), it is a priori not obvious why D could not be a 2 arc. If it were, it would be an indigenous 2 arc, and nothing in structure (5.14) would fail to satisfy middle clause condition (4.62) of Chapter 4, justifying the following logic:

(5.27) **Pseudopassive Prepassive Arcs Are *Not* 2 Arcs**

a. If a local successor$_{I}$, like D in pseudopassive structure (5.14) could be a 2 arc, the synthetic analog of a periphrastic clause like (5.11b) would satisfy English synthetic passive condition (4.62); that is, D could be a legitimate prepassive$_{I}$ arc.

b. Without additional ad hoc specification, a. would permit there to be pseudomiddles.

c. Since there are no pseudomiddles, arcs like D in (5.14) are arguably never 2 arcs.

d. Hence, at least in pseudopassives, there are English prepassive arcs *which are not 2 arcs*.

Conclusion (5.27d) alone determines that conditions like (5.1) are simply too restrictive.

Negative conclusion (5.27c) leaves open the identity of the edge labels of the prepassive$_{II}$ arcs of English pseudopassives. This must be determined indirectly; the following logic seems relevant. Independently of pseudopassives, as considered further in Chapter 7, English allows only 2 arcs, 3 arcs or 4 arcs to be prepassive arcs, arguing that pseudopassive clause prepassive arcs are 3 arcs or 4 arcs. But while all variants of English allow some prepassive 3 arcs, some allow no prepassive 4 arcs (no passivization of second objects). Since all also allow pseudopassives, the simplest choice is that pseudopassive prepassive arcs are uniformly 3 arcs. The congruence of this conclusion with the 3 arc character of the prepassive arcs in French pseudopassives is surely not an argument against it. Nonetheless, at least one potential objection to excluding prepassive 4 arcs in pseudopassives is encountered in section 2 of Chapter 6 (see discussion of (6.31)) and at least rhetorically in what follows, I allow the alternative of 3 arc or 4 arc prepassive arcs in pseudopassives.

One can then very partially sketch the principle governing English pseudopassives as follows:

(5.28) **The Basic** *English* **Pseudopassive Condition**

If A is a local successor$_{I}$ of an External Object arc, B, and not a neighbor of a viable 2 arc, then A is a prepassive 3 arc or 4 arc, B is copied and [{...}] zoned and any Narrow Object neighbor of A not R-sponsored by A is sponsored by a P arc.

The bare specification that B is an External Object arc combined with the lack of substantive specification of the zoning condition means that (5.28) does not even *attempt* to specify which (mostly oblique) phrases can advance to form pseudopassives. This complicated and poorly understood area is touched on further in Chapter 8. Clearly though, the relevant predecessor arcs are all of the type requiring their associated phrases to be flagged. I am also here not trying to specify the obligatory invisibility of the reflexive resumptive pronoun. [8]

The specification that the local successor$_I$ is not a neighbor of a viable 2 arc is designed to exclude from the scope of the condition cases like (4.67) from Chapter 4 repeated as (5.29b):

(5.29)a. Devon smeared butter on the toast.

b. Devon smeared the toast with butter.

These were taken to instantiate the situation where some type of locative Oblique arc has a 2 arc local successor$_I$. Such cases are not subject to any of the specifications relevant to pseudopassives. In such cases though, the local successor$_I$ of the Oblique arc is a colimb of a viable 2 arc, that whose analog is headed by <u>butter</u> in (5.29a).

The mention of Narrow Object arcs in (5.28) is intended to determine that the pseudopassive phenomenon is generally impossible in clauses having 'independent' 2 objects 3 objects or 4 objects:

(5.30)a. Jerome sent the package (2 object) to Carol

b. *Carol was sent the package to by Jerome.

c. Jerome wrote Carol (3 object) in that room.

d. *That room was written Carol in.

e. Jerome grunted (insults) (4 object) at Clyde.

f. Clyde was grunted (*insults) at by Jerome.

So the object exclusion specifies that English pseudopassivization is basically limited to intransitive clauses in the broadest sense, those without 2, 3 or 4 objects. However, the formulation allows two marginal deviations from that pattern. First, as argued in Chapter 7, each English prepassive$_{II}$ arc is copied as part of the raising claimed in Chapter 4 to be associated with periphrastic passivization. For pseudopassives, the invisible copy pronoun will head a final 3 arc or 4 arc, but one sponsored by the prepassive arc and hence consistent with (5.28).

Second, (5.28) is intended to allow for data of the sort represented by e.g. (5.31):

(5.31)a. Florence was taken unfair advantage of.

b. Florence was made fun of.

c. Florence was taken (good) care of.

d. Those assets were paid close attention to.

e. Close attention was paid to those assets.

f. They paid close attention to those assets.

Focus for concreteness on (5.31d, e), which both correspond to the active (5.31f). The former is a grammatical pseudopassive containing the phrase <u>close attention</u>. Such cases provide one more reason

why reanalysis is not a viable basis for treating pseudopassives, as it makes no sense to think of paid close attention to in (5.31d) as a verb. (5.31e) shows that with the same verb with the same meaning and the same PP, the phrase Close attention is passivizable in a structure which is clearly not a ditransitive. This argues that at least in (5.31e), the phrase is a 2 object, violating constraint (5.28) if that status holds as well for (5.31d). Moreover, claiming that Close attention demoted to 4 in (5.31d) would not suffice to keep the case consistent with (5.28).

All of (5.31) are of the type mentioned in Chapter 4, note 5 of so called *light verb* structures, which I took to involve inter alia 2 arc local successor$_I$s of P arcs. The idea built into (5.28) is that such 2 arcs also need to be exempted from the restriction barring independent objects. Note too that cases like (5.31a) contrast in that the phrase intervening between verb and stranded preposition is not passivizable:

(5.32) *Fun was made of Florence.

My approach to this and the contrast with the other light verb structures claims that some 2 arc local successor$_I$s of P arcs, including that headed by fun, but not those headed by advantage, attention, etc., *obligatorily* have 4 arc local successor$_I$s. Others, like those headed by the latter nouns only optionally have such. Given that condition (7.16) of Chapter 7 precludes passivization of *single object* (nonditransitive) 4 objects, this accounts for (5.32).

A key feature of (5.28) is the assumption that a certain (edge label defined) kind of arc can have a 3 arc local successor$_I$ in the presence of a copy arc but only if such a local successor is a prepassive arc. A key entailment of that, one logically parallel to a related consequence of the Peruvian Spanish 3 object to 2 advancement phenomenon characterization in (4.38) of Chaper 4, and to that of the French pseudopassive phenomenon as well, is that the 3 arc local successor$_I$ is precluded from having a 2 arc local successor$_I$ which is prepassive. Thus the specification truly precludes pseudopassivization from yielding a 2 object.

In fact, under the analysis of pseudopassives sketched here, this phenomenon is, if one excludes quace considerations discussed in Chapter 8, *independent of 2 objects*. At least one phenomenon associated with English passivization might though seem to conflict with that conclusion. This involves participles (properly) including passive participles *appearing as adjectives*, as in Bresnan's (1982a: 51) example discussed in section 5.

(5.33) The field had a marched through look.

I argue that only in the weakest sense do these cases support a connection between pseudopassives and 2 objects, where 'weakest sense' refers to the possibility of a non-2 arc having 2 quace. Moreover, I there briefly consider the issue of whether such expressions, where combinations of verb plus preposition seem to be constituents, provide genuine evidence for a reanalysis view of pseudopassives, which I have of course rejected.

The pseudopassive analysis sketched here means that in effect everything special about such structures is stated independently of the characterization of passives itself. The only link is that the resulting structure must feed passivization; but whatever rules are independently required to characterize passive structures will, with one minor exception, not need to be revised or complicated to interact with pseudopassivization. To put it in slogan form, pseudopassive formation is really pseudo 3 (or 4) object formation which happens to be subject to the twin requirements that the resulting object passivize and that the phrase which feeds the advancement to 3 object or 4 object antecede a(n) (invisible) copy resumptive pronoun. This provides a clear basis for characterizing the difference between NLs like English which have pseudopassives and those which do not. The latter arguably have stronger conditions on advancements which yield prepassive arcs than English. Some may not allow that at all or allow it only without the copy arcs. And of course, as seen in French, the various possibilities can be lexically limited.

Also, if, as I have claimed (though with limited justification so far), pseudopassive advancement involves a resulting 3 arc or 4 arc, it is unnecessary to indicate specifically that the prepassive arc is of the *prepassive*$_{II}$ type, which is why that need not be specified in (5.28). Given that rule (4.62) of Chapter 4 only permits middle (synthetic passive) formation based on prepassive 2 arcs, the 3 arc or 4 arc specification alone makes joint satisfaction of (4.62) and (5.28) impossible. And that can be taken to determine that there are no pseudomiddles, modulo certain further considerations.

For one should consider the consequences of revising (5.28) by (i) adding the specification that any pseudopassive clause involves a final P_1 arc and (ii) specifying that the prepassive arc is a 2 arc and not a 3 arc. Since middles involve final 1 arcs and clauses with final P_1 arcs cannot have final 1 arcs, these stipulations would block pseudomiddles *even under the hypothesis that pseudopassive prepassive arcs are 2 arcs*. However, Chapter 6, sections 3 and 4 indicate why stipulation (i) could not suffice to avoid other false consequences under the prepassive 2 arc hypothesis although they do not arise under the prepassive 3 arc or 4 arc view.

5.3 The Interaction of Ditransitive Passives with Demotion to 4

Generalization (5.1a), limiting prepassive arcs to 2 arcs, would largely (the reason for the hedge presently) determine properly that the objects of Arrays 1 and 2, which have been taken to represent single 4 objects and 3 objects respectively, cannot passivize, evidently a good result. But the pseudopassive discussion in the previous section already indicates that such a principle cannot be the basis for the failure of Array 1 and Array 2 objects to passivize. Moreover, pseudopassives aside, (5.1) has straightforward consequences for *ditransitive* clauses, seemingly claiming *under the assumptions supported in Chapter 3*, that these permit no passives at all of either object. This is a radically false claim for *every* variant of English, all of which of course permit at least some passives of some first objects, in present terms, some passives of 3 objects. That (5.1) is then (further) falsified merely by the existence of passives of the first objects of English ditransitive clauses has not been widely recognized simply because it has not in general been grasped that the first objects of such clauses are final 3 objects and not, as e.g. the Dative Shift analysis would have it, final 2 objects.

A complication arises though with respect to the interaction of (5.1) and the passivization of ditransitive 4 objects since I have analyzed these as systematically involving *demoted* 2 objects. The same problem arose for middles in section 7 of Chapter 4; but no solution was offered there. Namely, why can a ditransitive 2 object sister of a final 3 object not passivize (in either a periphrastic passive or a middle), as it were 'instead' of demoting to 4. This would yield passives of ditransitive second objects which, like passives related to Array 0, would be passives of 2 objects.

First, passives of 2 objects in clauses with final 3 objects may be possible in *other* NLs. Second, one might argue that an answer to this question at least for English participial passives is already provided by the interaction of the periphrastic passive view developed in Chapter 4 and principle (3.107) of Chapter 3, which I repeat:

(5.34) **The 3 Object-Induced 2 to 4 Demotion Condition (Version 1)**

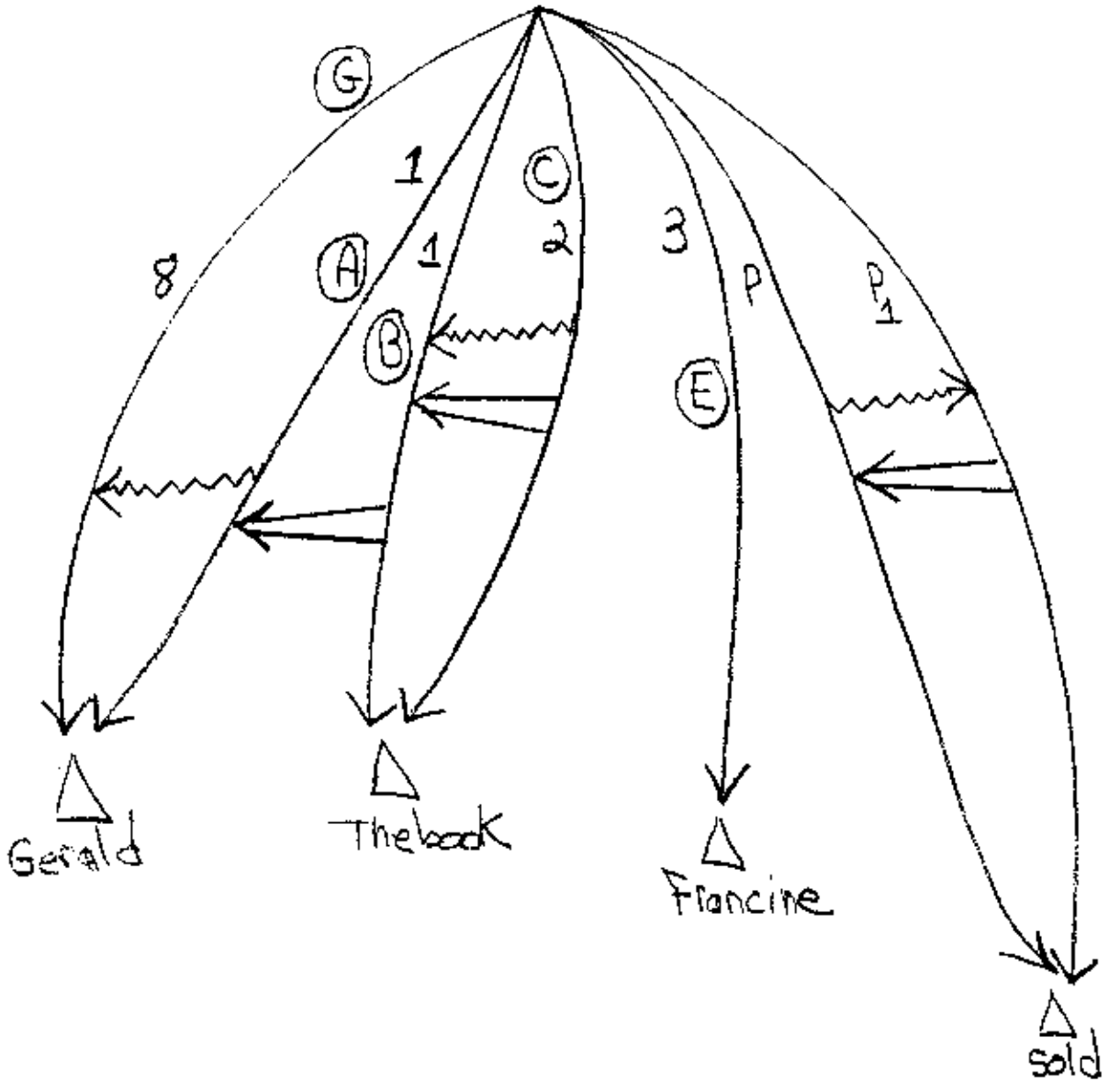
If A is a 2 arc neighbor of a final 3 arc and locally erasable by a 4 arc, then A has a 4 arc local successor$_I$.

The idea was that that in the presence of a final 3 object, English 2 arcs unerased by other neighboring arcs are forced to have 4 arc local successor$_I$s, and that only that precluded 2 object passives in ditransitive clauses.

For consider a metagraph fragment with a final 3 arc and a prepassive 2 arc, which according to the assumptions of the previous chapter, is a local predecessor$_{II}$. This would yield (5.35b) as a *putative* structure fragment for e.g. (5.35a):

(5.35)a. The book was sold Francine (by Gerald).

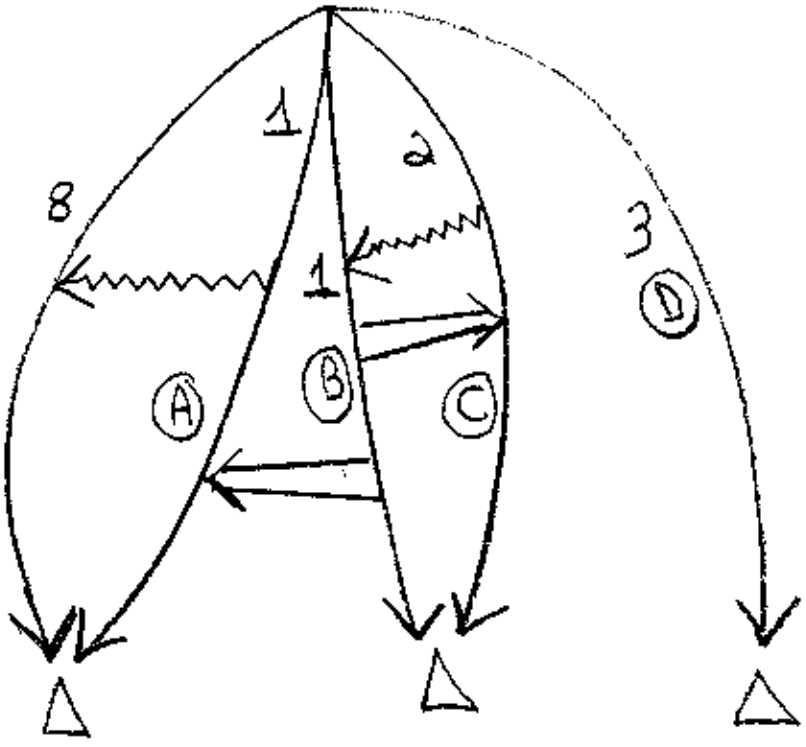
b.


G
1
C
8
A
1
2
3
P
P1
B
E
Gerald
The book
Francine
sold

The key is that the assumption that B exists to form the passive structure leaves arc C *locally erasable* by a 4 arc. For C is required by (4.26) of Chapter 4 to be erased only by a foreign successor in a higher clause. Moreover, (5.34) requires that a 4 arc local successor$_{I}$ of C, not represented, call it D, exist, along with the relevant sponsor and erase pairings. In particular, D will erase C, since D is required to be a local successor$_{I}$. Given that the passive structure defined by B exists as well, C will have a second eraser, its required higher clause (20 arc) foreign successor$_{I}$, violating the Unique Eraser Condition. Thus the assumptions made so far simply do not allow a prepassive$_{II}$ *2 arc* neighbor of a final 3 arc. Of course, these considerations in no way preclude the sort of 4 arcs required by (5.34) from being prepassive 4 arcs, as that does not result in any arc having two erasers.

However, the just sketched explication of the nonexistence of 2 object passives in the presence of final 3 arcs depends entirely on the claim that English periphrastic passives involve prepassive$_{II}$ and not prepassive$_{I}$ arcs. Only that combines with condition (5.34) in relevant cases to yield a violation of the Unique Eraser Condition. But for any English clauses with arc passive$_{I}$ arcs, the incompatibility explanation would not go through. For nothing so far bars situation (5.36):

(5.36)


1
2
8
3
1
A
B
C
D

Here B is an arc passive$_{I}$ arc, which erases C. Because C in (5.36) is *not* locally erasable by a 4 arc, it does not satisfy the antecedent condition of rule (5.34). Hence no 4 arc local successor$_{I}$ of C is then required and nothing so far blocks such a situation.

This theoretical point would at best be relevant to other NLs, if all English clausal passives had prepassive$_{II}$ arcs. But the situation instantiated by arcs B and C, in (5.36) represents just what I took to be the essence of the English middle construction, regardless of whether one accepts the view that middles are a type of synthetic passive. So (5.34) would, as already indicated, be impotent to predict that middles of the second objects of ditransitives are impossible, a fact I informally took to follow from the condition that only 2 objects can be targeted in middle clauses:

(5.37)a. One often sells such weapons to terrorists.

b. Such weapons don't sell often to terrorists.

c. One often sells terrorists such weapons.

d. *Such weapons don't sell terrorists often.

(5.38)a. One doesn't usually teach such things to our children.

b. Such things don't usually teach to our children.

c. One doesn't usually teach our children such things.

d. *Such things don't usually teach our children.

But (5.34) does not actually explicate the badness of (5.37d) and (5.38d) and so, despite previous informal claims, I have yet to really show how the required (in the presence of a final 3 object) demotion of 2 objects to 4 bleeds ditransitive second objects from feeding middles, although I *did* provide an account which determines that it bleeds periphrastic passives$_{II}$ from being fed by second objects *as 2 objects*.

A solution to this problem requires strengthening the conditions forcing 2 objects in the presence of a final 3 object to demote to 4. Specifically, it must be determined that having a 1 arc local successor$_{I}$, as 2 arc C of (5.36) does, *nonetheless fails to bleed the requirement of demotion to 4*. Since such demotion involves a 4 arc local successor$_{I}$ of a 2 arc, that will yield Unique Eraser Condition violations for any type of passive.

The way to accomplish the needed bleeding is to modify condition (5.34), replacing appeal to the concept *locally erasable* with a distinct notion, required since arc C in (5.36) is not locally erasable by

any 2 arc. Returning then to the problematic (5.36), the key fact is that arc C, which is not erasable by a 4 arc, is erasable by a local successor. I propose then to reformulate (5.34 as follows:

(5.39) **The 3 Object-Induced 2 to 4 Demotion Condition (Version 2)**

If A is a 2 arc neighbor of a final 3 arc and locally erasable by a successor, then A has a 4 arc local successor$_{I}$.

Unlike (5.34), (5.39) blocks all instances of improper failures of 2 arc colimbs of final 3 arcs to have 4 arc local successor$_{I}$s. Let us go over the cases systematically.

First, consider *active* ditransitive clauses with viable 2 arcs and final 3 arcs. Such viable 2 arcs will in general not have any local successors which are not 4 arcs and are hence locally erasable by a 4 arc successor. So the condition requires that they have 4 arc local successor$_{I}$s. This yields, as desired given earlier results, the obligatory 4 object status of the second object of English ditransitives.

Second, take the situation in a periphrastic passive structure with viable 2 arc and final 3 arc, where the desired result is that such a 2 arc *not* be able to be a licit prepassive$_{II}$ arc. Since it defines a periphrastic passive, the viable 2 arc is a prepassive$_{II}$ arc. But that property leaves the arc locally erasable by a 4 arc, hence subject to the requirement in (5.39) of having a 4 arc local successor$_{I}$. But it is also required by (4.26) of Chapter 4 to have a foreign successor$_{I}$, which erases it. That forces any such 2 arc to have two erasers, violating the Unique Eraser Condition. Thus, in this case, (5.39) has the same correct result as (5.34) did.

Third and finally, suppose a viable 2 arc neighbor of a final 3 arc is a prepassive$_{I}$ arc, as in a middle clause. Such an arc has a 1 arc local successor$_{I}$. Since it is erased by a local successor, it is obviously erasable by one. Hence (5.39) requires it to have a 4 arc local successor$_{I}$, again providing it with two erasers in violation of the Unique Eraser Condition. This blocks cases like (5.37d) and (5.38d), which (5.34) did not. So, as desired, (5.39) renders it impossible for any 2 arc in a clause with a final 3 arc to be a prepassive arc of either type, since any such prepassive arc is forced to illicitly have two erasers. Hence an explanation has now actually been provided both of why no *periphrastic* passives are both second object passives and 2 object passives and why no middles have this property either.

Issues related to (5.39) involve the interaction between 3 arc-induced demotion to 4 and various other types of constructions. Consider first cases discussed in Chapter 3 where I posited 3 object to 2

advancement with verbs like supply, an advancement which forced an earlier (viable) 2 arc to have a local successor$_{III}$:

(5.40)a. They supplied the troops body armor.

b. They supplied body armor to the troops.

c. They supplied the troops with body armor.

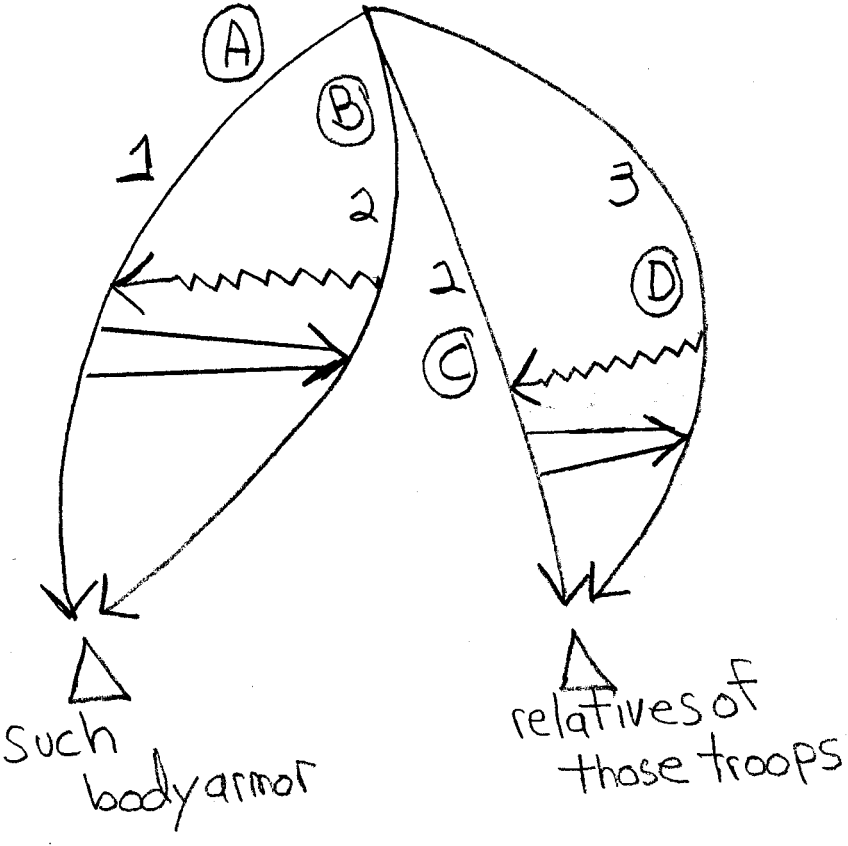
Under earlier proposals, the troops heads an initial 3 arc, as in (5.40a) but also a 2 arc local successor$_{I}$ of that, not present in (5.40a), while body armor heads a 2 arc which is erased by the 2 arc local successor$_{I}$. I defend such an analysis against critiques by Farrell (1994), in section 4 below.

A key issue is what present premisses yield when middle formation combines with the posited 3 object to 2 advancement such that the viable 2 arc is the prepassive$_{I}$ arc. This could permit sentences like (5.41) with relatives of those troops heading a final 2 arc and Such body armor heading a prepassive$_{I}$ 2 arc and final 1 arc.

(5.41) *Such body armor supplies relatives of those troops easily.

The object arc's output 2 arc status (hence non-3 arc status) would be supportable by showing that it is extractable and permits subconstituent extraction, seen in Chapter 2 to be characteristically impossible for final 3 objects. The issue is why such cases, which would represent a structure fragment like (5.42), are in fact impossible.

(5.42)


A
B
C
D
1
2
1
3
such
body armor
relatives of
those troops

The first observation is that (5.42) does not violate the Forced Erasure Condition. For while C potentially threatens B, it does not threaten it since B , having been erased by A, is not erasable by C. In this respect, (5.42) is comparable to the inversion structure described in (3.47) of Chapter 3, where a potentially threatened predecessor was also not threatened. Why is that inversion case good but (5.42) ungrammatical?

My proposal appeals to the notion *immune* introduced in Chapter 3. I will state the principle which divides the cases as follows:

(5.43) **The Immunity Condition**

If A is immune to B and C is a local successor$_1$ of A, A outranks C.

The notion *outrank* in (5.43) can be characterized in terms of a hierarchy of edge labels:

(5.44) **Definition**

A *outranks* B if and only if A and B are Central arcs and A's (first atomic) edge label precedes B's first edge label in the edge label sequence: 1 2 3 {4/5/6} {7/8/9} {Oblique}

In this formulation, edge labels within set brackets have no relative ordering, so that there are only six distinct ordering positions for the full set of Central arc edge labels.

Evidently, in the earlier grammatical inversion case of a potentially threatened but not threatened arc, the potentially threatened (1) arc is immune to its potential threatener since it has a local successor$_1$ which it outranks, satisfying (5.43). But in (5.42) the potentially threatened arc B does not outrank its local successor$_1$ and is hence not immune to its potential threatener C, which must thus, via the Forced Erasure Condition, erase B, yielding a violation of the Unique Eraser Condition.

Only two cases where the notion immune is relevant having been cited, the proposal is highly speculative. But the general claim is that demotion can rescue a potentially threatened arc from the Forced Erasure Condition but that advancement cannot.

5.4 Appendix: Pseudopassives and Adjectival Conversion

Section 2 touched on the issue of the links between pseudopassives and 2 arcs as indicated (or not) by adjectival facts. As discussed in Bresnan (1982a: 51), Postal (1986: Chapter 6), Pesetsky (1995: 23-25, 295, note 18) and Farrell (1994: 125-132), the adjectival use of passive participles, called conversion earlier, extends to (some of) those linked to pseudopassives. Bresnan cited:

(5.45)a. The field was marched through. a marched through look

b. The item was paid for. each unpaid for item

c. That profession is looked on favorably. a well looked on profession

d. Her passion for chocolates was not spoken of. an unspoken of passion for chocolates

Based on the view that the verbs whose participles permit conversion include no active unergatives but some active unaccusatives as well as periphrastic passive verbs, Farrell proposed the following condition linking conversion to 2 objects:

(5.46) Farrell (1994: 126)

"A participial adjective is well-formed only if the noun it modifies expresses the initial 2 of the base verb."

Details and contrasting theoretical assumptions aside, this necessary condition is compatible with uncontroversial data like (5.45) only under assumptions about pseudopassives *entirely at odds with* the present treatment and requiring the prepassive arc not only to be a 2 arc but an initial one.

Two lines of objection to Farrell's conclusion are possible. The first, developed in effect in the following chapter, especially on the basis of the interaction of pseudopassives with expletive there structures, shows further that pseudopassives cannot acceptably be analyzed in general as passives of 2 objects. The second, I will discuss here. It indicates that given the notion of quace, nothing Farrell cites motivates the conclusion that pseudopassive prepassive arcs are 2 arcs, For the quace idea permits analyzing such prepassive arcs as non-2 arcs, specifically as in (5.28), as 3 arcs or 4 arcs, having 2 quace, rendering the real connection to the 2 relation the weak one of the presence of 2 quace.

The central issue which Farrell's (5.46) addresses is the theoretical connection between adjectival status for a participle, that is, conversion, and property sharing between converted participial structures and forms linked to 2 objects, namely, unaccusatives and Array 0 periphrastic passives. The different answer here stands in part on the assumption that participle conversion requires heading a P arc with a P_1 arc local successor$_l$. Chapter 4 specified that the P arcs in (non clause union) periphrastic passive inner clauses have this property. And section 5 of that chapter 4 led to the conclusion that some unaccusative clauses (e.g. those based on born) have it as well.

A key assumption offering an alternative to Farrell's (5.46) is then (5.47):

(5.47) **The Participial Condition**

If A is a P_1 arc, A is a neighbor of an output arc with closed 2 quace.

Statement (4.88b) of Chapter 4, section 11 claimed that P_1 arcs headed by intransitive nonpassive participles as well as predpassive ones can have P_A arc local successor$_I$s, the latter successors defining conversion. From (5.47), it then follows that any P_A arc local successor$_I$ of a P_1 arc must also be a neighbor of an (output) arc with 2 quace. And that will interact with (4.37), the Obligatory 1 Arc Local Successor$_{II}$ Condition, to require such output arcs to be R-local predecessor$_{II}$s of 1 arcs. This will mean they are either prepassive$_{II}$ arcs, arcs like the output 2 arcs with the verb <u>born</u> or arcs coocurring with adjectives converted from unaccusative verbs.

I then take Farrell's claim about conversion with pseudopassive based participles to be unmotivated because the following principle, argued for in depth in Chapter 8, holds of English periphrastic passives:

(5.48) If A is prepassive$_{II}$ arc, A has closed 2 quace.

In fact, (5.48) is almost a consequence of (5.47) given that every prepassive$_{II}$ arc has been taken to occur in a clause with a P_1 arc.

But still so far nothing determines that it is such an arc rather than a distinct neighbor of a P_1 arc which has the relevant quace. For while, given the account of quace in Chapter 1, (5.48) is necessarily true for any prepassive$_{II}$ *2 arc*, its truth is not guaranteed independently for prepassive$_{II}$ arcs with other initial edge labels. So (5.48) serves inter alia to require that the prepassive 3 arc or 4 arc posited in the *present* analysis of pseudopassives will have 2 quace. And it is seen in Chapter 7, that it also plays an important role with respect to 3 object and 4 object passives in ditransitives. Hence (5.48) will allow the P arc associated with a pseudopassive prepassive 3 arc to have a P_1 arc local successor$_I$, just as much as it allows that for a P arc neighbor of a prepassive 2 arc. And both subcases of P_1 arc occurrence can then have P_A local successor$_I$s, defining the conversion of their head forms to adjectives because all the relevant P_A arcs will be neighbors of arcs with 2 quace.

Moreover, the requirement that P_A local successor$_I$s of P_1 arcs can exist only in clauses containing an arc with 2 quace arguably blocks conversion for arbitrary *unergative* verbs. This follows under the assumption that the P arcs they head will not be able to have P_1 arc local successor$_I$s, which in turn will hold under two conditions. The first is that there is no basis for their viable 1 arcs to have 2 quace. Although I have not formulated any condition to this effect, 2 quace surely cannot in general be assigned to English output 1 arcs, either unergative or transitive. Second, it must be true that any

other Central arcs occurring with a nonpredpassive unergative P arc, e.g. oblique arcs, 5 arcs, etc. also cannot have 2 quace. Both these conditions seem well motivated, although it is not possible here to precisely specify a condition which imposes them. Necessary would be something along the lines of:

(5.49) **The English 2 Quace Condition (Partial)**

If A is a neighbor of a nonpredpassive P arc, A has *quirky* 2 quace only if ??

Basically, one wants this to limit 2 quace in question to nonpassive structures only under the narrowest conditions. I touch on some of those in Chapter 8, section 7.

Consider now the fact noted by Farrell (1994: 127) that intransitives occurring with objects in PPs do not freely permit conversion; he cited e.g.:

(5.50)a. The lawyer moved for a mistrial.

b. *an unmoved for mistrial

c. *A mistrial was moved for by the lawyer.

In present terms, (5.50b) can be taken as a direct consequence of whatever blocks pseudopassivization with the relevant sense of <u>move</u>. For that can be taken to preclude a P_1 arc local successor$_I$ of the P arc, which in turns precludes conversion, that is, a P_A local successor$_I$. There is nothing in this case which favors Farrell's proposal over the present one. Incidentally, given earlier remarks, specifically (5.48), the way to block (5.50c) might be to specify that the relevant verb does not permit its P arc to be a neighbor of an arc with 2 quace. Given my account of pseudopassives, it would also be possible to say the verb cannot head a P arc with a neighboring 3 arc or 4 arc. I cannot currently provide a basis for choosing among these.

Farrell also cited (5.51a, b, c):

(5.51)a. Poverty leads to crime.

b. *Crime is led to by poverty.

c. *rarely led to crimes

d. *Poverty was led to crime.

While the pattern of grammaticality and ungrammatical parallels that in (5.50), it is doubtful that the <u>lead</u> of (5.51) is an unergative. If it is an unaccusative, the ungrammatical (5.51b) would violate the requirement in (4.42) that passive victim arcs be viable. That would also block (5.51c) on a passive analysis. An analysis of that parallel to the treatment of <u>born</u> is arguably also unavailable, as indicated in (5.51d). That is, this sense of <u>lead</u> would simply not permit its P arc to have a P_1 arc local successor.

In discussing (5.50), I have in effect treated it as if the *failure* of a pseuodpassive participle to permit conversion is exceptional. But Postal (1986: Chapter 6) maintained, on the contrary, that it is pseudopassive based adjectival conversion like that in (5.45) which is exceptional since good cases are quite sporadic. This was disputed by Pesetsky (1995: 23-25), who seems to suggest that the presence of a preceding adverb in general rescues such cases. I do not find this to be the case. For instance, no adverb rescues cases based on the verb in Farrell's (5.50b):

(5.52)a. *a never moved for mistrial

b. *an accidentally unmoved for mistrial

c. *most illegitimately moved for mistrials

Similarly, the following seem roughly as ungrammatical with, as without, an adverb:

(5.53)a. The minister was shot at. *(brazenly/frequently/rarely) shot at ministers

b. The port was sailed into by the pirate ship. *(often/proudly/rarely) sailed into ports

c. The proposal was argued against. *(cleverly/commonly/poorly) argued against proposals

d. The proposal was argued for. *(cleverly/infrequently/poorly) argued for proposals

e. The nurse was lied to by her date. *(repeatedly/shamelessly/unfairly) lied to nurses

If this is the general case, then there is a further objection to Farrell's (5.46). For under that proposal, pseudopassives are regular passives of 2 objects; but participles linked to periphrastic passives of uncontroversial 2 objects seem to quite productively permit conversion. [9] It is then unexpected within a framework embodying (5.46) that pseudopassive participle conversion is, even with adverbial support, seemingly quite unsystematic.

I have advanced nothing determining which pseudopassive cases allow conversion and which do not. And I have said nothing which selects which unaccusative verbs permit conversion and which do not. For while many are compatible with conversion, many, including those of (5.54), are not:

(5.54)a. The wind blew/roared constantly. *constantly blown/*roared winds

b. His stomach bulged. *noticeably bulged stomachs

c. The screams ceased. *the recently ceased screams

d. The water level climbed. *the noticeably climbed water level

e. The rocket seemed to glide. *most glided rockets

f. Some glasses glisten. *most glistened glasses

If there are principles selecting which unaccusative verbs permit conversion, I lack insight into them. Conceivably though undesirably, appeal to relatively ad hoc partially lexical constraints like those speculated about with respect to move and lead are needed.

A treatment of adjectival conversion appealing to 2 quace might appear to generate problems with respect to the passives of 3 objects and 4 objects, already noted to be possible with some ditransitives; see further discussion in Chapter 7. For given principle (5.48), the non-2 arc prepassive arcs underlying such passives must also have closed 2 quace. Therefore, the conditions cited in this discussion would not prevent the participles associated with such non-2 object passives from permitting adjectival conversion. But that is nonetheless entirely impossible:

(5.55)a. Hust (1977: 42)

*The school was ungiven the gift.

b. Levin and Rappaport (1986: 652)

*The customer remained unsold a car.

c. They/The women were sent the books.

d. The books were sent them.

e. *The women remain unsent them/the books.

f. *The books remain unsent the women/them.

However, these facts, taken in in Chapter 4, section 11 to follow from condition (4.98), the English Adjectival Clause Relational Poverty Condition, can be rendered consistent as well with the conversion of pseudopassive passive participles, via a modest modification of that condition.

Condition (4.98) as is would not allow the conversion of pseudopassive passive participles and hence would wrongly block all of the fine cases of e.g. (5.45). Because under my analysis of periphrastic passives, the prepassive$_{II}$ 3 arc of a pseudopassive underlying the conversion would be an output 3 arc. There is though a revision of (4.98) which has all and only the desired consequences.

(5.56) **The** *English* **Adjectival Clause Relational Poverty Condition (Version 2)**

If A is an output Core arc neighbor of a P_A arc, A has closed 2 quace.

This modifies the earlier condition to pick out licit output Core arc neighbors of P_A arcs not by their primary edge labels but by their quace defining edge labels. It follows that an output 3 arc like that in converted pseudopassive participle cases, which violated (4.98) in not being 2 arcs, can be legitimate if

such non-2 arcs have closed 2 quace. But principle (5.48), further elaborated in Chapter 8, section 7, determines that they do.

How though can the converted pseudopassive cases be grammatical under (5.4856), while the adjectival passives linked to ditransitives like (5.55a, b, e, f) are blocked? The answer is that while converted pseudopassive cases contain output 3 or 4 arcs, these are always prepassive arcs, hence have closed 2 quace. There are no output 4 arcs in the prepassive 3 arc case or output 3 arcs in the prepassive 4 arc case, so no other Core arcs fail to have closed 2 quace. However, ditransitives like (5.55) are different. Because, *pseudopassives aside*, 3 objects only passivize in the presence of an an output 4 arc, and 4 arcs only in the presence of an output 3 arc; Array 1 and Array 2 objects never passivize. Hence ditransitive passives like those underlying the conversions in (5.55) always involve an output Core arc *which is not prepassive*. So if it is guaranteed, that such nonprepassive 3 and 4 arcs *cannot* have closed 2 quace, the desired results are achieved. And, as discussed further in Chapter 8, section 7, this state of affairs is enforced by condition (8.57), the 3 Object and 4 Object 2-Quace Condition. That requires output 3 arcs or 4 arcs with closed 2 quace to be prepassive arcs.

In these terms, the fundamental reason why pseudopassive participles permit conversion even though they are based on prepassive 3 or 4 arcs but ditransitive clause passive participles do not even though they are also based on prepassive 3 or 4 arcs is this: *pseudopassive* prepassive$_{II}$ 3 arcs or 4 arcs are not required to cooccur with respectively 4 arcs or 3 arcs (see condition (7.16) of Chapter 7) and indeed, as represented in (5.28), are mostly forbidden from so occurring. But other prepassive$_{II}$ 3 and 4 arcs are subject to that requirement, which in an adjectival structure clashes with the requirement that clauses with P_A arcs not occur with output Core arcs without closed 2 quace.

The analysis of 3 and 4 object interaction with adjectival conversion just sketched has one other important implication. This relates to those cases like (5.31a, c) taken to involve pseudopassive predpassive conversion in the presence of output 4 arcs which are R-local successor$_I$s of P arcs. One observes the following contrast:

(5.58)a. Those threats were paid close attention to.

b. *the threats recently paid close attention to

c. Close attention was paid to those threats.

d. the close attention recently paid to those threats

If it is correct that cases of postnominal participles without relative pronouns and auxiliary involve conversion, then the contrast between (5.58b, d) follows from present assumptions. In (5.58a), the clause is a pseudopassive, but one in which there can be an output 4 arc because it is an R-local successor of a P arc. That 4 arc is, however, not prepassive and hence cannot have closed 2 quace. In (b) though, there is conversion meaning that (5.56) must be satisfied. It cannot be however since the stranded 4 object cannot have closed 2 quace because of condition (8.108 below, which requires 3 arcs and 4 arcs with closed 2 quace to be prepassive arcs. On the contrary, in (5.58d), the passivized phrase is a 2 object, there is no output 3 arc or 4 arc and so (5.56) cannot be violated.

Summarizing, my remarks on adjective conversion and Farrell's claim that pseudopassives involve (in my terms) prepassive initial 2 arcs have been sketchy. Nonetheless, I think they show that his conclusion is, within the current framework, not justified. The relevant facts do not undermine the proposal that pseudopassive clause prepassive arcs are 3 or 4 arcs. As already indicated, Chapter 6 argues further the untenability of the claim that pseudopassives are 2 object passives.

At least one matter has been left hanging though. With reanalysis rejected as a basis for pseudopassives, how is it that seemingly converted pseudopassive participles like those in (5.45) *occur with a stranded* preposition *in what are normally taken to be adjectival positions*? That word order position would follow if the preposition were inside the participial verb converted to an adjective, *as reanalysis claims*. But in current terms, pseudopassive verb + preposition combinations involve a verb followed by a PP with an *invisible* pronominal DP. And of course adjectives followed by *visible* PPs cannot in general appear pronominally:

(5.59)a. a woman proud of her accomplishments

b. a proud (*of her accomplishments) woman

c. many claims equivalent to that

d. many equivalent (*to that) claims

e. several fallen (*into the lake) trees

Do such facts not provide a powerful argument for reanalysis and against the current position?

The answer is they do but only to a limited extent and in one respect. While they yield a prima facie argument favoring reanalysis in one sense, that is largely orthogonal to the central claims of the current account. For the relevant cases bring out that as traditionally understood, reanalysis is a complex idea. The straightforward aspect is the claim that it yields verbs with incorporated

prepositions. There is though no inherent incompatibility between *that idea* and the proposals here about inter alia pseudopassives, participle to adjective conversion, prepassive arc edge labels, etc. What *is* incompatible with these proposals is the assumption that reanalysis, in addition to yielding a kind of preposition incorporation into verbs, *somehow turns the object of a* preposition *into a direct object*. This common view is found clearly in e.g.:

(5.60) Levin and Rappaport (1986: 650: note 30)

> "Reanalysis effects a change in a verb's lexical-thematic properties. A θ-role that was indirectly assigned through the use of a preposition is directly assigned by the reanalyzed verb-plus-preposition. As a result of reanalysis, an indirect argument becomes a direct argument and can therefore be externalized."

Here 'direct argument' is the closest equivalent to my 2 object and 'externalized' denotes the possibility of appearing as a final 1.

This aspect of reanalysis, which is not entailed by the mere idea of preposition incorporation, is connected to a view that being a 2 object is somehow linked (at least in English) to a DP being both unflagged by a preposition and immediately post-verbal. But of course I do not accept that the notion 2 object is characterizable in such terms, not for English and still less from a universal grammatical perspective.

Nothing then precludes adopting exactly the assumptions made here so far (and further supported in the following chapter) about pseudopassives, while positing that certain converted pseudopassive participles permit the stranded preposition (perhaps with its invisible neighboring resumptive pronoun as well) of the flagged copy arc to incorporate in the resulting adjective. Such an incorporation posit would thus leave the claim that pseudopassivization involves prepassive *non*-2 arcs, the presence of 2 quace, etc., essentially unaffected.

In short, the existence of cases like (5.45) supports at best only that aspect of traditional reanalysis ideas which is compatible with the key edge-based proposals taken here to characterize passivization, pseudopassivization, conversion, etc.

Notes to Chapter 5

1 The hedge is due to the fact that there are other conditions on passives independent of prepassive arc constraints. See for instance the appeal to the (near) absence of final 2, 3 and 4 arcs in rule (5.28) below.

2 Fouvry and Kordony (2005) discuss Dutch passives of 3 objects parallel to those in German.

3 This view can certainly not reduce all putative cases of 3 object passivization to 2 object passivization. This was already supported in Postal (1996) for one kind of passivization found in French clause union cases. See also the German facts cited in Chapter 3, section 10.

4 The negative viable 2 arc condition is designed to determine that the stated requirement holds only for intransitives and to specifically exclude fournir 'furnish' type verbs. These, as argued in Postal (1982), involve 3 object to 2 advancement which leads to the demotion of the head DP of a viable 2 arc. Their structure parallels that of English 'supply' verbs considered in Chapter 3, section 2.

5 French arguably provides an instantiation of a local successor$_I$, X, of an arc, Y, where Y is copied but X is *not* required to be a prepassive arc. Thus where the (dés)obéir cases share one feature with pseudopassives, obligatory passivization of the result, but not another, required presence of a copy pronoun, what Postal (1990a) called *orphan dessus* cases illustrate required presence of a copy pronoun without a passivization requirement:

(i)a. L'agent a tiré sur Phillipe.

b. L' agent lui a tiré dessus (à Phillipe).

"The policeman shot at Phillip"

c. *L'agent a tiré à Phillipe.

The idea was that (ib) involves an advancement of an oblique of the type represented by the sur phrase in (ia) to 3 object, with the requirement that the oblique local predecessor$_I$ be copied. The absence of a *visible* pronominal copy in such cases makes them perhaps resemble English pseudopassives in another respect. Alternatively, one might regard complex prepositions like dessus as parallel to English therein, with des possibly an incoporated pronominal form.

6 Such examples have, as Postal (1996) observed, provided a conundrum for French traditional grammarians, leading to declarations that they are illogical, inexcusable, barbarisms, due to speaker inattention, etc. One must conclude that when, in lieu of providing analyses, grammarians disparage uncontroversially grammatical examples, they face facts incompatible with their conceptual framework.

7 The specification in (5.25) to the effect 'if D is not a Loc arc' is intended to allow possessor raising to 3 object from locatives, as in (i) and to sanction advancements of locatives to 3 as in (i) of note 5 (see Postal, 1990: e.g. 139-152):

(i) On lui marche sur le ventre.

"One walks on his/her stomarch"

Such cases are clearly not governed by the conditions of relevance here.

8 The invisibility in question must reflect the erasure of *all* arcs headed by the resumptive pronominal. That the result is a stranded preposition indicates that the erasure really defining the invisibility is that of the ultimate successor of the copy arc inside the PP flagging structure, that is, in particular, of the 60 arc H in (5.14). If that erasure is local, the eraser would have to be the Flag arc. The issue would then be to pick out all and only those 60 arcs which are erased by their neighboring Flag arc. As a first approximation, these would be the foreign successors of copy arcs seconded by local successor$_I$s.

9 The systematicity of conversion for passive participles linked to 2 object passivization does have limits. For instance, this appears impossible for 2 objects resulting from raising, either from complements or from possessive structures:

(i)a. Helen proved the theorem.

b. the subsequently proved theorem

c. Helen proved the theorem to be incompatible with Gork's Lemma.

d. the subsequently proved (*to be incompatible.....) theorem (*to be incompatible....)

(ii)a. Helen wants such jewels.

b. the seemingly unwanted jewels

c. Helen wants such jewels destroyed.

d. the unwanted (*destroyed) jewels (*destroyed)

e. Helen slapped the guy (in the face).

f. *the unslapped (in the face) guy (in the face)

Such cases may well be barred by a condition requiring the arc having 2 quace needed by a P_A local successor$_I$ of a P_1 arc to be an indigenous arc, partially parallel to the condition on middles noted in Chapter 4, section 7.

The grammatical short version of (iid) might appear anomalous, since the associated verb takes what Chapter 2 claimed to be a 4 object, given that it permits no verbal passive, clausal object raising, etc.:

(iii)a. *The jewels were not wanted by Helen.

b. *Those jewels were impossible (for any gorilla) to want.

Perhaps the verb <u>want</u> takes an initial 2 object, which, however, must demote to 4 *unless* <u>want</u> heads a final P_A arc. That would mean that in the absence of demotion to 4, the 2 object must passivize in a clause which also manifests conversion.

Chapter 6 Passivization Targets: II

6.1 Periphrastic Passivization and Restricted Phenomena

Condition (5.39) of Chapter 5 determines the theoretical impossibility for an English *2 arc* cooccurring with a final 3 arc to be a prepassive arc of either type. The *theoretical* consequence that English ditransitive clauses thus cannot, under present assumptions, have periphrastic 2 object passive nor middle correspondents is highly desirable since, even for that subset of speakers, like the present writer, *who allow some periphrastic passives of second objects,* solid *factual* evidence indicate such are passives of 4 objects not of 2 objects.

To clarify, the grammaticality of examples like (6.1b) in dialects like mine does not in itself indicate that such sentences involve passivized 4 objects and not passivized 2 objects or some other kind.

(6.1)a. Melissa sold them that CD collection.

b. That CD collection was sold them by Melissa.

Once it is is concluded that there are distinct types of objects, specific arguments are needed for the status of the object type permitting passivization in such cases.

The overall evidence known to me for the claim that ditransitives do not permit direct periphrastic passives of 2 objects can then be summarized as follows:

(6.2)a. Given the freedom of *2 object* periphrastic passivization, if that were in general possible *in ditransitives*, it would be unexplained why the dialects of many speakers *entirely lack second object periphrastic passives*. This parallels and extends the argument that the impossibility of *middles* formed on second objects indicates they cannot be analyzed as constituents heading prepassive 2 arcs.

b. For the same reasons as in a., it would also be anomalous that even for speakers like the author who allow, as in (6.1b), *some* ditransitve second objects to passivize, for many other second objects this is impossible; see Chapter 7, section 7.

c. There are several passive subtypes which are relatively productive *variants* of standard 2 object passives but which are impossible for *either* object of a ditransitive, even for speakers whose grammars permit some second object passives.

Claims (6.2a, b) should be largely self-explanatory. Under present assumptions, the difference between dialects that bar *all* second object passives and those that do not, is simply the difference between

dialects barring *all* 4 object passives and those allowing some. The former dialect type is characterizable simply by suppressing reference to 4 arcs in (7.2) of Chapter 7.

The two most important phenomena relevant to (6.2c) are *expletive* *there* and *locative inversion passives*. Since expletive there is a complex, poorly understood phenomenon, some of this chapter needs to explicate its properties. These are seen to bear critically on the character of ditransitive objects and on the edge label of pseudopassive prepassive arcs.

6.2 Expletive there: Basics

Passivized expletive there is illustrated in (6.3):

(6.3)a. Chomsky (1999: 20)

(i) Several large packages were placed on the table.

(ii) There were placed on the table several large packages

b. On the table there were placed several large packages.

Hereafter I refer to (6.3aii, b) indifferently as *expletive passives*. [1] Other expletive examples with corresponding *locative inversion* passives and related standard 2 object passives are provided in (6.4) and (6.5): [2]

(6.4)a. Tons of rocks were moved by the workers.

b. Yesterday there were moved/said to have been moved by the workers tons of heavy rocks.

c. At that time were moved/said to have been moved by the workers tons of heavy rocks. [3]

(6.5)a. Few such messages were sent to the space aliens by the king.

b. Surprisingly there were/sent/said to have been sent to the space aliens by the king few such messages.

c. Under those conditions were sent/said to have been sent to the space aliens by the king few such messages.

But, as (6.7)-(6.10) illustrate, informal generalization (6.6) holds:

(6.6) Neither independently passivizable first or second objects of ditransitives permit either expletive or locative inversion passive subvarieties. [4]

(6.7)a. Few space aliens were sent messages by the king.

b. *Surprisingly there were sent/said to have been sent messages by the king few space aliens.

c. *At that time were sent/said to have been sent messages by the king few space aliens.

(6.8)a. Many such messages were sent them by the king.

b. *Surprisingly, there were sent/said to have been sent them by the king many such messages.

c. *At that time were sent/said to have been sent them by the king many such messages.

(6.9)a. Many young children were offered healthy refreshments at the school picnic.

b. *At the school picnic there were offered healthy refreshments many young children.

c. *At the school picnic were offered healthy refreshments many young children.

(6.10)a. Many types of refreshments were offered them at the school picnic.

b. *At the school picnic there were offered them many types of refreshments.

c. *At the school picnic were offered them many types of refreshments.

These data indicate that both expletive and locative inversion periphrastic passives manifest constraints more like those seen (in Chapter 4, section 7) to limit middle clauses than like those of simpler periphrastic passives. This division is a priori unexpected if English ditransitives are viewed in terms of the Dative Shift analysis; consider the relevance to the discussion of Farrell's (1994) assumptions at the end of Chapter 4. But in current terms, which recognize 3 and 4 objects in ditransitives, these two special passive types can, like middles, be taken to be restricted to 2 objects, in a sense elaborated below, without claiming that *all* periphrastic passives are so limited.

More precisely: [5]

(6.11) Prepassive arcs headed by <u>there</u> DPs in expletive or locative inversion passives are 2 arcs.

Evidently, deriving generalization (6.6) from constraint (6.11) depends fundamentally on the analysis of English ditransitives characteristic of this work, which takes them to lack any *output* (or *final*) 2 objects (they have final 3 objects and final 4 objects representing demoted 2 objects). However, the argument from expletive and locative inversion passives just given is relevant to the absence of expletive and locative inversion variants of passives of *second objects* only for that subset of speakers, like me, who allow at least some standard (nonexpletive) passives of second objects. For those who *don't* (see e.g. Ouhalla's (60a) in (3.3), Bach, 1980: 325 or Iwakura, 1987: 78), that fact *in itself* distinguishes second objects from single 2 objects, which systematically passivize for all speakers, as represented in (6.2a). This supports the 4 object status of ditransitive second objects in a different way. But the argument holds for all speakers for first objects.

Generalization (6.11) is not an ad hoc specification about English *participial passives*. That neither object of a ditransitive clause permits a corresponding expletive or locative inversion passive is itself arguably a special case of a broader generalization about expletive <u>there</u> covering *nonpassive* expletive

clauses as well. This depends on the linkage between expletive there and 2 objects and holds for the facts of ditransitives precisely because of the non-2 object character of ditransitive final objects. For outside the realm of periphrastic passives, the relevant expletives and their null locative inversion variants are found mostly with main verb be and a subset of intransitive single object verbs.

These are illustrated in (6.12)-(6.16):

(6.12)a. A new religion arose in that province.

b. There arose in that province a new religion.

c. In that province arose a new religion.

(6.13)a. A bunch of drunks arrived with Joan.

b. There arrived with Joan a bunch of drunks.

c. With Joan there arrived a bunch of drunks.

(6.14)a. A great deal of opposition to the reform candidate developed among the party's base.

b. There developed among the party's base a great deal of opposition to the reform candidate.

c. Among the party's base developed a great deal of opposition to the reform candidate.

(6.15)a. Such weapons no longer exist in space.

b. There no longer exist in space many such weapons.

c. In space no longer exist many such weapons.

(6.16)a. Very serious difficulties remain in his proposal.

b. There remain in his proposal many very serious difficulties.

c. In his proposal remain many very serious difficulties.

Significantly, the intransitives participating in the nonpassive expletive there construction are typically *unaccusatives*, [6] those taken in RG and current terms to have a single nuclear term argument which is an initial 2 object. These contrast with *unergatives*, which take their single initial nuclear term argument as a 1. This is not meant to suggest that expletive there is possible with all unaccusatives or even that it is systematically possible with such. There are many known restrictions, of an unclear character. The most substantive characterization of the intransitives compatible with expletive there known to me is that in Levin (1993, especially p. 89). As she noted, typical cases involve existence or appearance verbs.

I believe that if a verb permitting expletive there has a nominalization, this cannot take passive form, that is, does not permit a realization of the initial nuclear term in a by phrase. This accords with the standard clausal pattern in which unaccusative *clauses* preclude passives of any kind (see Perlmutter

and Postal, 1984a; Postal, 1986). In nominalizations of the relevant unacccusatives, the initial term appears in an of phrase, typical nominalization form for a verbal clause final 2 object:

(6.17)a. the arising of/*by a new religion

b. the arrival of/*by a bunch of drunks

c. the development of/*by a great deal of opposition

d. the existence of/*by such weapons

e. the materialization of/*by an extraterrestrial

f. the occurrence of/*by an earthquake

In this respect, compare expressions based on the unergative verb in (6.18a) with those based on the unaccusative in (6.18d):

(6.18)a. A group of drunks showed off at the party.

b. *There showed off at the party a group of drunks.

c. showing off of/by drunks

d. A group of drunks showed up at the party.

e. There showed up at the party a group of drunks.

f. showing up of/*by drunks

These nonpassive expletive there facts will allow taking the properties invoked in (6.11) as consequences of general features of expletive there constructions (and locative inversion cases, argued at length in Postal, 2004: Chapter 1 to be a subvariety of expletive there structure). So the interaction of expletive there with clauses based on intransitive verbs indicates a strong connection between there and 2 arcs, which is what (6.11) appeals to.

Such a connection offers a basis for the impossibility of expletive there in various DP positions having nothing to do with 2 objects:

(6.19)a. Vivian spoke about many such problems yesterday.

b. *Vivian spoke about there (yesterday) many such problems (yesterday).

c. Heinrich sent candy to several young ladies on that saturday.

d. *Heinrich sent candy to there (several young ladies) on that Saturday (several young ladies).

e. Heinrich sent several young ladies candy.

f. *Heinrich sent there candy several young ladies.

However, the link between there and 2 objects is anything but straightforward. For expletive there itself never appears as the final 2 object of a clause, unless it has raised into that clause:

(6.20)a. Stephen bought a lovely bracelet for Joan.

b. *Stephen bought there for Joan a lovely bracelet.

c. Stephen referred some of the students to the new gym teacher.

d. *Stephen referred there to the new gym teacher some of the students.

e. Stephen proved many of the younger professors to have arrived on time.

f. Stephen proved there to have arrived on time many of the younger professors.

This fact is as clear and sharp as the expected (given a connection to 2 objects) constraint barring expletive there as the final 1 of *most* instances of transitive clauses:

(6.21)a. Several demons hassled Miranda.

b. *There hassled Miranda several demons.

c. Several demons harmed Miranda's dog.

d. *There harmed Miranda's dog several demons.

The reason for the hedge 'most' appears shortly.

Summarizing:

(6.22) Expletive there:

a. appears as a final 1 of (some) unaccusative verbs;

b. appears as a passivized 2 object element in standard periphrastic passives;

c. does not *in general* appear as a final 1 of unergative verbs;

d. does not appear as a final 2 object (except where raised to that status) or 3/4/5/6 object, or 8 or oblique object or genitive;

e. does not *in general* appear as a final 1 of an active transitive or ditransitive clause;

f. does not appear as the final 1 of a middle clause.

Needed then is an account having at least these basic properties as consequences. Given the assumptions of Chapter 4, section 6, at stake first are the conditions on XPL arcs headed by expletive there, taking the latter to cover the null instance of that argued in Postal (2004) to be present in locative inversion forms.

One could initially take these conditions to include the following properties:

(6.23) Each such XPL arc

a. is sponsored by a Central arc colimb neighbor;

b. has an R-local successor$_1$ which is equivalent to, and erases, the XPL arc's sponsor; [7]

c. has a local successor$_1$ which is a 2 arc; this will arguably have to be generalized;

d. is an R-predecessor$_1$ of a final 1 arc neighbor of an unerased P arc.

The need for reference in d. to *unerased P arc* is illustrated by:

(6.24)a. Arthur had/wanted several students invited.

b. *Arthur had/wanted there invited several students.

c. With several non-English speaking students invited, ...

d. *With there invited several non-English speaking students, ...

In context, (6.24b), there occurs with a passive participle and arguably a prepassive 2 arc. But the latter would fail to have a 1 arc R-successor$_1$ which is a neighbor of a *surface* P arc. It might lack any 1 arc R-sucessor$_1$ at all. But the possibility that *all* periphrastic passives involve a passive auxiliary means that there could be such. The final P arc of the auxiliary would then have been erased, and condition (6.23d) would be violated. In context (6.24d), there again is associated with a participle linked to a prepassive 2 arc. But even if there is a deleted auxiliary, condition (6.23d) cannot be satisfied, since there cannot head a 1 arc neighbor of a surface P arc.

Conditions (6.23a, b) largely repeat the earlier assumed theoretical characteristics of the 'first' arcs headed by expletives under the posit of XPL arcs in Chapter 3. They are thus not parochial English statements about expletive there and I assume can be generally imposed:

(6.25) **The XPL Arc Condition**

If B is an XPL arc, then there is a Central arc colimb sponsor of B, A, and B has an R-local successor W-equivalent to A which erases A.

Possibly, invocation of Central arc sponsors is insufficiently restrictive; the right condition might even limit such to Core arcs in the sense of (2.117).

The character of (6.23c, d) on the dimension parochial/universal is less clear. The reason is that other NLs, e.g. French, have expletives which appear to share properties (6.23c, d), specifically, the *extraposition of indefinite expletive* il, as seen in (6.26):

(6.26)a. There finally arrived several students.

b. Il est enfin arrivé plusieurs étudiants.

c. There were finally arrested several students.

d. Il a été enfin arrêté plusieurs étudiants.

e. *They arrested there several students. (ignore locative reading of there)

f. *Ils ont arrêté il plusieurs étudiants. [8]

g. With several students arrested, we can't take it easy.

h. *With there arrested several students, we can't take it easy.

i. Avec plusieurs étudiants arrêtés, on (ne) peut pas se la couler douce.

j. *Avec il arrêté plusieurs étudiants, on (ne) peut pas se la couler douce.

French extraposition of indefinite il shares English expletive there properties: (i) occurs as the final 1 of some unaccusative clauses; (ii) heads the prepassive arc in some periphrastic passives and (iii) cannot occur as a final 2 object or in an absolute construction without a surface P arc.

This parallelism might indicate a universally specifiable NL expletive type which there instantiates, requiring a characterization independent of (6.23a-d) to capture the nonparochial features of the entity in question. To pursue that path, given that stereotypical instances of the displaced DPs of both the English there construction and the French construction in (6.26b, d) are indefinites, arguably needed is reference to the *semantic* properties of the DP displaced by the expletive. While that observation is far from a precise semantic condition, I can say nothing more substantive.

A further key issue involving expletive there is the identity of the intial edge label of the local successor_{III} of any arc instantiating variable A in (6.25), that is, of a local successor_{III} required by the erasure determined by the Forced Erasure Condition. As Chapter 4, section 9 noted, the incompatibility of expletive there with adjectival clauses supports taking that label to be 4, consistent with the fact that such DPs are unflagged. But not all XPL arc sponsors have 4 arc local successor_{III} arcs. [9] Assuming the existence of an *unanalyzed* semantic property SEM_x claimed to characterize the DP displaced by expletive there, one can initially propose:

(6.27) **The Expletive there Condition (Version 1)**

If A is an XPL arc sponsored by an arc B which has SEM_x, then B is a 2 arc with a 4 arc local successor_{III} and A is an R-predecessor_I of a final 1 arc neighbor of an unerased P arc.

Although, (6.27) does not mention the shape there, I assume that the English expletive type it characterizes, specifically via appeal to SEM_x, uniquely determines the shape there (modulo, the argument of Postal, 2004: Chapter 1 that locative inversion involves an invisible instance of that). This can be stated only partially formally as follows:

(6.28) **The Expletive [there] Shape Condition$_x$**

If *h* is the phonological form of the head of an XPL arc sponsored by an arc A, then A's head has SEM_x, if and only if *h* is [there].

Condition (6.27) combines with (4.62) to predict the fact noted in Chapter 4 and represented in (6.22f) that middle clauses lack expletive there variants. For the latter condition requires the final 1 arc of a middle clause to be the R-local successor$_{I}$ of an indigenous arc. But under the XPL arc view of expletives, and expletive there in particular, which (6.25)/(6.27) embody, no expletive can head an indigenous arc, so (4.62) is unsatisfiable in a middle clause with an expletive there final 1.

Turn to how condition (6.27) addresses the other elements of (6.22). The core of (6.22a) is unproblematic; if the viable 2 arc of an unaccusative clause sponsors an XPL arc, the latter can have its required 2 arc local successor$_{I}$, which in turn can have a 1 arc local successor$_{I}$. Unexplained though is why some unaccusatives *bar* there (*There just collapsed an old bridge). One possible descriptive account is that such unaccusatives require their associated final 1 arc to be indigenous.

Pattern (6.22b) is evidently sanctioned by condition (6.27). Consistent with its requirements, there can head an XPL arc and a prepassive$_{II}$ 2 arc local successor$_{I}$ of that. The requirement about heading a final 1 arc can be met in a higher (auxiliary) clause, given the raising of the passivized phrase taken to be an invariant feature of periphrastic passives. [10]

Generalization (6.22c) is more problematic. Despite appearances, (6.27) does *not* absolutely ban there from unergative clauses. For the viable 1 arc of such a clause might have a 2 arc local successor$_{I}$, which could, like an unaccusative clause viable 2 arc, sponsor the required XPL arc. I already posited 1 demotion to 2 for adjectival clauses in section 9 of Chapter 4; recall (4.93), the English Pure Adjectival Clause Condition. Logically, such *could* then also be present in verbal there clauses like (6.29c).

(6.29)a. Superman charged/dashed/flew/rushed into the burning room.

b. The burning room was charged/dashed/flown/rushed into by Superman.

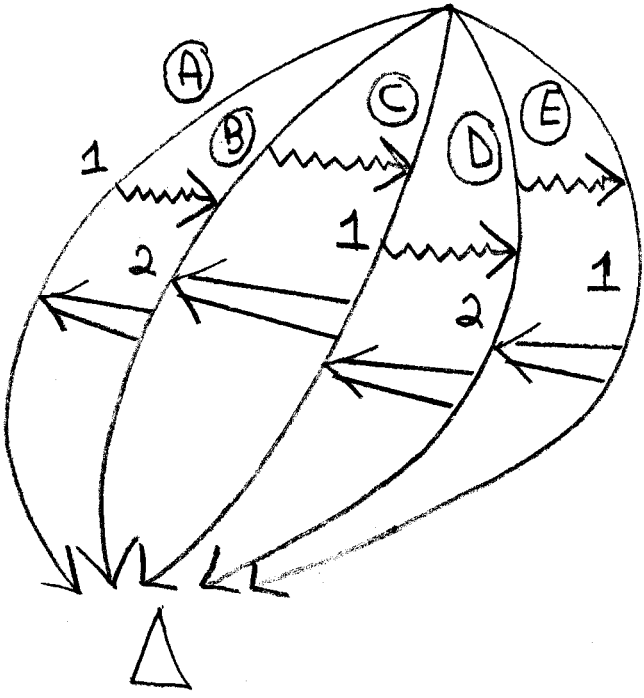
c. Suddenly there charged/dashed/flew/rushed into the room a kid in a Superman costume.

Pseudopassives like (6.29b) prevent taking (6.29a, c) as unaccusative structures. For that would characterize the passive victim 1 arcs in (6.29b) as nonviable arcs, contrary to condition (4.41) of Chapter 4. [11] However, if a structure *optionally* including a 2 arc local successor$_{I}$ of a 1 arc is a possible analysis for (6.29c), one *could* take (6.29b), in which no such 2 arc local successor would exist, to

include a viable passive victim 1 arc, while still recognizing the need for a kid in a Superman costume to head a 2 arc in (6.29c).

A general theoretical issue raised by such a posit should be mentioned. Given that the basic unaccusative analysis recognizes 1 arc local successor$_l$s of 2 arcs, posit of 2 arc local successor$_l$s of 1 arcs, already determined for adjectival clauses in Chapter 4 by (4.93), raises the issue of what, if anything, precludes situations like (6.30):

(6.30)


A
B
C
D
E
1
1
2
1
2
Δ

Here, previous assumptions render an *isolated* pairs like A/B and B/C licit. This already yields an arguably unmotivated situation in that C contributes nothing to the description of known facts. [12] The C/D pair is evidently also licit in isolation and arc E shows that so far nothing precludes further repetitions of equivalent pairings. Inter alia, this would permit *unbounded* sequences of local successor$_1$ arcs, since even with a finite set of edge labels, repetitions of the sort in (6.30) remain as yet unblocked. Specifically, this situation is allowed by (3.40), the Local Successor Non-Equivalence Condition, which only blocks local successor/predecessor pairs which are W-equivalent.

Assuming structures represented by (6.30) do not exist, one could generalize (3.40) to also block them. by incorporating an ancestral:

(6.31) **The R-Local Successor Nonequivalence Condition**

If A is a distinct R-local successor of B, then A is not W-equivalent to B.

While differing syntactically from (3.40) only in the substitution of the inscription *distinct R-local successor* for *local successor*, the semantics of condition (6.31) determine broader claims. For instance, the new formulation bars as well structures in which the analog of C in (6.30) would not be a 1 arc but the analog of D would be. I suspect, there is as much reason to doubt the existence of that structure as of (6.30).

I note though one possibly unhappy consequence of (6.31) for the description of English pseudopassives. This condition is not compatible with an analysis of pseudopassives like (6.32c) under attractive and reasonable (if hardly overwhelmingly supported) assumptions about them:

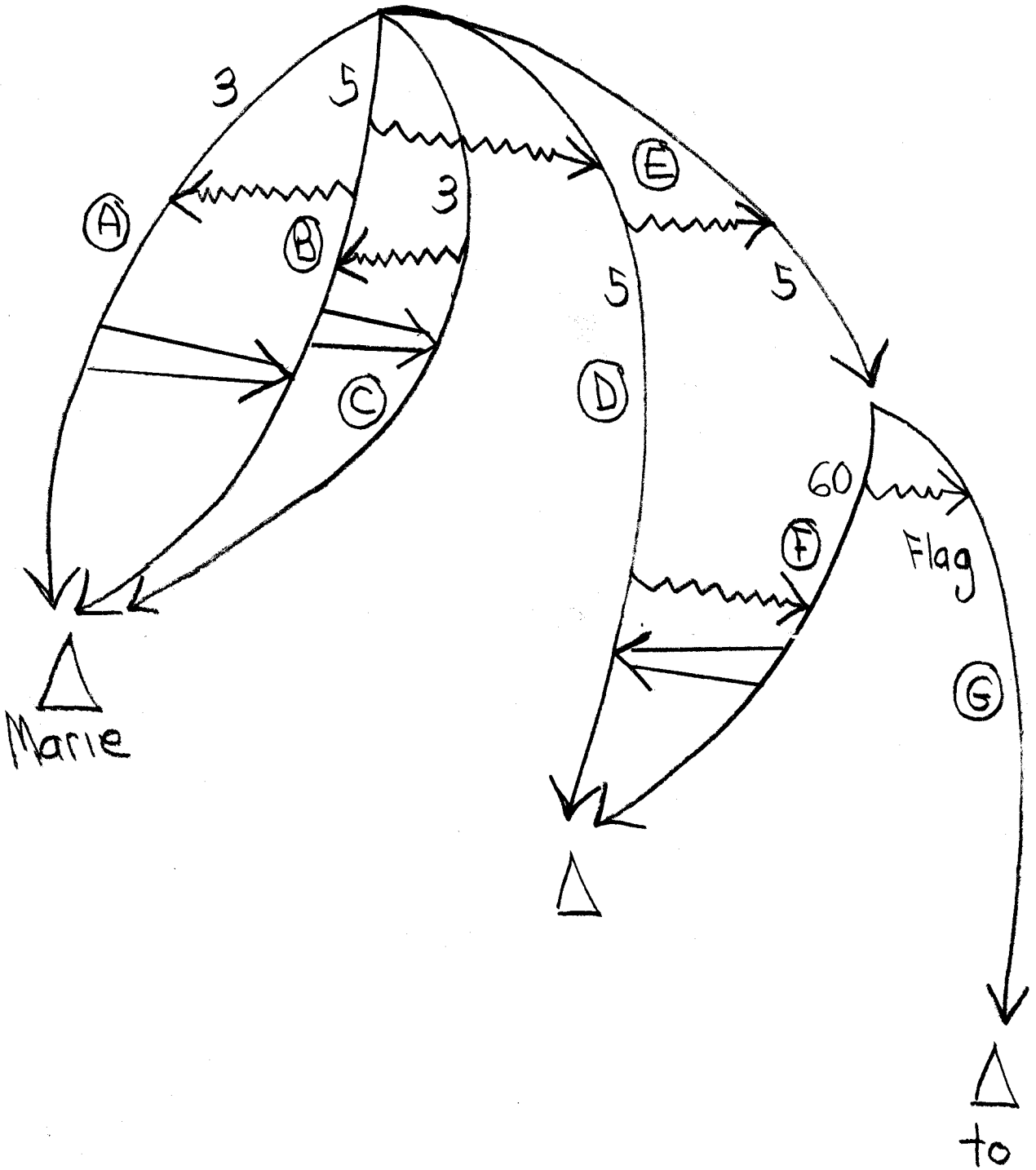
(6.32)a. Loretta lied to Mary.

b. Mary was lied to by Loretta.

c. Loretta lui a menti, à Marie.

Under earlier conclusions, the pseudopassive (6.32b) involves a copy advancement to 3 or 4 object. For reasons stated earlier, the *ideal* would be to limit the prepassive arc class here to 3 arcs. But arguably, the PP in (6.32a) represents a 5 object. Since one can possibly absolutely exclude *initial* 5 objects, crosslinguistic similarities then suggest that the post-<u>to</u> DP in (6.32a) is an initial 3 object; compare French (6.32c), where the 3 object status of <u>Marie</u> is uncontroversial. Example (6.32b) would then include the substructure:

(6.33)


3
5
3
5
5
60
A
B
C
D
E
F
G
Flag
Marie
to

This instance of distinct W-equivalent R-local successors is though evidently not consistent with (6.31).

For the present then, one has a choice. Accept the attactiveness of a structure like (6.33) and reject (6.31), or accept the attractiveness of (6.31) and modify (6.33) so that the prepassive arc is a 4 arc. Recognizing the arbitrariness of either choice at this point, I choose to maintain (6.31). There is one other possible alternative. One could weaken (6.31) by appealing to my hypothesis that a pseudopassive prepassive arc, regardless of its edge label, links to a copy arc. One could maintain (6.33) as is and keep *most* implications of (6.31) by weakening the latter to exclude cases where the 'offending' R-local successor links to a copy arc. Only much further relevant data could determine the viability of such a step.

Returning to expletive there distributional properties, (6.22d) can be taken to follow from the requirement in (6.27) that the local successor$_1$ of the XPL arc have a final 1 arc R-successor$_1$. The only way this condition could be met with there the head of a *final* 2 arc is if that 2 arc either is, or has, a *foreign* successor$_1$. And, as (6.20f) shows, under one relatively clear instance of such, there heading a final 2 arc is fine. In this case, the final 1 arc requirement is met in the complement. The final 1 arc condition could also be met by a there heading a final 2 arc in a complement if the expletive could raise and head a main clause final 1 arc, e.g., as in object raising. But no English expletive, there or other, can object raise, so this possibility allowed by (6.27) cannot be realized; see Postal and Pullum (1988: 637):

(6.34)a. It was difficult for Zeus to make it snow.

b. *It was difficult for Zeus to make snow. (Ignore reading where this has a non-object raising complement like: Zeus made snow.)

c. It was easy for Zeus to allow there to be riots.

d. *There was/were easy for Zeus to allow to be riots.

These remarks about there as a final 2 object carry over to there as a final 3 object, 4 object, etc.

Property (6.22e) raises the same issues as the grammaticality of expletive there 1s with some unergatives. Expletive there would be expected to be impossible as the final 1 of an active clause with an object for the same reasons that is unexpected with unergatives, a negative expectation broadly valid for diverse object types:

(6.35)a. At that point an elderly gorilla ate a huge banana. (2 object)

b. *At that point there ate a huge banana an elderly gorilla.

c. Some people lack good judgment. (4 object)

d. *There lack good judgment some people.

e. Lots of people write their senators. (3 object)

f. *There write their senators lots of people.

However, as with unergatives, 2 arc local successor$_1$s of 1 arcs would in principle permit some *grammatical* cases to exist, even while satisfying (6.27).

Such examples exist with all three object types:

(6.36) Kayne (1979: 715)

a. There reached his ear the sound of voices and laughter.

b. At this point, there hit the embankment a shell from our own lines.

c. There entered the room an indescribably malodorous gust of air.

(6.37)a. At that point a cloud of white dust entered the chamber. (4 object)

b. At that point there entered the chamber a cloud of white dust.

c. Just before noon a strange translucent submarine neared the harbor. (4 object)

d. Just before noon there neared the harbor a strange translucent submarine.

e. A wave of muddy water filled the basement. (3 object)

f. There suddenly filled the basement a wave of muddy water.

g. A truly great revelation suddenly hit him. (3 object)

h. There suddenly hit him a truly great revelation.

(6.38)a. At that point, a powerful shell hit/struck the embankment. (2 object)

b. At that point, the embankment was hit/struck by a powerful shell.

c. At that point, there hit/struck the embankment a powerful shell.

The grammatical passive in (6.38b) argues that these are Array 0 structures. That means that if (6.38c) involves 1 to 2 demotion, the occurring 2 arc local successor would, via the Forced Erasure Condition, erase the type of 2 arc permitting passivization with such verbs. This would determine that while e.g. (6.38a) has a final 2 object, the same DP in (6.38c) is not a final 2 object but rather a final 3 or 4 object.

Initially, this seems like a good consequence because the object in the latter definitely behaves in ways which contrast with the corresponding DP in the former. Specifically, in there clauses except those with main verb be, the postverbal DP linked to there cannot, for speakers like me, left extract. [13] Nor can its subconstituents. But these properties hold as well for (6.36) and (6.37), which involve 4 objects or 3 objects in corresponding non-there cases. So these restrictions appear to have nothing to do with the 2 arc erasure requirement.

If the possibility of there as a 1 in certain unergative and object clauses is due to 1 to 2 demotion, the occurrence of the defining 2 arc local successor$_l$s must be controlled to account for contrasts like those between e.g. (6.35) and (6.36)/(6.37). This likely requires a lexical statement invoking specific verbs (e.g. a zoning condition), although there might be semantic generalizations as well. I cannot say anything about such matters here.

In current terms, while a treatment of e.g. (6.35), (6.36) and (6.37) via 2 arc local successor$_l$s is possible, a modestly *different* analysis from that involving 1 to 2 object demotion also exists. This would

appeal to 2 arc local successor$_{II}$s of 1 arcs. Given principle (4.35) of Chapter 4, limiting local predeccessor$_{II}$s to output arcs, the relevant 1 arcs would all be output arcs. And given (4.75), the 2 Quace Marking of 1 Arcs Condition, these would be required to have 2 quace. One would claim that the (above documented) division of unergative and object taking verbs into those which permit there 1s and those which do not devolves on presumably lexical zoning distinctions. The 1s of verbs permitting there would have 2 arc local successor$_{II}$s, which the Forced Erasure Condition would, as in the 1 to 2 object demotion analysis, require to erase any locally erasable 2 arcs. This alternative amounts to positing what is in one sense a variety of invisible antipassivization.

This alternative would need the following minimally different alternative to (6.27):

(6.39) **The Expletive there Condition (Version 2)**

If A is an XPL arc sponsored by an arc B which has SEM$_x$, then B is a Nuclear Term arc with a 4 arc local successor$_{III}$ and there are R-successors of A, C, D, such that (i) C is a 1 arc R-local successor of A with 2 quace and (ii) D is a neighbor of an unerased P-arc.

This statement generalizes earlier views to allow the sponsor of the XPL arc yielding there (represented by variable B) to be either a 1 arc or a 2 arc, and requires either to have a 4 arc local successor$_{III}$ and an R-local successor with 2 quace. In unaccusative and periphrastic passive cases, the XPL arc sponsor will be a 2 arc, an output 2 arc in the latter case, hence one obligatorily having 2 quace, barring some kind of quirky non-2 quace marking of 2 arcs unknown in English. In the unaccusative case, the 2 arc XPL sponsor will have a 1 arc local successor$_{I}$, required to have 2 quace by (4.75)

I can provide no *direct* evidence choosing the 2 arc local successor$_{II}$ analysis over the earlier one involving 2 arc local successor$_{I}$s of 1s. Formally, they differ not only in the distinction between local successor$_{I}$ and local successor$_{II}$. A distinction more directly related to grammatical fact is that the former analysis treats the 'earlier' 1 DP linked to *there* as originally a 2 object which is never a 1, while the latter treats it as a 1 which is never a 2 object. English data of a little known type link in a possibly relevant way to certain French facts. These permit factual differentiation of DPs linked to an expletive depending on whether they are former 1s or former 2 objects.

The English data consists of clauses containing a reflexive or reciprocal object. Postal (2004: 346-347, note 26) already observed the locative inversion case:

(6.40)a. A trio of vacationing bankers were amusing themselves at that nightclub.

b. At that nightclub (there) were amusing themselves a trio of vacationing bankers.

(6.41)a. Two apprentice comedians were needling each other on stage.

b. On stage (there) were needling each other two apprentice comedians.

While some speakers may reject the b. examples, I find them acceptable and clearly distinct from examples in which the postverbal DPs are replaced by lexical DPs:

(6.42)a. *At that time (there) were hassling Marie several drunk teen agers.

b. At that time (there) were hassling each other several drunk teen agers.

Notable about these cases beyond their grammaticality is that they do *not*, as shown by the ungrammaticality of (6.42a), fall under the patterns of grammatical examples like (6.36), (6.37) and (6.38c, f). These data seem to indicate the existence of a pattern of there clauses which is dependent on an anaphoric connection between the DP displaced by there and some locally anteceded reflexive or reciprocal. Whatever is involved in such cases cannot be unrestricted for anaphoric structures, as bad cases like (6.43) indicate:

(6.43)a. *At that time (there) praised herself a foolish politician.

b. *At the police station (there) denounced himself a notorious pedophile.

While I cannot characterize the difference between e.g. (6.43) and (6.42a), perhaps number is relevant as the following seem to me much improved:

(6.44)a. ?At that time (there) praised themselves several foolish politicians.

b. ?At the police station (there) denounced themselves several notorious pedophiles.

While this has no implications for the choice between e.g. (6.27) and (6.39), it does suggest the existence of more than one (so far unformulated) constraint on either or both 2 arc local successor$_{I}$s of 1 arcs or 2 arc local successor$_{II}$s of 1 arcs. It is even possible, of course, that some structures in which there seems to displace a 1 involve 1 to 2 demotion and others do not (but instead invisible antipassivization).

Turn to the French facts alluded to above. I noted earlier that the French extraposition of indefinite construction manifests certain similarities to the English expletive there construction. Particularly, as is well-known and discussed in Postal (1982), the DPs displaced by the French expletive cannot in general be the 1s of clauses with objects. However, Postal (1982) noted that some speakers allow extraposition of indefinite sentences in which a 1 is displaced; these involve a logical object that yields a reflexive 2 clitic, e.g.:

(6.45) Fauconnier (1974: 213)

Il s'est offert une femme (pour mener le combat).

"A woman offered herself (to lead the battle)"

These are paralles to English cases like (6.40b) in that an anaphoric connection is required and in that only some speakers permit such structures.

The currently relevant fact, missed in Postal (1982), is cited in Reinhart and Siloni (2005: 395-396). The 1 DP displaced by extraposition of indefinite in the presence of a reflexive clitic cannot be the partitive source of the clitic en:

(6.46)a. Il s'est lavé beaucoup de touristes dans ces douches publiques.

"Lots of tourists have washed themselves in those public showers"

b. *Il s'en est lavé beaucoup dans ces douches publiques.

"Lots of them have washed themselves in those public showers"

They cite Guglielmo Cinque's statement that the parallel pattern holds for the Italian analogs. And, intriguingly, like the English and French anaphoric cases, the Italian ones are also apparently not accepted by all speakers.

But as far as I know, every *other* instance of French extraposition of indefinite permits the displaced DP to be an en source. In general, these instances can, like the DPs displaced by there, be taken to head 2 arcs; see Postal (1982) for extensive discussion of this point. Arguably then, a necessary condition on such en is informally:

(6.47) If a DP D is a source of partitive en, D must head an R-local successor$_1$ of a 2 arc.

If this is correct, the impossibility of en sourcing in (6.46b) noted by Reinhart and Siloni would follow from taking the reflexive clitic cases of extraposition of indefinite to involve displaced 1s, not displaced 2 objects. And the possibility of such an analysis would, at the least, render an analysis of English cases like (6.40b) via a parallel treatment, as embodied in a system based on (6.39), quite plausible. Since, however, I lack any evidence parallel to that provided by Reinhart and Siloni for French, I will have to leave the analysis of 1s displaced by expletive there in the present unsettled state.

Consider next the interaction between expletive there and raisings. There is reason to think that cases like (6.48b, d) would represent XPL sponsoring by main clause 2 arcs; yet the examples are ungrammatical:

(6.48)a. Henry proved several politicians to have lied.

b. *In that way (there) were proved by Henry (several politicians) to have lied (several politicians).

c. Henry tapped several colleagues on the arm.

d. *At that time (there) were tapped (several colleagues) on the arm (several colleagues).

What I suspect transpires here is that while expletive there in such cases is sponsored by a 2 arc and has the requisite 1 arc R-successor$_{I}$ neighbor of a surface P arc, the 2 arc sponsor is not indigenous. In (6.48a, b) the relevant 2 object achieves that status via raising from the complement, while in (6.48c, d), it achieves 2 object status via possessor raising and advancement of the resulting 3 object to 2. Under these assumptions, the XPL sponsors in these cases are not indigenous arcs. Apparently then, such a specification must be added to conditions like (6.27) and (6.39). [14]

6.3 Expletive there: Further Implications

Chapters 4 and 5 discussed the verb born, whose clauses morphologically resemble those of periphrastic passives. The fact that they never permit a passive by phrase was taken to indicate though that these are *non*passives with an unaccusative verb taking passive morphology, as spelled out there. The unaccusative 2 object was taken to have a 1 arc R-local successor$_{II}$ and usually a final 1 arc R-successor in a higher clause.

Those assumptions combine with condition (6.44) to permit born to occur with expletive there just as a regular unaccusative verb can, which is the case:

(6.49)a. At that time, there was born in Egypt a future pharoh.

b. Never had there been born so many children with that characteristic.

But cooccurrence with there would be barred by (6.39) in contexts like (6.50a, b, c, d):

(6.50)a. They wanted several healthy children born on the ranch.

b. *They wanted there born several healthy children on the ranch.

c. With several healthy children finally born, ...

d. *With there finally born several healthy children, ...

e. There were believed to have been born several premature babies.

For in these, the final 1 arc requirement of (6.39) cannot be met. But in (6.50e) it can be in the complement clause, which has an unerased P arc.

Second, consider cases like the following, touched on in Postal (1986: 244, note 20):

(6.51)a. Jerome was/got hailed/rained/sleeted/snowed on.

b. It/*X ≠ It rained on Jerome.

c. *Jerome got rained on by it.

While as with born, the forms hailed, rained, etc., could, on morphological grounds, be taken to be passive verbs, the earlier discussion of born shows they might also be nonpassive forms sharing the morphological structure of periphrastic passives, the structure linked to P_1 arcs. This conclusion is though partly countered, as with the parallel inference with born, by the fact (6.51c) illustrates that a passive by phrase is illicit. Further, in active clauses, the weather verbs in (6.51a) permit only a single 1, the weather expletive it. If (6.51a) were passives, they might seemingly have to involve passive victim arcs headed by expletives, specified as impossible by (4.41), the Passive Victim Arc Condition. Lastly, (6.51a) not only *looks like* a passive because of its main verb and verbal inflection; it also shows the stranded preposition characteristic of *pseudopassives*. An analysis parallel to that proposed for born cannot capture that property.

These facts leave the analysis of the weather cases like (6.51b) rather obscure. The best proposal I see is that unlike born clauses, weather clauses like (6.51b) actually are passives. While the possibility of a by phrase is standard for uncontroversial cases of periphrastic passives, in a few known instances this is not possible, e.g.:

(6.52) Chang was rumored (*by the press/*Joan/*everyone/*some analysts) to be a Chinese agent.

The objection that a passive analysis would require recognizing passive victim arcs which are expletives, hence not, as required by (4.41), viable arcs, is avoidable. While true that active sentences like (6.51a) only permit weather it as final 1, this nonetheless does not force an analysis in which such expletive 1 arcs are the passive victim arcs.

An alternative would recognize some kind of unspecified DP as the argument of weather verbs. Call this ∇. The idea is that the 1 arc headed by ∇ must sponsor an XPL arc local $\text{successor}_{\text{I}}$ if and only if it is erasable by an XPL arc. If cases like (6.51b) are passives though, one can hypothesize that the 1 arc headed by ∇ is the passive victim arc, hence is erased by a 1 arc local $\text{successor}_{\text{II}}$, hence is not erasable by an XPL arc. A peculiarity of ∇ would be that any 1 arc it heads must be erased. Of course, it would remain to give an account of the semantics of ∇, but that task is more or less inherent in any treatment of the semantics of weather structures like (6.51). After all, these need some predicate/argument structure in which whatever the weather predicate(s) denote is applied to *some* argument. While one might claim the argument semantics is associated with weather it, positing that it is linked to ∇ raises no problems.

There are two reasons as yet untouched on to prefer a passive analysis of weather cases like (6.51b) to one parallel to that suggested for the born cases. [15] First, the passive hypothesis permits treating a sentence like (6.51b) as a copy leaving advancement as suggested in Chapter 5, section 2 for transparent pseudopassives. Put simply, they can be covered by condition (5.28). Taking that idea seriously, requires assuming that the prepassive arc in (6.51a) is a 3 or 4 arc. [16]

The second reason relates to a more general point about the nature of pseudopassives. Section 2 of Chapter 5 argued that the prepassive arcs in English pseudopassives were not 2 arcs. That claim grounded an account of why there are no pseudomiddles, one linked to the independently supportable claim that middle prepassive arcs have to be 2 arcs.

A largely parallel argument is now available from periphrastic passives, specifically from their intersection with expletive there (and locative inversion) constructions. For while the idea that periphrastic passives in general are restricted to prepassive 2 arcs has been rejected, it has been argued that the prepassive arcs in expletive there and locative inversion periphrastic passives must be 2 arcs. That conclusion combines with the specification in condition (5.28) that pseudopassive prepassive arcs not only need not be, but cannot be, 2 arcs to predict the nonexistence of expletive there or locative inversion variants of pseudopassives.

This claim is quite correct. I illustrate first for expletive there cases:

(6.53)a. At that time, the FBI investigated/looked into such events.

b. At that time, such events were being investigated/looked into by the FBI.

c. At that time, there were being investigated/*looked into by the FBI many such events.

(6.54)a. The planetary defense force fired at several alien space ships on Thursday.

b. Several alien space ships were fired at on Thursday (by the planetary defense force).

c. *On Thursday there were fired at (by the planetary defense force) several alien space ships.

(6.55)a. Those startup companies fought over many outstanding scientists during the war period.

b. Many outstanding scientists were fought over during the war by those companies.

c. *During the war, there were fought over by those companies many outstanding scientists.

Second, it is true of locative inversion passives (as noted in Bresnan, 1994: 79-80; see Postal, 2004: Chapter 1, 46-47):

(6.56)a. At the beginning of the conflict poorly armed guerrillas had to be accepted as officers/counted on as officers.

b. At the beginning of the conflict were accepted as officers/*counted on as officers only poorly armed guerrillas.

The interaction between expletive there/locative inversion constructions and pseudopassives is a strong argument against taking pseudopassives to manifest prepassive 2 arcs. This is consistent with the claim in condition (5.28) that they are, rather, 3 or 4 arcs.

As Chapter 5 indicated, the argument from the failure of pseudopassives to have expletive (and locative inversion) passive variants needs to be buttressed, and it can be. My claim that the failure depends on the fact that pseudopassives are not passives of 2 objects might be undermined if it could be argued that the expletive there condition requires not only the presence of an XPL arc sponsor which R-locally antecedes a 2 arc but, say, a viable one. For on that assumption, pseudopassives would involve non-viable prepassive 2 arcs and yet still determine disjointness from expletive there structures. However, it is not tenable to take the sponsors of XPL arcs underlying there structures in the present treatment to be viable arcs.

First, this is already argued by cases cited earlier in which there displaces the 1 of either an unergative clause or one with certain kinds of anaphoric objects. Under the demotion of 1 to 2 object analysis of such cases, the 2 arc local successor$_1$s of 1 arcs posited are not viable 2 arcs (although they are indigenous).

Second, the point is supported by the fact that there can displace either the initial 2 object or that based on 3 object to 2 advancement in my analysis of paradigms involving verbs such as supply:

(6.57)a. During that month (there) were supplied to the troops more than seven tons of munitions.

b. During that month (there) were supplied with munitions more than seven hundred rebels.

The same sort of possibility is seen in locative alternations:

(6.58)a. Herman cleared tons of snow off of the bridge.

b. At that time (there) were cleared off the bridge more than two tons of snow.

c. Herman cleared several bridges of snow.

d. At that time (there) were cleared of snow more than seventeen bridges.

Given the defense, e. g. in Chapter 5, section 4, of the idea that the relevant pairs with these verbs share initial arc structures, the displaced elements in (6.57a, b) and (6.58b, d) could not all head *viable* 2 arcs.

Arguably then, a condition limiting the 2 arc sponsors of relevant XPL arcs to 2 arcs does not hold for expletive there cases and hence cannot be the basis for the incompatibility of pseudopassivized expletive there under a hypothetical view that the prepassive arc in a pseudopassive can be a 2 arc.

Returning to reasons for preferring a passive analysis of participial weather clauses with stranded Ps, this predicts, via condition (6.39), that weather *clauses are incompatible with expletive there*, contrasting in this respect with born clauses. This is a positive result since the predicted contrast is robust:

(6.59)a. *During the picnic there got/were drizzled/hailed/rained/sleeted/snowed on many of the younger students.

b. During the picnic there were born several anxiously awaited children.

A similar contrast is found in locative inversion cases, for the same reasons (given the analysis of the latter in Postal, 2004: Chapter 1).

(6.60)a. *During the picnic got/were drizzled/hailed/rained/snowed on many of the younger students.

b. During the picnic were born several anxiously awaited children.

The difference between the weather verbs and born with respect to expletive there devolves on the fact that this verb occurs with an initial 2 arc which can lead to satisfaction of condition (6.27) or (6.39). But the advanced DP in the former heads an initial oblique arc, with a 3 or 4 arc local successor$_{I}$, which cannot. This follows since the 3 arc or 4 arc local successor$_{I}$, having a (1 arc) local successor$_{II}$, has to be an output arc. That precludes it having the 2 arc local successor$_{I}$ there would, given either principle (6.27) or (6.39), require.

6.4 Implications: Pseudopassive/Ditransitive Passive Parallels

Chapter 5, section 2 argued that the nonexistence of pseudomiddles supported the claim that pseudopassive prepassive arcs are not 2 arcs. The discussion of the interaction of pseudopassives and expletive there has further strengthened that conclusion. It was also seen earlier that neither object in a ditransitive can head the prepassive arc in a middle clause. This supports the idea that such objects cannot head 2 arcs capable of having 1 arc local successor$_{I}$s. Expectably then at this point, just as expletive there and locative version fail to intersect pseudopassives, neither object in a ditransitive can feed an expletive there or locative inversion passive, even for speakers like me who accept some second

object passives. This was already expressed in (6.6) and previously partially illustrated in (2.17)-(2.19) and (6.7)-(6.10). But as this is one of the key results of the present work, it is worth further documentation:

(6.61)a. Francine offered some children such expensive gifts.

b. Some children were offered such expensive gifts by Francine.

c. *There were offered such expensive gifts some needy children.

d. *There were offered them some very nice gifts.

e. *At that party were offered such expensive gifts some needy children.

f. *At that party were offered them some very expensive gifts.

The parallelism between ditransitive object passivization and pseudopassivization then is that neither is reducible to 2 object passivization. More technically and precisely, neither can tenably be taken to be based on prepassive 2 arcs.

Besides their similar interaction with expletive there/locative inversion structures, ditransitive passives and pseudopassive structures manifest other parallels which strengthen the conclusion that neither structural type involves prepassive 2 arcs. The first involves the *participial absolute* construction, illustrated in (6.62):

(6.62)a. With Frank arrested (by the FBI), Linda will soon be lonely.

b. With all of the boxes sealed by the authorities, we cannot now find our stuff.

c. With Sally accused by Greta of being a werewolf, things are a bit tense in the family.

Such structures seem to involve a passive participle preceded by a DP corresponding to the passivized phrase of a standard passive, without any overt passive auxiliary. I would assume that the P arc of a participial absolute has a P_1 arc local successor, barring any neighboring final 1 arc, and probably that has a P_A local successor defining conversion.

The connection between participial absolutes and standard passives is shown by the presence of the passive participle, the possibility of a by phrase and the fact that only verbs capable of appearance in standard passives appear in the participial absolute:

(6.63)a. They allowed/forced/had/let Barbara (to) call the doctor

b. Barbara was allowed to/forced to/*had/*let call the doctor.

c. With Barbara allowed to/forced to/*had/*let call the doctor, people relaxed a bit.

(6.64)a. Frank meant/needed/wanted other things.

b. Other things were *meant/?needed/*wanted by Frank.

c. With other things *meant/?needed/*wanted by Frank, the meeting was not pleasant.

The key generalization is that only 2 object passives permit a corresponding participial absolute. This would, under current assumptions, properly entail the lack of participial absolute cases corresponding to pseudopassives and passives of either object of a ditransitive. The following data support the correctness of these consequences:

(6.65)a. With that decision reconsidered/*looked into (by higher courts), we facists can relax.

b. With his wife criticized/*sneered at by the gliteratti, Herman is rather unhappy.

c. With the details finally told to the director, ...

d. *With the director finally told the details, ...

e. *With the details finally told them, ...

(6.66)a. With that baby sitter recommended/*depended on by the neighbors, ...

b. With the proposal accepted/*fought against,...

(6.67)a. With the forms finally sent to Jerome, ... (The forms were finally sent to Jerome)

b. *With Jerome finally sent the forms, ... (Jerome was finally sent the forms)

c. *With the forms finally sent him, ... (The forms were finally sent him)

The restriction to 2 object passives can, moreover, be taken to reflect a still broader generalization requiring the participle in a participial absolute to be associated with an *output 2 arc*, accounting for the compatibility with nonpassives based on unaccusatives and the impossibility of those based on unergatives:

(6.68)a. With all of the telephone poles fallen over/rotted, ...

b. With so many bridges collapsed/ruined/rusted,

c. *With so many starlets confessed/laughed/smiled, ...

d. *With so many firemen charged/dashed/flown/rushed into the room,...

Recall that the latter will follow even under the first alternative analysis suggested for ergative expletive <u>there</u> structures, that associated with (6.27). Required is the assumption that the 1 to 2 demotion posited therein is only licit when the resulting 2 arc sponsors an XPL arc. Under that view, in unergatives like those of (6.68), the DP must head a final 1 arc, incompatible, via (4.25), with a P_1 or P_A arc.

A third parallel between pseudopassives and ditransitive passives is that neither happily yields the kind of participial clauses which appear to be directly embedded below various causative and perceptual

verbs. Again, these are possible if the complement corresponds to a passive of a 2 object, but not otherwise in my dialect:

(6.69)a. They had her mocked/*laughed at by the contestants.

b. The queen had her enemies assassinated/*shot at/*railed against.

c. The majority leader heard/watched the issue debated/*argued about/*fought against.

d. They had the diamonds sold to the prince.

e. *They had the prince sold the diamonds.

f. *They had the diamonds sold him.

(6.70)a.They had/saw Jerome arrested by the sheriff.

b. They had/saw the bicycles repaired at the mall.

c. They had/saw a snake sent to Jerome by Larrissa.

d. *They had/saw Jerome sent a snake by Larrissa.

e. *They had/saw a snake sent him by Larrissa.

A fourth pseudopassive/ditransitive passive correspondence also supports the idea that neither instantiates 2 object passivization. This involves get passives; these yield fairly productively grammatical correspondents to uncontroversial 2 objects:

(6.71)a. The general was/got praised by the president.

b. She was/got questioned about her contacts.

c. Few bills were/got turned into laws.

But not so for pseudopassives, where get variants seem degraded:

(6.72)a. The choice of TV programs was/*got argued about by the children.

b. Many doctors should not be/*get counted on.

c. Such candidates often were/*got voted for.

And likewise, even for those speakers (and with those verbs) which permit second object passives of ditransitives, these lack get passives of either first or second objects:

(6.73)a. Jerome sent many objects to the wrong addresses.

b. Many objects were/got sent to the wrong addresses.

c. Jerome sent many people incorrect notices

d. Many people were/*got sent incorrect notices.

e. Many incorrect notices were/*got sent them.

(6.74)a. The town assigned untrained police guards to many officials.

b. Untrained police guards were/got assigned to many officials.

c. The town assigned many officials untrained police guards.

d. Many officials were/*got assigned untrained police guards.

e. Many untrained guards were/*got assigned them.

(6.75)a. The company offered excellent jobs to foreign workers.

b. Excellent jobs were/got offered to foreign workers.

c. The company offered them excellent jobs.

d. They were/*got offered excellent jobs.

e. Excellent jobs were/*got offered them.

In support of these assertions, the badness of get passives formed on a ditransitive first object was independently claimed:

(6.76) Alexiadou (2005: 16)

a. The salesman sold the customer the car.

b. The car was sold to the customer.

c. The customer was sold a car.

d. The car got sold to the customer.

e. ??The customer got sold a car.

f. "If the get-passive is based on the adjectival participle, one might expect similar restrictions on what passives are possible there. (13) [= (6.76d, e): PMP] confirms this." [17]

This independent observation is important since I have encountered speakers who do not reject get passives of ditransitive first objects. Moreover, the same speakers tend to accept participial absolutes based on ditransitive first object passivization. For these speakers, the idea that the relevant constructions are limited to P_1 arc clauses with output 2 arcs appears untenable.

This generates a bit of a puzzle, on the assumption (which I have not extensively investigated) that such speakers, like me, reject the two constructions in cases linked to pseudopassives. Because the lack of parallelism between participial absolute/get passive linkages to pseudopassives and ditransitive first object passives would, under my assumptions, preclude saying both constructions freely allow participles occurring with prepassive 3 arcs. Rather, for the speakers in question I might be forced to say something like this: the participial absolute and get passive structures allow clauses with both 2 object and 3 object output arcs, where my variant of English allows only 2 object ones. However, in these constructions, the 3 object output (prepassive) arc must be a viable arc, which the prepassive 3 arc posited for pseudopassives, always a local $successor_l$, can never be.

A last piece of evidence showing a parallelism between pseudopassives and ditransitive object passives involves the prefix re-. An Array 0 structure permitting this prefix in actives, also does so in the corresponding passives:

(6.77)a. Herman (re)attached the leash to the alligator.

b. The leash was (re)attached to the alligator by Herman.

So re- is as compatible with a 2 object passive as it is with its corresponding active clause. But in my variant of English at least, re- is barred from pseudopassives:

(6.78)a. Herman (re)argued the point.

b. The point was (re)argued by Herman.

c. Herman (*re) argued against that position.

d. That position was (*re)argued against by Herman.

(6.79)a. Herman (re)signaled the alligator not to back up.

b. The alligator was (re)signaled not to back up.

c. Herman (*re)signaled to the alligator not to back up

d. The alligator was (*re)signalled to not to back up.

One might argue intially that nothing in the data of (6.78) and (6.79) bears on the relational status of the passivized phrase in pseudopassives because the bad passive cases can be attributed to whatever constraint on re- blocks the bad actives in these data sets. However, I doubt this.

If, contrary to the view advocated here, pseudopassives involved the passivization of 2 objects, then the structure of e.g. (6.79d) differs in an important respect from that of (6.79c), namely, in involving a 2 object. And as e.g. (6.77a, b) show, a 2 object, *passivized or not*, is compatible with re-. In these terms, it is justified to deny that what blocks (6.79c) would block (6.79d) under the hypothesis *rejected here* that pseudopassives represent the passivization of 2 objects. If though, they do not involve that, then it turns out that what blocks the long version of (6.79c) does block the long version of (6.79d).

Relevantly then, re- is also incompatible with passivization of either type of ditransitive object, as it is with active ditransitives. See references relevant to this claim just above (3.21) in Chapter 3.

(6.80)a. The company (re) sent the package to Valerie last week.

b. The package was (re) sent to Valerie by the company last week.

c. The company (*re)sent Valerie the package last week.

d. Valerie was (*re)sent the package last week.

e. The package was (*re)sent her last week.

6.5 Particles and 3 Object-Like Behavior

An important generalization is that a DP object occurring *between* a verb and a particle manifests 3 object properties. So Kayne observed that such DPs preclude subconstituent left extraction even when the same DP with the same verb and interpretation allows it when the DP follows the particle:

(6.81) Kayne (1984b: 103)

a. *Who has the cold weather worn the sister of out?

b. *He's the guy who all the paperwork has ticked the sister of off no end.

c. *The only book that low humidity has dried half of out is that one.

These have perfect correspondents if the particle occurs to the left of the DP having an extracted subconstituent. Kayne attributed the ill-formedness of cases like (6.81) to conditions which ban extraction *of a subpart of a left branch*, under a view that particle structures involve a small clause structure within which the preparticle DP is a 1; these, for Kayne, occur on left branches of phrase structure trees. See also Den Dikken (1995: section 2.2.2). His idea gains plausibility from the well-known fact that subparts of *uncontroversial* 1s are in general not extractable either.

However, the idea is, I think, nonetheless not viable. First, other properties I have taken to be characteristic of 3 objects also hold for pre-particle DPs. These include incompatibility with slang NPIs of the <u>squat</u> class and with in situ human relative pronouns:

(6.82)a. *Ted didn't look squat up in that dictionary.

b. Ted didn't look up squat in that dictionary.

c. *Tamara, figuring whom out is difficult, will soon arrive.

d. Tamara, figuring out whom is difficult, will soon arrive.

Even if these features could be handled in Kayne's terms (e.g. by claims that 1s also bar <u>squat</u> class NPIs and in situ human relative pronouns, which is doubtful for reasons cited just below), the left branch proposal cannot deal with the following critical fact, which may not have been previously reported. In a ditransitive structure where both the first and second objects intervene between a verb and a particle, the *second object also manifests 3 object properties*. While not many particles permit this situation, <u>back</u> certainly does:

(6.83)a. Ernest sent Lucille (back) a carving of Franco ((right) back).

b. *It was Franco that Ernest sent Lucille a carving of (right) back.

c. Ernest sent Lucille back a carving of Franco.

d. It was Franco that Ernest sent Lucille back a carving of.

(6.84)a. Ernest sent a relative of Lucille('s) a carving of Franco (right) back.

b. *It was Lucille that Ernest sent a relative of a carving of Franco (right) back.

c. Ernest sent a relative of Lucille('s) back a carving of Franco.

d. *It was Lucille that Ernest sent a relative of back a carving of Franco.

Even if one grants that the first object in (6.83) and (6.84) can be analyzed as a left branch 1, that is not a serious alternative for the second object. Hence Kayne's proposal fails to extend to preparticle ditransitive second objects, although their behaviour is consistent with that of preparticle single objects:

(6.85)a. *Ernest didn't send Harriet squat (right) back.

b. Ernest didn't send Harriet (right) back squat.

(6.86)a. *That female slave, sending him whom (right) back would be unconscionable, is very ill.

b. That female slave, sending him (right) back whom would be unconscionable, is very ill.

These data show that Kayne's proposal fails to capture the general structural property establishing a commonality of grammatical behaviour between 3 objects and preparticle objects. In present terms, assuming an edge label *Prt* for arcs headed by particles, one can advance the following hypotheses:

(6.87)a. If a *nonprepassive* 2 arc is a neighbour of a Prt arc and locally erasable by a 4 arc, it has a 4 arc local successor$_l$. [18]

b. An unereased 4 arc neighbour A of a Prt arc, B, linearly precedes B if and only if A has 3 quace.

This formulation can work only under the assumption that nothing precludes the option of an output 4 arc having 3 quace.

Constraint (6.87) claims that *active* clauses with particles *can never contain final 2 arcs*. But it allows even a 2 object heading a potentially demotable 2 arc *not* to demote to 4 if it heads a prepassive arc. This sanctions periphrastic passives of 2 objects with particles, even while banning final 2 objects, an arguably correct result given the grammaticality of many cases like:

(6.88)a. At that time (there) were cut down more than two hundred trees.

b. In that way (there) were divided up most of the captured territories.

For it was shown that if standard expletive there and locative inversion there head prepassive arcs, those are 2 arcs. Moreover, given the ban on the passivization of single 3 objects or 4 objects, there is no alternative to taking these as 2 object passives.

Formulation (6.87) also allows middle clauses with particles. The adequacy of that is less clear, as I find middles with particles a bit doubtful. But my wife disagrees:

(6.89)a. Such onions don't chop (?up) easily.

b. That turkey didn't carve (?up) easily.

c. Such patients don't calm (?down) easily (ignore nonmiddle, intransitive reading)

d. ?Complex solutions don't figure out easily.

For speakers for whom it is wrong to ban particles in middles, one can replace *prepassive* in (6.87a) by the more restrictive *prepassive*$_1$.

Under the analysis of particle facts sketched here, what Barrel (A) work has called *particle movement* (see e.g. Fraser, 1965; Ross,1967 [1986]), to account for the alternative word orders possible in most particle constructions, is simply the difference between a 4 arc with 3 quace, whose head DP must precede the particle, and a 4 arc without that, which (extractions aside) must follow a particle. Unlike talk of particle movement, this approach also offers a way to cover cases where one of the word orders is impossible, as in (6.90) and (6.91):

(6.90)a. They threw the rascals out.

b. *They threw out the rascals.

While the use of throw out meaning 'jettison', allows both word orders, the usage in (6.90), meaning 'remove from office', allows only the preparticle order. In present terms, one can say that that verb + particle combination with that meaning is only compatible with a 4 object having 3 quace.

The opposite case is seen in:

(6.91)a. Vanessa tossed off two scotches.

b. *Vanessa tossed two scotches off.

c. Vanessa held down two jobs.

d. *Vanessa held two jobs down.

These usages are incompatible with a 4 object with 3 quace.

Present assumptions also suggest a simple account of the fact (Ross, 1967 [1986: 41]) that no clause manifests a particle preceding a weak definite pronominal 4 object:

(6.92)a. Omar filled out the forms/*them.

b. Omar figured out the answer/*it.

c. *I gave him back it

d. I gave him it back.

One can add to the conditions in (6.87):

(6.93) **The Weak Definite Pronoun + Particle Condition**

If an output 4 arc A neighbour of a Prt arc is headed by a weak definite pronoun, A has 3 quace.

This will evidently interact with (6.87b) to force preparticle word order for the pronoun. Probably, other weak forms like e.g. <u>one</u> should also be included.

The discussion of particles so far is though oversimplified and incomplete. Most of the gaps cannot be treated here, but a few remarks are relevant. First, some particles manifest still more complex constraints than the ones discussed so far. These involved conditions precluding either pre-particle or post-particle word order. But a usage of the particle <u>back</u> different from that in e.g. (6.83) represents a distinct situation, illustrated in (6.94):

(6.94)a. Rocky punched (*back) Spike (back).

b. Spike was punched (*back) by Rocky.

c. The rascals were finally thrown out by the residents.

Call this usage, discussed in Fraser (1965: 106-109), *retaliatory* <u>*back*</u>. On the basis of (6.94a), this form initially might seem like that in (6.90). But whereas the latter structures have corresponding passives, that with retaliatory <u>back</u> does not, as noted in Fraser (1974: 52-53) and illustrated in the (6.94b, c) contrast.

Moreover, only the former paradigm includes grammatical Q construction targeting:

(6.95)a. The rascals were difficult to throw out.

b. *The rascals were difficult to punch back.

c. The rascals were too fierce to throw out.

d. *The rascals were too fierce to punch back.

Here it does not suffice to say retaliatory <u>back</u> requires the associated active clause 4 object to have 3 quace; for as indicated, that can be said in a way *compatible with* periphrastic passives. Retaliatory <u>back</u>

seems to require that the underlying 2 object head an output arc with closed 3 quace. As represented in (5.48) and discussed further in Chapter 8, section 7, this is impossible for English prepassive arcs, and the taget arcs of Q constructions, which all require closed 2 quace.

Moreover, the toss off paradigm also has a complication, as it too bars passives:

(6.96)a. *Five scotches were quickly tossed off.

b. *Five scotches don't toss off easily.

In this case, one needs not only to specify incompatibility with 3 quace, but probably to require that the underlying object head an output arc with closed 4 quace, again barring passivization.

Like toss off is throw up ('vomit'):

(6.97)a. Valerie threw up the tuna salad/everything she ate.

b. *Valerie threw the tuna salad/everything she ate up.

c. *The tuna salad/Everything she ate was thrown up by Valerie.

d. *Tuna salad throws up easily.

e. *Valerie threw it up.

Here too a constraint requiring the object to head an output arc with closed 4 quace is apparently required. This interacts with (6.93) to correctly block (6.97e), since the weak pronoun is required inconsistently to have 3 quace, whereby it must precede the particle, but also to have closed 4 quace, whereby it must follow the particle.

I conclude with a disclaimer. These tentative remarks about particle structures are not based on a detailed analysis of the daunting mass of particle containing cases.

Notes to Chapter 6

1 As Chomsky observed, cases like (6.3aii) should be distinguished from existential structures like:

(i) There were several large packages placed on the table

One point is that such cases seem not to manifest the well-known 'indefiniteness constraint' characteristic of existential there cases and specifically of those like (iia-c):

(ii)a. *There had been those mysterious packages placed on the table.

b. (On the table) there had been placed (on the table) those mysterious packages.

c. *On the table there had been (all) those mysterious packages placed.

d. On the table there had been placed (all) those mysterious packages.

2 See Postal (2004, Chapter 1) for discussion of locative inversion and locative inversion passives.

3 I take the long versions of (6.4b) and (6.5b) to manifest raising of the expletive which originates in the complement and passivization of that element in the main clause.

4 Some passives of expletive it 3 objects are possible:

(i) He never gave it any thought that she might be a vampire.

(ii) It was never given any thought that she might be a vampire.

Even though the prepassive 3 arc here is not an initial (or viable) 3 arc, the passive satisfies condition (7.16) of Chapter 7, since the prepassive arc is a neighbor of an initial (hence antioblique) 3 arc headed by the that clause.

5 Radford (2000a) cites a number of expletive passives; all including (i) are consistent with generalization (6.11).

(i)a. There were placed on the table *several large packages*

b.There are likely to be awarded *several prizes*

c. We expect there to be awarded *several prizes*

d. There were awarded several prizes

e. There were shown to the blackmail victims *numerous compromising photos of themselves*

6 For discussion of the unaccusative/unergative distinction and references on the notions see e.g. Alexiadou, Anagnostopoulou and Everaert (2004), Baker (1997a), Levin (1993), Levin and Rappaport (1986), Levin and Rappaport Hovav (2005), Perlmutter (1978, 1989), Perlmutter and Postal (1984a), Postal (1989), Pullum (1988) and Rosen (1981). Specification of the ancestral R-local successor$_1$ rather than simply local successor$_1$ is required in particular because of the specifics of the analysis of impersonal passive expletives in Johnson and Postal (1980: Chapter 10, Postal (1986, 1989), which I consider essentially correct. In this, revised only to allow for the recognition of XPL arcs not found in

those works, a 1 arc sponsors an XPL arc which has a prepassive 2 arc local successor$_1$; that in turn has a 1 arc local successor which erases the XPL arc sponsor.

7 The ancestral R-local successor$_1$ in (6.23b) is motivated by the treatment of impersonal passives in Johnson and Postal (1980). Space precludes discussion here.

8 Actually, (6.26f) is misleading and is present only to establish parallelism with the English (6.26e). For French final 2 object weak definite pronouns including expletives must determine accusative clitics. But taking this into account yields the equally bad:

(i) *Ils l'ont arrêté plusieurs étudiants.

9 For instance, this is contraindicated for the arcs associated with those expletive <u>it</u> linked to clausal extraposition like:

(i) It follows that 2 + 2 = 19.

Here, as discussed in Chapter 9, the <u>that</u> clause heads a final 9 arc.

10 Two of the assumptions about expletive passives adopted here yield partial parallels to the situation in German and other Germanic NLs. These are that expletive *passives* are a special case of a broader expletive construction also possible for intransitives, and that the expletive involved is systematically linked to a 2 arc. I observed earlier that German has two types of clauses, one involving passives of 2 objects requiring the auxiliary <u>werden</u>, the other involving passives of 3 objects and requiring distinct auxiliaries, <u>bekommen</u>, <u>erhalten</u>, <u>kriegen</u>. Müller (1995: 243) observes that an impersonal passive of an intransitive clause (for me involving passivization of an expletive 2 object as im Postal, 1986), is not possible with the auxiliary used with 3 object passivization:

(i) Müller (1995: 242)

a. *dass pro jetz gearbeitet kriegt

"that EXPL now worked PASS2"

b. *dass pro Antje geküsst kriegt.

"that EXPL Antje$_{acc}$ kissed PASS2""

Excluding these impossible cases would largely be accomplished by a specification that the XPL arc introducing the expletive involved has to have a 2 arc R-local successor$_1$, partially parallel to the conditions on English <u>there</u>.

11 This remark excludes the idea of giving the verbs in (6.29) distinct initial analyses, one unergative, one unaccusative. Given that no semantic distinction can be discerned between the verbs in what would thereby be distinct constructions, such a step would at best degrade systematic principles linking initial syntactic structures and semantic properties.

12 The original RG antipassive analysis, that in Postal (1977), involved the equivalent of a 1 arc, A having a 2 arc local successor$_{I}$, B, which in turn had a 1 arc local successor$_{I}$, thus instantiating the situation in (6.30). The motivation for such a view of antipassive clauses is eliminated by analyses which can posit 2 arc local successor$_{II}$s of 1 arcs, as in Chapter 4, section 8.

13 Compare Hukari and Levine (2006: 208) who treat as unexceptional:

(i) A gigantic RABBIT there then emerged from the cave, which frightened the wits out of poor Alice.

For me, (i) is as bad or worse than any example starred in this work.

14 The indigenous arc condition eliminates one a priori possible analysis of a case like (ic), the locative inversion variant of which was cited in Postal (2004: 346-347, note 26):

(i)a. There committed perjury at that time several congressmen.

b. They proved several congressmen to have committed perjury at that time.

c. At that time (there) were proven to have committed perjury several senior congressmen.

That is, such cases might in principle involve an XPL arc in the complement clause, which has a 20 arc successor$_{I}$, 2 arc R-successor$_{I}$, etc. Or, they might involve sponsoring of the XPL arc by the main clause 2 arc successor$_{I}$ of the 20 arc headed by <u>several senior congressmen</u>. But the indigenous specification in (6.44) bars the latter analysis, as the main clause 2 arc at issue is not indigenous. This is a desirable result because as noted in Chapter 1, the possibility of a raised <u>there</u> correlates with the possibility of its acceptability. Compare (i) with:

(ii)a. *There had many such thoughts several experienced nurses.

b. *There were claimed to have had many such thoughts several experienced nurses.

15 Ruwet (1991) discusses many problems linked to weather expressions, citing data from six European NLs.

16 The claim that cases like (6.51a) are pseudopassives hardly settles everything about them. So the posited copy leaving advancement in (6.51a) is extremely limited in a way different from *standard* pseudopassives. Specifically, possible PP types are more narrowly limited:

(i)a. The bed was slept on/in/near/under.

b. Jerome got hailed/rained/sleeted/snowed on/*in/*near/*under.

c. *The Gobi Desert got hailed/rained/sleeted/snowed in/near/on.

It is unclear how to build in such constraints.

17 Alexiadou (2005: 16) cites Siewierska (1984: 132) for the data in (6.76d). But there are no English data on that page of the cited work.

18 This condition is designed to be consistent with the interaction of particle structures and ditransitive structures:

(i) Helen sent George the book back.

The present framework, via condition (5.39), requires that any ditransitive second object like <u>the book</u> head a 4 arc local $\text{successor}_{\text{I}}$, which is consistent with what (6.87a) requires for a 2 object with the particle. So in cases like (i) two separate conditions demand that a relevant 2 arc have a 4 arc local $\text{successor}_{\text{I}}$.

Chapter 7 Passivization Targets: III

7.1 Focus

Previous chapters have inter alia concluded the following:

(7.1)a. Middle clause formation (analyzed as synthetic passive formation) targets exclusively 2 objects, hence cannot target either object of a ditransitive.

b. Periphrastic pseudopassive clause formation targets exclusively non-2 objects, claimed to be 3 or 4 objects advanced from lower ranking relations.

c. Periphrastic expletive and locative inversion passive clauses only target 2 objects.

d. All periphrastic passives of ditransitive clauses target non-2 objects; hence the disjointness of ditransitive passivization and expletive there and locative inversion passives.

e. Periphrastic get passives only involve 2 object (and for some speakers, viable 3 object) targets

f. Participial absolutes only involve 2 object (and for some speakers, viable 3 object) targets

g. So, while English periphrastic passivization is more general than middle formation, and overall targets at least 2, 3 and 4 objects, specific subtypes of periphrastic passives are more limited, and in just the way that traditional, early RG and Barrel (A) views have taken to be valid for *all* pasivization. [1] Even taking these conclusions as established provides, however, only a beginning of an account of English passives. This chapter focuses on a more refined characterization of English periphrastic passivization targets, seeking to explain restrictions unaccounted for by previous assumptions, specifically, those in (7.1).

7.2 The Most Basic Constraints

A striking fact about English passives is the contrast documented earlier between *single* 3 objects and 4 objects and (some) ditransitive clause objects. While I have stressed the reality of non-2 object passives, Chapter 2 really began with the observation that neither Array 1 nor Array 2 objects were passivizable. Consequently, the justification that 3 object and (in some dialects) 4 object passivization is possible for ditransitive clauses means that a basic element of English grammar must exclude the passivization of *single* 3 objects and *single* 4 objects, presumably for all dialects. This generalization must nonetheless not bar pseudopassives since I have argued these represent passivization of non-2 objects, more precisely, manifest prepassive$_{II}$ 3 or 4 arcs.

Given these assumptions, basic constraints limiting English periphrastic passivization to the three cited object types and excluding single object non-2 object passivization except in the pseudopassive case can be initially given as follows:

(7.2) **The Basic English Periphrastic Passive Condition (Version 1)**

If A is a prepassive$_{II}$ arc, then A is a 2 arc, 3 arc or 4 arc.

(7.3) **The English Periphrastic Non-2 Object Passive Condition (Version 1)**

If A is a prepassive$_{II}$ 3 arc or 4 arc which does not locally second a copy arc, then A is a colimb of an output 3 arc or 4 arc.

Here, (7.2), which is slightly refined in Chapter 8, excludes prepassive$_{II}$ arcs with any edge label other than 2, 3 or 4, precluding all direct periphrastic passives of 5 objects, 6 objects, oblique objects, etc. This properly blocks starred cases such as:

(7.4)a. Frank logged on to the internet.

b. *The internet was logged by Frank.

c. The delegates tired of all the wrangling.

d. *All the wrangling was tired by the delegates.

e. Mike argued for the delay.

f. *The delay was argued by Mike.

One might assume formulation (7.2) is a basis for the failure of *predicate nominals* to passivize on the minimal assumption that these are not 2, 3 or 4 objects. The literature cites the data in (7.5)-(7.8):

(7.5) Bach (1980: 307)

a. Mary became my friend.

b. *My friend was become by Mary.

c. John is an idiot.

d. *An idiot is been by John.

(7.6) Williams (1980: 211) (crediting Bresnan, 1978):

a. They make (= 'turn into' good cooks.

b. *Good cooks are made by them.

(7.7) Postal (1993: 747)

*That kind of outfielder was turned into/made out of by Martin.

(7.8) Culicover and Jackendoff (2005: 212)

a. Two tons are weighed by my car.

b. Fifty dollars are cost by this ring.

However, considerations returned to in Chapter 8 show that more is involved in the analysis of forms like those in (7.5)-(7.8). For instance they also fail to be proper targets for what I call Q constructions, such as Object Raising:

7.(9)a. *A doctor is hard to be.

b. *A rich man man is difficult to become.

c. *Two tons are impossible for that car to weigh.

d. *Fifty thousand dollars is easy for an operation to cost.

e. *Good cooks are difficult to make (= 'turn into').

This obviously cannot follow from (7.2) nor independently just from absence of 2, 3 or 4 status; since e.g. the DPs of certain PPs which lack that can be targets of Q constructions

Condition (7.3) excludes the periphrastic passivization of *single* 3 objects or 4 objects except in the special case of pseudopassives. The latter are picked out because under the analysis in Chapter 5, the prepassive 3 or 4 arc of each does second a copy arc, which other 3 or 4 arcs do not. The specification that a prepassive$_I$ non-2 arc requires a *colimb* which is an output 3 or 4 arc determines that the latter arc type is distinct from the prepassive arc. This is necessary since, recall, in periphrastic passives every prepassive$_I$ arc is an output arc; hence without the colimb specification, a single object clause prepassive$_I$ 3 arc would itself satisfy a requirement of output 3 arc presence.

7.3 Basic Past Ditransitive Passive Observations

Although Chapter 3, section 1 distinguished Class A from Class B ditransitives, the basis for such a distinction depended only on the fact that the former manifest alternation of 3 objects with PPs in <u>to</u>, the latter class with PPs in <u>for</u>. However, Fillmore (1965) offered other grounds for the distinction. He observed that for his variant of English (relevantly, also mine) Class A ditransitives permit passives of either of the two objects, while Class B ones permit *none;* see (7.10)/(7.11):

(7.10) Class A Ditransitive Structure

a. Arthur gave/handed/sent/sold Muriel a novel.

b. Muriel was given/handed/sent/sold a novel by Arthur.

c. The novel was given/handed/sent/sold her by Arthur.

(7.11) Class B Ditransitive Structure

a. Arthur bought/found/purchased/stole Muriel a novel.

b. *Muriel was bought/found/purchased/stolen a novel by Arthur.

c. *The novel was bought/found/purchased/stolen her by Arthur.

Fillmore basically observed a correlation between passivization possibilities and whether the first object of a ditransitive alternates with a to PP, as in the Class A case, [2] or with a for PP, as in the Class B case; see (7.12).

(7.12)a. Arthur gave/handed/sent/sold the novel to/*for Muriel.

b. Arthur bought/found/purchased/stole the novel *to/for Muriel.

I argue below that this picture is oversimplified. A basic question though is what element of English grammar blocks the passivization of the 3 objects of Class B ditransitives but not that of those of Class A ditransitives. Conditions (7.2) or (7.3) do not since their formulations allow the passivization of any ditransitive 3 object whatever.

One step toward an answer was though taken in Chapter 3, which claimed that Class A ditransitive clauses are defined by the presence of *initial* 3 objects, while Class B ditransitives manifest 3 objects that are advanced initial obliques. These assumptions would permit a revision of (7.3) to state:

(7.13) **The English Periphrastic Non-2 Object Passive Condition (Version 2)**

If A is a prepassive$_{II}$ 3 arc or 4 arc which does not locally second a copy arc, then A is not a local successor$_{I}$ of an Oblique arc and is a colimb of an output 3 arc or 4 arc.

Under the analysis proposed earlier for Class B structures, (7.13) properly blocks passivization of Class B ditransitive 3 objects, which were analyzed as heading local successor$_{I}$s of Oblique arcs.

While condition (7.13) seems to me in essence correct, and will be shown to have further desirable consequences shortly, even this refinement does not account for Fillmore's (1965) other key passivization observation about Class B structures: their 4 objects are also unpassivizable (even in variants of English allowing passivization of Class A 4 objects). This generalization is, I believe, a special case of (7.14):

(7.14) If a ditransitive clause C permits any 4 object to passivize, then C also permits a 3 object to passivize.

Stated differently, a necessary condition for a ditransitive clause type to permit 4 object passivization (for those allowing this at all) is that it permit 3 object passivization. Such a principle has consequences well beyond the properties of Class B ditransitives noted by Fillmore, although so far without specific illustration.

Incorporating the consequences of (7.14) into a richer version of (7.13) is not straightforward though. For (7.14) appeals to a 'behavioral' ability of the relevant clauses, their cooccurrence with a

3 object *permitting passivization*. The question is whether that characterization can properly be reduced to the structural property in effect taken so far to specify when 3 objects passivize. This is that they head *initial* (more precisely, *viable)* 3 arcs, since the only passivizable 3 objects recognized so far head viable arcs zoned by Class A ditransitives.

If it could be so reduced, one could combine the condition blocking Class B ditransitive passives of 4 objects with those blocking Class B ditransitive passives of 3 objects, previously given as (7.13). The property might then be that, pseudopassivization aside, a non-2 object passivizes in this dialect type only if it is a sister of the head of a certain type of 3 arc. There are two possibilities with partially distinct entailments.

The first is that a prepassive non-2 arc needs to be a neighbor of a *viable* 3 arc, such being either an initial arc not inherently replaced or an inherent replacer of an initial arc. Since, critically, each constituent is its own sister (correspondingly, each arc is its own neighbor), this covers both 4 object sisters of initial/inherent replacer 3 objects and initial/inherent replacer 3 objects themselves.

The second alternative is most compactly stated if based on the concept in (7.15):

(7.15) **Defintion: *Antioblique***

A is an a*ntioblique* arc if and only if A is not an R-local successor$_{I}$ of an Oblique arc.

The two alternative formulations of the needed principle are then:

(7.16) **The English Periphrastic Non-2 Object Passive Condition (Version 3)**

a. If A is a prepassive$_{II}$ 3 arc or 4 arc which does not locally second a copy arc, then A <<is not a local successor$_{I}$ of an Oblique arc>>>, is a neighbor of a viable 3 arc and has a colimb B which A does not sponsor and B is an output 3 arc or 4 arc.

b. If A is a prepassive$_{II}$ 3 arc or 4 arc which does not locally second a copy arc, then A is a neighbor of an antioblique 3 arc and has a colimb B which A does not sponsor and B is an output 3 arc or 4 arc.

The bracketed specification in version a. is probably redundant. It could only be needed if a clause could contain both a 3 arc local successor$_{I}$ of an Oblique arc *and* a viable 3 arc. But I don't believe English has any such cases. The negative sponsor condition will be motivated in section 7 below,

where it is proposed that every prepassive$_{II}$ arc is copied, so that any prepassive$_{II}$ 3 arc *has* a 3 arc colimb, but one it *does* sponsor.

Both formulations (7.16a, b) will arguably block ditransitive passivization based on clauses with 3 arc local successor$_I$s of Oblique arcs, since such arcs are neither viable nor antioblique. The contrast between the two formulations is relevant in the case of 3 arcs which are local successor$_I$s of foreign successors, e.g. in cases of possessor raising. In such circumstances, formulation (**Error! Reference source not found.**a) systematically blocks passivization, while formulation (7.16b) does not.

Incidentally, either version of (7.16a, b) excludes the prepassive 3 arc of a pseudopassive from both the requirement of being a colimb of an output 4 arc and the additional requirement of being a neighbor of a viable 3 arc in one case or of an antioblique one in the other. In fact, in most pseudopassive cases, e.g. <u>That was argued about by the semanticists,</u> the latter condition would not be met...but this is rightly rendered irrelevant by either formulation.

The two conditions I have proposed are of differential strength, (7.16a) entails (7.16b) but not conversely. For any arc which is a neighbor of a viable 3 arc is a neighbor of an antioblique 3 arc since a viable 3 arc is antioblique. But an arc could be a neighbor of an antioblique 3 arc and not of a viable 3 arc if, for instance, it was a neighbor of a 3 arc R-local successor of a (nonOblique) foreign successor. The difference between the two formulations is what they say about passivization in clauses whose 3 arcs exist only as a function of some type of raising.

Evidently, the more restrictive (7.16a) is a priori preferrable, so the question is whether the full distribution of passive facts is consistent with it. While I have found no evidence which overwhelmingly decides the question, the conclusion will be that (7.16a) is too strong and that (7.16b) is the most exclusive tenable condition on English ditransitive passivization.

7.4 Enriching the Data Base: I

The assumption that advanced oblique 3 objects cannot passivize, now expressed in (7.16), stands so far only on Fillmore's observation that 3 objects which alternate with <u>for</u> PPs, those in Class B ditransitive clauses, do not passivize. All his cases involved <u>for</u> phrases designating *intended* but not necessarily actual recipients of some object. Other less systematic evidence also points to the

unpassivizability in the relevant NL of 3 objects which head oblique arcs, since in all of (7.17)-(7.23), 3 objects of a partially different sort alternate with obliques and cannot passivize:

(7.17) a. Herb caused a lot of problems for me.

b. Herb caused me a lot of problems.

c. *I was caused a lot of problems by Herb.

d. *A lot of problems were caused me by Herb.

(7.18) a. Sandra cast/flashed/shot/threw a nasty glance/look at me. [3]

b. Sandra cast/flashed/shot/threw me a nasty glance/look.

c. *I was cast/flashed/shot/thrown a nasty glance/look by Sandra.

d. *A nasty glance/look was cast/flashed/shot/thrown me by Sandra.

(7.19) a. I bore no ill will/grudge toward/against him.

b. I bore him no ill will/grudge.

c. *He was born no ill-will/grudge by anyone.

d. *No ill will/grudge was born him by anyone.

(7.20) a. Mary played a game of tennis with Clara.

b. Mary played Clara a game of tennis.

c. *Clara was played a game of tennis by Mary.

d. *A game of tennis was played him by Mary.

(7.21) a. Boris did a favor for Greg.

b. Boris did Greg a favor.

c. *Greg was done a favor by Boris.

d. *A favor was done him by Boris.

(7.22) a. Sarah made a good wife for Edward.

b. Sarah made Edward a good wife.

c. *Edward was made a good wife by Sarah.

d. *A good wife was made him by Sarah.

(7.23) a. Xavier made a bet with Shelly.

b. Xavier made Shelly a bet.

c. *Shelly was made a bet by Xavier.

d. *A bet was made her by Xavier.

Unlike Fillmore's data, no 3 object in these cases, even those alternating with <u>for</u> PPs, represents an intended recipient. But the systematic blockage of passivization of the 3 object in the *b* cases arguably follows from either of (7.16a, b) if each such 3 object heads a 3 arc local successor$_1$ of an oblique arc

of whatever type is found in the *a* cases. For then there is no known way the clause can also contain a viable 3 arc.

Moreover, the ungrammatical d. variants of (7.17)-(7.23) support the idea embodied in both (7.16a, b) that ditransitive 4 objects only passivize in clauses whose 3 objects correspond to viable/antioblique 3 arcs. So analyzing the 3 objects in (7.17)-(7.23) as initial obliques has two desirable passivization consequences.

Passivization based justification for a distinction between 3 objects which are initial obliques and others would be more determinative if other data correlated with it. Two areas which have not been studied in great detail could potentially support the distinction between oblique-originating 3 objects and others. The first involves the grammaticality of overlapping nominal denotations. The examples in (7.24) illustrate that in general the denotations of a subject and object of the same clause cannot so overlap, as perhaps first noted in Postal (1971).

Of course, in present terms, talk of pronouns overlapping in denotation is at best a shorthand since pronouns do not head initial arcs and thus have no semantic relevance. For this argument though, I need not consider a different analysis than the standard one.

(7.24) a. *I love us.
b. *I understand us.
c. *I faxed us the data.
d. *I sent us a hibachi.
e. *I gave us a lot of thought.
f. *I will tell us a story.
g. *I forgave us our sins.
h. *I considered us intelligent.
i. *I struck us as intelligent.
j. *I supplied us with beer.

However, as (7.25) indicates, there are seeming exceptions.

(7.25) a. I did us a favor.
b. I bought us a hibachi.
c. I will get us some beer.
d. I caused us a lot of trouble.

e. (Naturally), I bear us no ill will.

As in (7.25), every good intersecting subject/object pair appears to be currently analyzable, on the basis of passivization properties and alternations with oblique PPs, as containing a 3 object advanced from some oblique and *not* as containing an initial (or raised) 3 object. This motivates a purely descriptive and partly informal principle something like (7.26):

(7.26) **The Clause-Internal Intersecting Denotation Condition**

If A and B are respectively final 1 arc and final Nuclear Term arc colimbs, and the denotations of the heads of A and B incompletely overlap, B is a local successor$_1$ of an Oblique arc. [4]

Combination of (7.26) with either (7.16a, b) would determine that any case like (7.24) which permits an intersecting 1 and 3 object would, in my type of English, preclude passivization of the 3 object. This seems correct:

(7.27)a. *We were done a favor by Clyde.

b. *We were bought a hibachi by Lisa.

c. *We were gotten some beer by my mother.

d. *We were caused a lot of trouble by those guys.

e. *We were borne no ill will by Sandra.

A second potential source of evidence correlating with p;assivization properties would link to the assumption that at least for English, condition (7.28) holds:

(7.28) **The Term Arc Reflexive/Reciprocal Antecedence Condition**

If A is a reflexive arc, then A has a Term arc neighbor which arc antecedes A. [5, 6]

This constraint, which requires the existence of an arc edge labeled 1, 2 or 3 for reflexive or reciprocal antecedence, can draw well-known distinctions like that in (7.29a), again perhaps first noted in Postal (1971), on the basis of the relational analyses schematized in (7.29b) (PP structure ignored). In these and following reflexive examples, the reflexive forms should be read as unstressed, noncontrastive and the constraint proposed only relevant for such. [7]

(7.29)a. Ellen lied/spoke to Mike about himself.

3	Oblique$_3$
5	Oblique$_3$

b.*Ellen lied/spoke about Mike to himself.

Oblique$_3$	3
Oblique$_3$	5

Consider then Class A ditransitive cases (7.30a, b), treated here as having *initial* 3 objects.

(7.30) a. The book was sent to Lois by herself.

2	3	1
1	5	8

b. The book was sent by Lois to herself.

2	1	3
1	8	5

Both reflexive structures satisfy (7.28) and both are good, as observed in effect by Williams (1994: 221), whose less natural examples were:

(7.31) a. The book was given to John by himself.

b. The book was given by John to himself.

The result for (7.30b) depends on the standard RG assumption, of course adopted here, that a passive agent phrase is an earlier 1; see Perlmutter (1983a), Postal (2004, Chapter 8). [8]

In contrast, the reflexive facts for clauses corresponding to Class B ditransitives, whose 3 objects do not passivize in my English, are different; see (7.32):

(7.32) a. *The book was bought for Lois by herself.

2	Oblique_1	1
1	Oblique_1	8

b. The book was bought by Lois for herself.

2	1	Oblique_1
1	8	Oblique_1

While (7.32b), which satisfies (7.28), is grammatical, not so (7.32a), which violates (7.28), as the antecedent heads no Term arc at all.

Other English cases where (7.28) properly blocks bad reflexives appear in (7.33):

(7.33) a. The junkie shoved the needle into herself.

b. *The needle was shoved into the junkie by herself.

c. The needle was shoved by the junkie into herself.

d. Joe placed the blanket under himself.

e. The blanket was placed by Joe under himself

f. *The blanket was placed under Joe by himself.

The principles appealed to will also properly block various examples cited by Williams (1994: 221):

(7.34)a. *I spoke on behalf of Bill to himself.

b. *I spoke on behalf of Bill about himself.

For on no reasonable analysis of any of these are the reflexive antecedents terms at any level. Again though, the considerations of note 7 might render facts like (7.34) irrelevant to (7.28).

Of crosslinguistic interest, analogs of contrasts like those between (7.30) and (7.32) exist in French; see Postal (1990a).

(7.35)a. Ce paquet a été envoyé à Marcel par Lucille/lui-même.

"That package was sent to Marcel by himself"

b. Ce paquet a été procuré pour Marcel par Lucille/*lui-même.

"That package was procured for Marcel by himself"

7.5 Enriching the Data Base: II

So far one might have assumed that, as in Fillmore (1965), *all* cases where a ditransitive 3 object alternates with a <u>to</u> phrase, here analyzed as a 5 object, represent homogeneous Class A ditransitives, involving initial 3 objects. But clauses with ditransitive verbs denoting propulsion through space like (7.36) provide motivation for doubt. Dowty (1979) noticed that these bar first object passivization and (7.36d) illustrates that their second objects are likewise unpassivizable even for speakers like me, who accept some ditransitive 4 object passives.

(7.36)a. Mike chucked/lobbed/pitched/rolled/slid/threw/tossed the ball to Vera.

b. Mike chucked/lobbed/pitched/rolled/slid/threw/tossed Vera the ball.

c. *Vera was chucked/lobbed/pitched/rolled/slid/thrown/tossed the ball.

d. *The ball was chucked/lobbed/pitched/rolled/slid/thrown/tossed her/Vera.

These facts mean that these ditransitives are, despite the alternation with a <u>to</u> phrase, similar in passivization behavior to Class B ditransitives, not to Class A ones. Call them *Class* C ditransitives.

Class C structures also contrast with uncontroversial Class A ones in permitting directional elements like the particles <u>down</u>, <u>in</u>, <u>over</u>, and <u>up</u> and the prepositions <u>at</u> and <u>towards</u>:

(7.37)a. Mike chucked/lobbed/pitched/rolled/slid/threw/tossed the ball down/in/over/up to/at/towards/in the direction of Vera.

b. Mike awarded/loaned/rented/sold/willed the ball (*down/*in/*over/*up) to Vera.

One can then consider the following hypotheses:

(7.38)a. In contrast to Class A ditransitive clauses, the 3 object in Class C ditransitives is an advanced initial directional Oblique.

b. In contrast to Class A ditransitive clauses, the 5 object in Class C ditransitives is an advanced initial directional Oblique.

c. Given earlier evidence that the 3 objects which are advanced obliques can*not* demote to 5, a. and b. can yield a maximally compact and overall consistent analysis only if the relation between e.g. (7.36a, b) involves 5 object to 3 advancement. The result is analyses like (7.39):

(7.39)a. Mike rolled the ball (right) to Vera

1	2	Oblique_2
1	2	5

---

b. Mike rolled Vera the ball

1	Oblique_2	2
1	5	2
1	3	4

The failures of both the first and second objects of Class C ditransitives to have corresponding passives can then follow from either of (7.16a, b) since the structures lack either viable or antioblique 3 arcs.

The 3 arc local successor_I of the 5 arc in (7.39b) could not itself have a 5 arc local successor_I, although English allows some 5 arc local successor_Is of 3 arcs, because of (6.30) of Chapter 6, the R-Local Successor Nonequivalence Condition.

Predictions would also be made about overlapping denotations and reflexives, as in (7.40):

(7.40)a. ?I lobbed us a beach ball.

b. The balls were chucked by the octopuses to themselves.

c. *The balls were chucked to the octopuses by themselves.

d. The letters were sent/handed to those octopuses by themselves.

In (7.40a) physical realities interfere since the situation is sufficiently bizarre as to render it hard to tell if its overlapping denotations are acceptable or not. Example (7.40b) involves an octopus reference to make chucking something to oneself physically more plausible. And under that circumstance, I find the anaphoric linkage in (7.40b), which satisfies condition (7.28), to be good.

Not so for (7.40c), which describes the same physical situation but which violates (7.28). Moreover, it seems to contrast with e.g. (7.40d), which, under a Class A ditransitive analysis, would satisfy (7.28):

The posit of of 5 object to 3 advancement in the relevant cases permits a simple account of attested facts like (7.41) and (7.42); see e.g. Green (1974: 103, 129), Herriman (1995: 28):

(7.41) Oehrle (1976: 127)

a. The collision sent the car to the other side of the gas station.

b. *The collision sent the other side of the gas station the car.

(7.42)a. Mike rolled the ball to Vera/the gate.

b. Mike rolled Vera the ball.

c. *Mike rolled the gate the ball.

The bad (7.41b) and (7.42c) *cannot* of course be attributed to any *general* ban on inanimate English 3 objects, which does not exist, as documented in Chapter 1. However, one can say that the 5 object to 3 advancement of obliques posited for cases like (7.36b) is only possible for *animates*:

(7.43) **The Oblique Advancement to 3 Animacy Condition**

If A is 5 arc local successor$_I$ of an Oblique arc and a local predecessor$_I$ of a 3 arc, A's head corresponds to an animate phrase.

By not being limited to directional oblique's in particular, condition (7.43) may, moreover, explicate other facts. Consider (7.44) and (7.45):

(7.44) Green (1974: 90-91):

a. He owes his present success to his father.

b. He owes his present success to good luck.

c. He owes his father his present success.

d. *He owes good luck his present success.

(7.45) Huddleston (2002a: 310, note 65)

a. She owes her immense success to sheer hard work.

b. *She owes sheer hard work her immense success.

It makes semantic sense to assume that the <u>to</u> phrases and 3 objects here both represent a source relation, one commonly realized in a <u>from</u> phrase, like those roughly paraphrasing (7.44a-d):

(7.46) His present success comes from his father/good luck.

If then, one analyzes (7.44a, b) as involving advancement of source obliques to 5, and (7.44c, d) as involving the further advancement of those 5 objects to 3, then the bad (7.44d) could also be attributed to (7.43).

The assumption that (7.44) and (7.45) manifest non-initial 3 objects combines with either (7.16a, b) to correctly determine the ungrammaticality of passives corresponding to either the first or second objects of such examples, regardless of the animacy of the 3 object.

(7.47) a. *Bob/Good luck is owed that success by Martha.

b. *That success was owed Bob/him/good luck/it by Martha.

It remains unexplained though why even the object in cases like (7.44a, b) is unpassivizable, as observed in Postal (1993: 743):

(7.48) a. Allan owes that idea to Nancy.

b. *That idea is owed to Nancy by Allan.

c. *That idea is impossible for Allan to owe to Nancy.

d. *That idea was too much in the air for him to owe to anyone.

e. Allan owes the $200 to Nancy.

f. The $200 is owed to Nancy by Allan.

One might have assumed that the unpassivizable DP is a 2 object. A clue to the basis of its unpassivizability is provided by (7.48c, d) which show that this object has distinctive properties of Array 1 objects and thus is arguably a 4 object, which would explain (7.48b, c, d) via principle (7.13). The 4 object status of the object of the nonmonetary sense of <u>owe</u> is not a feature of the monetary sense, as (7.48e, f) illustrate. It may then be necessary to posit an ad hoc requirement of 2 object demotion to 4 for the relevant sense of this verb, as with e.g. the requirement for arbitrary members of Array 1 under the parallel assumption that their 4 objects represent demoted 2 objects.

7.6 *Not* Enriching the Data Base: III

My original intention was to analyze several further varieties of English ditransitive clause, including those which I will call Class D, Class E and Class F types, illustrated in respectively (**7.49**), (7.50) and (7.51).

(7.49) a. Martha wrote a letter to Jim.

b. Martha wrote Jim a letter.

c. *Jim was written a letter by Martha. (noted in Jespersen, 1927 [1961: 309])

d. *That letter was written Jim by Martha.

Class E ditransitives, cited by Green (1974: 83) as a distinct subclass, are seen in :

(7.50) Green (1974: 83)

Mary gave John a bath/kiss/a punch in the nose/a handshake/a shove/a beating/thrashing/whipping.

Class F ditransitives were noted by Green (1974: 82-83), Emonds (1985) and Oehrle (1976) among others:

(7.51)a. Mary gave John the measles/an inferiority complex/a cold/a broken arm/a pain in the neck/a sense of well being.

b. Emonds (1985: 188-190)

(i) Overeating gave him a stomach ache.

(ii) *He was given a stomach ache by overeating.

c. ((His) eating) Hot food gives Reginald heartburn. (Oehrle, 1976: 60)

d. Harriet's nagging gave Reginald heartburn.

e. *Reginald was given heartburn by (his) eating hot food/Harriet's nagging.

However, I was never happy with the degree of insight gained into these subtypes and space limitations in any event precluded a serious analysis. Perhaps in some other place.

7.7 Failures of Ditransitive 4 Object Passivization

Passive principle (7.16) restricts prepassive 4 arcs in two ways; they must be ditransitive 4 objects, hence neighbors of a final 3 arc and also neighbors of a viable or antioblique 3 arc. I have shown that certain restrictions on second object passivization follow from the latter condition. But the union of these conditions certainly fails to provide anything like a full account of 4 object passivization possibilities.

For instance, Dowty (1979) cited cases explained by nothing cited so far, listing some ditransitives alternating with <u>to</u> phrases and permitting their 3 object to passivize but which still have unpassivizable 4 objects; see (7.52):

(7.52)a. They awarded/gave/issued/promised/sent me that.

b. I was awarded/given/issued/promised/sent that.

c. That was awarded/given/issued/promised/sent me.

d. They guaranteed/lent/showed/sold/told me that.

e. I was guaranteed/lent/shown/sold/told that.

f. *That was guaranteed/lent/shown/sold/told me.

Since cases like (7.52f) are consistent with generalizations (7.16a, b), in fact, I believe with all principles previously advanced, their ill-formedness remains unaccounted for.

I suggest that the (7.52c)/(7.52f) contrast is linked to the following distinctions, which offer an insight into a general, so far untouched on property of English periphrastic passives clauses.

(7.53) a. They awarded/gave/issued/promised/sent me it/them.

b. I was awarded/given/issued/promised/sent it/them (by Frederica)

c. *They guaranteed/lent/showed/sold/told me it/them.

d. *I was guaranteed/lent/shown/told it/them.

Specifically, some ditransitive verbs do not permit their 4 object to be a weak definite pronoun in either active clauses or 3 object passives. In these cases, the 4 object represents what earlier work (Postal, 1998, 2001a, 2001b, 2004) called an *antipronominal* context. And I believe the following *rough* correlation holds:

(7.54) A 4 object which occurs in an antipronominal context cannot be a target for passivization even in a clause satisfying passive principle (7.16).

In isolation, (7.54) seems like a bizarre and ad hoc state of affairs. But it can be seen as a consequence of a more general fact about English periphrastic passivization:

(7.55) In general, an antipronominal object context is not a legitimate passivization target, even if all other relevant conditions on passives are satisfied.

Before examining evidence for such a claim beyond (7.52), consider briefly its implications. As far as I can see, such a principle can only make sense if passive clauses themselves inherently involve a weak definite pronoun, evidently though, a covert one. While such a conclusion might seem partially ad hoc, Postal (2004) provided some initial evidence. This consisted first of facts like:

(7.56) Postal (2004: 282)

a. They couldn't determine/tell the weight of the beast with that instrument.

b. The weight of the beast couldn't be determined/*told with that instrument.

c. As for the weight of the beast, they couldn't determine/*tell it. [9]

(7.57) Postal (2004: 282)

a.They made that guy/him into a center fielder.

b. That guy was made into a center fielder.

c. They made an excellent center fielder/*it/*him out of that guy.

d. *An excellent center fielder was made out of that guy.

Other cases of the same sort include:

(7.58) a. Valencia attended that lecture/Harvard.

b. As for that lecture/*Harvard, Valencia never attended it.

c. *That lecture/Harvard was not attended by Valencia.

(7.59) a. Rudy was speaking (in) Slovenian (with great of fluency).

b. As for Slovenian, Rudy was speaking (*in) it (with great fluency).

c. Slovenian was being spoken (*in) by the guards.

d. Slovenian, no guard was speaking (*in).

e. Slovenian is hard to speak (*in).

(7.60) a. They said he should change/switch internet providers and he did change internet providers (*them).

b. *Internet providers should be changed/switched regularly.

c. a./b. are fine in the <u>change</u> case on an irrelevant reading of type 'make changes in' rather than 'switch'.

(7.61) a. Keith usually flies (on) Air France to Martinique.

b. *Although he hates Air France, Keith usually flies (on) it to Martinique.

c. *Air France, he doesn't fly (on).

(7.62) a. We can't play under these conditions/*them.

b. These are not the sort of conditions (which) we can play under.

c. *These conditions cannot be played under.

Consider too:

(7.63) a. Vagabonds rarely traveled/wandered the back roads.

b. As for the back roads, vagabonds rarely traveled/*wandered them.

c. The back roads were rarely traveled/*wandered by vagabonds.

(7.64) a. Herman said he would slide into second base (and he did slide into it).

b. Herman said he would slide into home (*and he did slide into it).

c. Second base/*home should never be slid into by anyone.

A number of essentially parallel cases involve unpassivizable *idiom chunk* 4 objects:

(7.65) a. Willie gave the vampires the slip/*it.

b. The vampires were given the slip/*it by Willie.

c. *The slip was given them.

(7.66) a. Norton gave Lucille the run around/*it.

b. Lucille was given the run around/*it.

c. *The run around was given her.

(7.67) a. The police gave Samantha the once over/*it.

b. Samantha was given the once over/*it by the police.

c. *The once over was given her.

(7.68) a. Marco gave him the finger/*it.

b. He was given the finger/*it by several of them.

c. *The finger was given them.

(7.69) a. The director gave Mary Jane the go ahead/*it.

b. Mary Jane was given the go ahead/*it by the director.

c. *The go ahead was given them.

There are many other parallel idiom chunk cases.

Lastly, support for a strong connection between passivization and weak definite pronoun distribution derives from cases involving complement clauses. Here I limit the evidence to the contrast between <u>believe</u> and <u>think</u>:

(7.70) a. Ted believed/thought that you were a vampire but I didn't believe/*think it.

b. That you were a vampire was believed/*thought by Ted.

I discuss this evidence further in Chapter 9, section 1.

I have then provided motivation for recognizing an invisible resumptive pronoun in English periphrastic passives. That suggests that a wide range of 4 object passivization failures follow from constraints barring 4 object pronouns in specific contexts. There are though problems, one represented by a subtype of light verb <u>give</u> structure so far ignored:

(7.71) a. Sharon did not consider/respect/think of that idea.

b. Sharon gave that idea no consideration/respect/thought.

c. Sharon gave no consideration/respect/thought to that idea.

d. No consideration/respect/thought was given that idea by Sharon.

e. That idea was given no consideration/respect/thought by Sharon.

f. No consideration/respect/thought was given to that idea by Sharon.

g. That much thought was difficult (for Sharon) to give to that idea.

h. That much consideration would be too noticeable for Sharon to give to that idea.

i. The giving of so much consideration to that idea would be thought strange.

Examples (7.71d, e, f) show that passivization is quite free in this paradigm; 3 object passives, 4 object passives and 2 object passives are all entirely grammatical. The problem principle (7.55) is clear counterevidence to the claim that the 4 object can be a weak definite pronoun:

(7.72)a. They gave that idea the sort of consideration/respect/thought that it deserved.

b. *He said they would give those ideas the sort of consideration/respect/thought they deserved and they did give them it.

c. *He said those ideas would be given the sort of consideration/respect/thought they deserved and they were given it.

Such data allows at least two choices. The most obvious takes them to show the falsity of (7.55), which could then inter alia offer no insight into anything, including the restrictions on 4 object passives. The other is to find a way to keep paradigms like (7.71) consistent with (7.55). The only way I see to do this is by a refined assumption about the constraint that underlies ungrammatical examples like (7.72b, c). Rather than assuming the simplest account, which would say that the 4 object of the construction bars weak definite pronouns tout court, one can say that it only bars those which are visible, overt.

Although hardly an ideal solution, I believe it is the best alternative. I proposed something parallel in earlier work (see Postal, 1994a, 1994b, 1998) to account for similar gaps in claimed correlations between weak definite pronouns and certain nonpassive constructions. While claiming that various nonpassive constructions also linked to invisible resumptive pronouns, those works noted certain cases where those constructions, including topicalization, clefting and object raising, were possible from contexts which forbid overt weak definite pronouns. So Postal (1998: 39-41) distinguished *wide* from *narrow* antipronominal contexts, the former barring all weak definite pronouns, overt or covert, the latter only overt ones. The idea of describing such contexts with constraints barring only visible pronouns was criticized in Levine (2001), who appears to have taken such a distinction to reduce the claimed correlations to vacuity; see also Hukari and Levine (2006).

But such a conclusion is exaggerated. While true that any claim that a fixed construction W rigorously links to an invisible weak definite pronoun can be kept grossly consistent with a distribution of visible weak pronouns which either bars them or allows them in some contexts feeding

W, this is not the end of the story. If there is a reasonably extensive set of contexts which both bar visible pronouns and also preclude feeding W, where this correlation follows from no known independent principles, merely throwing out a claimed pronominal distribution/W correlation, leaves a wide body of facts unaccounted for. Moreover, if the right approach to a specific failure of visible pronoun W distribution to hold in some context C is to posit a constraint for C which only bars *visible* weak definite pronouns, one would predict that other constructions beside W which involve such (imperfect) correlations would also be good in C although generally bad in contexts which bar visible weak definite pronouns. If the whole idea of correlations between specific constructions and weak definite pronouns is erroneous, one would expect instead to find no general correlations between the relevant constructions.

But although Levine (2001) and Hukari and Levine (2006) raise many objections to this claim, I think one does find a considerable number of such correlations. The normal case, according to Postal (1998) and (7.55) above would be illustrated by e.g. paradigm (7.73) based on a quantitative object:

(7.73) a. That car cost $50,000.

b. *That car cost it.

c. *$50,000, his new car cost.

d. *It was $50,000 that that car cost.

e. *$50,000 is impossible for a car to cost.

f. *50,000 was cost by that car.

The quantitative object cannot be a weak definite pronoun and topicalization, clefting, object raising and passivization of such an object is impossible. That situation contrasts with that involving the same quantitative object and a different verb:

(7.74) a. Phyllis bet $5000 on that horse.

b. They said Phyllis bet $5000 on Rocketfeet and she did bet that much/*it on him.

c. $5000, only a crazy person would bet on that horse.

d. It was $5000 that Phyllis bet on that horse.

e. $5000 was hard for her to bet on one race.

f. $5000 was bet on that horse.

While (7.74b) shows the quantitative object of the relevant usage of <u>bet</u> also precludes a weak definite pronoun, (7.74f) illustrates that passives of that object are nonetheless good, seeming to provide another counterexample to claim (7.55). But the other constructions I have in the past claimed are also inherently linked to invisible resumptive pronouns are also good.

I take such facts to show that the relation between the cited constructions including passivization and weak definite pronouns is systematic, despite the contrasts between cost and bet. Simply rejecting a connection between these constructions and weak definite pronouns fails to account for the systematicity. It offers no reason why the antipronominal quantitative object of cost should reject all of the constructions, while the antipronominal quantitative object of bet accepts them all. Looking at (7.74) in isolation, one could of course simply say that pronominal distribution is irrelevant to the constructions at issue. But that leaves paradigms like (7.73c, d, e, f) mysterious. The account suggested here, that the constraint on the object of cost bars all weak definite pronouns, while that on the object of bet bans only overt ones, accounts for both paradigm types. I know of no other proposal which explicates correlations between the acceptability or nonacceptability of groups of these constructions in particular contexts.

I thus assume that a periphrastic English passive clause manifests an invisible resumptive pronoun in the site of the passivized object, whether that is a 2 object, 3 object or 4 object. The question is how this conclusion integrates with the rest of the description of such structures. Since this issue is not central to present concerns, I answer only briefly and schematically.

Consider:

(7.75) a. Elsa was [arrested X by the FBI].

b. Elsa was [sent X threats].

c. Horrible things were [sent her X].

The claim is that invisible resumptive pronouns occur at the X sites. My proposal is that this is not a function of anything else in the lower nonfinite clauses headed by arrested/sent/sent themselves, which I have bracketed, but rather is a consequence of the interaction of those with the containing auxiliary verb structure. More precisely, I assume that the resumptive pronoun links to the passivized phrase, here Elsa/Elsa/Horrible things, by virture of the fact, discussed at length in Chapter 4, that the latter raises out of a lower (non finite) clause into a containing (auxiliary) clause. Technically, the copy arc (replacer) headed by the resumptive pronoun is seconded by the foreign $\text{successor}_{\text{I}}$ defining the raising into the auxiliary clause, not by any arc internal to the clause defined by the P_1 arc associated with a $\text{prepassive}_{\text{II}}$ arc. [10] If the passivized phrase is a 2 object, then the resumptive pronoun will head a 2 arc and be a 2 object; if the passivized object is a 3 object, then the resumptive pronoun will head a 3 arc and be a 3 object and if the passivized object is a 4 object, then the

resumptive pronoun will head a 4 arc and be a 4 object. In all cases, the relevant copy arc will then be a final 2, 3 or 4 arc internal to the inner, passive clause itself, while the prepassive$_{II}$ arc will in all cases be a nonfinal output arc.

In these terms, the most general constraints on weak definite pronouns, those covering *both overt and covert ones*, will bar periphrastic passivization of particular 2 objects, 3 objects and 4 objects, even if these are otherwise licit, if the positions of those objects bar weak definite pronouns. But more restricted constraints on weak definite pronouns, those covering only overt ones, will not have that consequence, as in paradigms (7.71) and (7.74).

The view that the invisible copy pronouns associated with English periphrastic passivization arise from the raising of the passivized DP permits one to see that cases discussed in Postal (2004: Chapter 8) where subject positions are antipronominal do not provide counterexamples to a correlation between passivizability and the possibility of weak definite pronouns. For, although these resist even invisible weak pronouns in other constructions, see e.g. (7.76g, h), when embedded as complements of raising verbs like <u>believe</u> or <u>prove</u>, main clause object passivization (hence complement final 1 passivization) is fine:

(7.76) a. Something/*It was the matter with the engine.

b. They believed/proved something/*it to be the matter with the engine.

c. Something was believed/proved to be the matter with the engine.

d. They said the love bug bit him (*and it did bite him).

e. They believed/proved the love bug/*it to have bitten him.

f. The love bug was believed/proved to have bitten him.

g. *That, they proved was the matter with the engine.

h. *It was the lovebug that they believed had bitten him.

However, (7.76c, f) really show nothing other than that these infinitival forms involve raising to object. Because that combines with my claim that the auxiliary clause linked raising associated with periphrastic passives leaves a copy pronoun to determine that the invisible pronouns in such cases head final main clause 2 arcs, not final complement clause 1 arcs. But only the latter need be taken to define antipronominal contexts.

There is of course a gap in the overall description of the claimed pronominal aspect of periphrastic passivization so far. Since all the posited resumptive pronouns are covert, the copy pronominal arcs

they head are erased. The identity of the arcs which erase them is not clear to me. Somewhat arbitrarily, I assume the eraser is in all cases the seconder of the copy arc, the 20 arc foreign successor$_I$ of the prepassive arc:

(7.77) **The Passive Clause Resumptive Pronoun Erasure Condition**

If A is prepassive$_{II}$ arc, C copies A and B seconds C, then B erases C.

One inadequacy of this statement is that it is restricted to periphrastic passive clause copy arcs, when ultimately there should no doubt be a common statement covering those in Q constructions like object raising as well. But I cannot pursue that generalization.

To sum up, a variety of 4 object passives of clauses with passivizable 3 objects are blocked because the 4 object contexts are subject to constraints precluding them from containing (at least covert) weak definite pronouns anteceded by the sort of phrases which head the prepassive 4 arcs in the blocked passives. Since the raising associated with periphrastic passives must leave a resumptive pronoun, such constraints block passivization of any object subject to them. For reasons which I have no insight into, it just turns out that a lot of 4 objects are subject to such constraints.

7.8 Two Alternative Viewpoints

This section briefly comments on two conceptions of ditransitive constructions which contrast radically with the viewpoints developed here. The first is found in (7.78):

(7.78) Oehrle (1976: 247-249)

> "Consider now the proposals of Perlmutter and Postal concerning what they call 'relational grammar'. One of the central claims of this theory is that cyclic rules are defined in terms of grammatical relations such as subject ('I'), direct object ('II'), and indirect object ('III')." "Thus, the passive is formulated as the rule 'II → I', and the dative movement rule is formulated as 'III → II'. Furthermore, they propose that if an NP_i fulfilling one of these grammatical relations is replaced in the course of a derivation by some NP_j, then NP_i ceases to bear any grammatical relation to the sentence. This analysis is inconsistent with the treatment of the passive proposed in section 2, and if my arguments for the formulation of the second passive are correct, they provide a serious counterexample to Perlmutter and Postal's theory.
>
> To see this more clearly, consider two possible derivations within this theory of sentences like (1):
>
> 1) A book was given him.

On a relational theory, this sentence will have an underlying structure roughly corresponding to 'PRO gave a book to him', in which the grammatical relations are as follows: I='PRO'; II='a book'; III='him'. If the dative rule applies before the passive rule, (1) is ungenerable, since the dative rule is stated as 'III → II' and a consequence of this is that 'a book' ceases to be the direct object upon its replacement by 'him'. Thus if the dative rule applies first, the application of the passive rule can only produce the sentence

2) He was given a book.

Consider the alternative application of the rules, however. Applying the passive rule first, we get the right NP into the subject position. But what do we do about the preposition?

If we now allow the dative rule to apply, serious problems arise. First, the pronominal restriction that we noted in section 2 must be dealt with--i.e. it's not clear that the usual dative rule will suffice. Second, this theory offers no way to account for sentences like <u>My sins were forgiven me,</u> whose derivation does not involve the dative rule. Furthermore, it is not at all clear how to avoid generating sentences like (3b) from (3a) on this account, since presumably the same structural considerations apply:

3a) As far as the United Fund is concerned, I think everyone should give to them.

3b) *As far as the United Fund is concerned, I think everyone should give them.

In short, the problem of the second passive is not only not resolved by the theory of relational grammars; the existence of such a phenomenon poses a very serious problem for this theory."

First, the pre-1976 version of 'relational grammar' proposals Oehrle criticized had little in common with the present account. On a theoretical level, that view accepted a generative conception of grammars, posited specific generative rules, had a notion of cyclic application, etc. It had no clear notion of arc, hence none of arc labeling, thus lacked a clear idea of the kind of formal objects syntactic structures were taken to be. Rather, the assumptions were a mixture of the transformational ideas of the time informally and unclearly supplemented with posits of some primitive grammatical relations.

On a descriptive level, the account had no notion of 4 object or 5 object; hence its analysis of ditransitive structures was necessarily entirely distinct from the present one. Further, those ideas accepted a relational version of the Dative Shift analysis mentioned in Chapter 3, and so regarded a

(Class A) ditransitive first object as a 2 object derived from an underlying 3 object taken to be represented by the kind of to phrase taken *here* to be a flagged 5 object. Although those earlier ideas posited 3 objects, they failed to recognize that the proper instantiations of these in English are the first objects of ditransitives.

The upshot is that almost none of Oehrle's criticisms of 'relational grammar' has any bearing on current proposals. But they did bring out several problems which I claim to have offered solutions for. The most general is that of describing second object passivization, which Oehrle dealt with in terms of his (1). As he observed, this was not generable if the dative rule applied before the passive rule, since that would render him the 2 object and force the original 2 object, a book, to demote to chomeur. The stated order of applications could then only yield his (2). And the alternative application order would correctly passivize the original 2 object, but fail to account straightforwardly for the preposition, unless the dative rule applied after passive.

But Oehrle noted three objections to that ordering. First, it fails to impose the restriction that for speakers allowing examples like (1), the postverbal DP must be very minimal, in Oehrle's dialect apparently only a pronoun. This is not the case for other DPs putatively rendered as 2 objects by the posited dative shift rule, as seen in contrasts like:

(7.79) a. I gave that underappreciated individual a last chance to succeed.

b. A last chance to succeed was given him/*that underappreciated individual.

Second, Oehrle claimed that the proposals he was criticizing could not account for second passive cases like (7.80a):

(7.80) a. My sins were forgiven me.

b. *They forgave my sins to me.

This followed, he seems to have assumed, from the fact illustrated by (7.80b) that the verb bars a to phrase. While it would have been logically possible to posit such a phrase as subject to obligatory application of dative shift with that verb, presumably Oehrle would have considered such assumptions in themselves undesirable enough to still count against the view he rejected.

Third, Oehrle also claimed, I infer, that allowing dative shift to apply after passive and hence to a structure lacking a 2 object would wrongly permit derivation of his (3b) from his (3a).

Evidently, none of Oehrle's objections apply directly to present proposals, in which second object passivization is conceptualized as passivization of 4 objects, not 2 objects. Specifically, the first two objections offered by Oehrle attacked assumptions based on trying to reduce both first object and second object passives to the passivization of 2 objects.

Still, his observation of contrasts like (7.79a, b) reveals a minor issue I have not dealt with. But treating such a restriction in present terms raise no problems of the sort Oehrle noted. Involved at worst is an additional statement of the form:

(7.81) **The 3 Object Lightness Condition**

If A is a final 3 arc neighbor of a prepassive 4 arc, A's head is *light*.

Of course, to render this a serious principle, one would have to give an account of the undefined property 'light', which I will not attempt; perhaps it has to do with accent, perhaps with word count. But the key point is that (7.81) rightly draws the distinction between the contrasting versions of (7.79b), and between the bad version and (7.79a), since only the bad version of (7.79b) involves all of a prepassive 4 arc with a 3 arc neighbor whose head is not light. (7.79a) has a 3 arc with a nonlight head and a neighboring 4 arc, but the latter is not prepassive, while the good version of (7.79b) has a prepassive 4 arc with a 3 arc neighbor, but the latter's head is light. [11]

Issues relevant to Oehrle's criticisms of early RG proposals arise in connection with a suggestion of Den Dikken's, also worth addressing:.

(7.82) Den Dikken (1995: 134)

> "This also implies that in a 'genuine' double object construction, passivisation with raising of the Theme is ruled out. We thus effectively predict the English type situation in which, on the whole, only Goals raise to subject in double object passives. Languages (and dialects of English; cf. Czepluch 1982) with grammatical double object Theme passives presumably derive these from 'covert' prepositional dative constructions, not from Dative Shift constructions."

This passage claims first that in English in general, only first objects and not second objects can be passivized in ditransitives. No evidence is presented for this putative asymmetry. And, as I have multiply indicated, the actual situation is that in some dialects only 3 objects passivize but in others both 3 objects and (some ditransitive) 4 objects do.

Second, and more importantly, Den Dikken claims that those cases taken in this work as passives of ditransitive 4 objects are actually not only passives of 2 objects but, for those speakers who permit

them, passives of the 2 objects of corresponding *nonditransitive* clauses, that is, those in which there is a PP, with the expected preposition somehow missing in the passive. Den Dikken's 1995 proposal thus shared key assumptions with the pre-1976 RG account Oehrle addressed, in particular, the assumption that second object passives are 2 object passives. I argued against this view in Chapter 6, citing the behavior of expletive (there) passives, locative inversion passives, participial absolutes, get passives and certain auxiliary-free embedded passives, to show that second object passives in many ways *fail to behave like 2 object passives*.

But there is a bit more to be said. In Den Dikken's terms, for speakers like Fillmore and me having grammatical passives like (7.83b), the latter are taken as passives of the 2 object in a structure like (7.83c), with the expected preposition missing; they are not grammatically related to (7.83a).

(7.83)a. They handed Louise the message.

b. The message was handed Louise.

c. They handed the message to Louise.

This is parallel to the proposal Oehrle criticized. Such an account is additionally untenable for basic reasons, some cited in Dowty (1979). It misses the generalization entailed by either (7.16a, b) that even for the subset of speakers permitting them, passives like (7.83b) only exist with (a subset of) those verbs like hand which occur in the ditransitive construction like (7.83a). This does not follow from Den Dikken's proposal, which treats cases like (7.83b) as entirely independent of ditransitives. Hence it would need further ad hoc additions to block ungrammatical examples like e.g. (7.84d) since (7.84a, b) are both fine:

(7.84)a. I mentioned that to her.

b. That was mentioned to her.

c. *I mentioned her that.

d. *That was mentioned her.

These cases are illustrative of dozens and dozens of verbs, e.g. explain, indicate, etc.

Long after constructing the above criticism of Den Dikken's proposal, I encountered a parallel criticism of ideas of Stowell (1981) and Larson (1988) in Emonds and Whitney (2006), although the parallels are partly obscured by the latter authors' radically different theoretical and descriptive assumptions:

(7.85) Emonds and Whitney (2006)

"Both Stowell and Larson circumvent the problem of the bare dative NPs' seeming ability to move (only) to A-positions by claiming that 'dative passives' (34) involve movement from an outer, non-promoted position directly to the subject position. Since the deep indirect objects then receive case after passivization, there is no need for an oblique *to* or *for* with a trace t_k:

(34)

We$_k$ might be given a book t_k.
A woman$_k$ was offered the job t_k.
The guests$_k$ were finally fixed an appropriate lunch t_k.

Once English dative passives are not derived directly from double object constructions, however, an important generalization is lost. Early generative analyses observed that English verbs which do not permit prepositionless double objects prohibit dative passives as well:

(35)

*Our club might be {distributed/donated/suggested} some books.
*A woman was {demonstrated/outlined/revealed} the procedure.
*The guests were finally {concocted/designed/reordered} an appropriate lunch.

That is, dative passives appear to derive, in English at least, from double object constructions. Hoekstra (1995) provides two further arguments against passivizing indirect objects in their base position. Along the same lines, Romance languages lack dative passives because they lack bare double objects. Thus, the following descriptive generalization encompasses both English and Romance:

(36)

Dative passive Restriction:
Passivization of indirect objects (unmarked by any dative case) results from moving NPs already promoted to direct object.

The Stowell and Larson accounts of dative passives contravene (36) and thus fail to predict data such as (35) naturally."

Of course, what Emonds and Whitney mean by 'direct object' is what the present work takes to be the 3 object of a ditransitive.

The failures of proposals like Stowell's, Larson's and Den Dikken's to capture the connection between second object passives and ditransitive clauses and their failure to recognize that passives like (7.83b) do not behave like passives of 2 objects in a number of respects suffice to show their untenability. There is just no way to reduce English second object periphrastic passivization to 2 object passivization.

Recall that taking second object periphrastic passives to be 2 object passives loses the insight as to why such passives do not intersect expletive there or locative inversion passives, which in present terms follows from the fact that the latter types are restricted to 2 object passives. And the assumption offers no ground the *nonexistence* of second object middles, parallel to second object passives, in those dialects having the latter. This yields contrasts like:

(7.86)a. Such things weren't easily taught them.

b. *Such things didn't teach them easily

That also shows up as anomalous within the proposals in question, since they take the first objects of ditransitives to be 2 objects. And Chapter 6 also cited facts about participial absolutes, causative complements and get passives to support the same point.

Overall then, the idea in (7.82) is factually unmotivated, fails to capture relevant generalizations and has a range of wrong consequences. It seems to have been driven entirely by Barrel (A) theoretical assumptions, at least some of which are thereby certainly undermined.

Notes to Chapter 7

1 It may be that for any specific type of passivization T, if T can target *non-*2 objects, T can passivize 2 objects. So e.g. while some NLs permit passivization of 3 objects, I know of none which permits *only* those. Moreover, the generalization seems to hold internal to individual NLs. So French participial passives target only 2 objects, while one type of clause union passive targets 3 objects, but also 2 objects. If this primacy of 2 object targeting in passivization reflects a genuine NL principle, it is unclear what sort of grammatical law the nonexistent situations violate.

2 But see section 5 for discussion of cases where the correlation cited by Fillmore is seemingly threatened.

3 The cases in (7.18) represent most of what Herriman (1995: 160-162) calls *class 5* indirect objects.

4 A refinement is minimally necessary. While examples like (ia) manifest the constraint, that is, preclude an overlapping denotation reading, those like (ib, c) do not:

(i)a. *Fred$_x$ awarded them$_{x,...}$ a prize.

b. FRED$_x$ awarded them$_{x,...}$ a prize.

c. Fred$_x$ awarded THEM$_x$,... a prize.

Contrastive stress on either of the DPs potentially involved in overlapping denotation permits the overlapping reading. This is one of many facts which indicate a relation between contratively stressed DPs and structures like (iic):

(ii)a. Who awarded them a prize?

b. FRED$_x$ awarded them$_x$ a prize.

c. The one who awarded them$_x$ a prize was FRED$_x$.

It is then not really relevant that e.g. (7.24a) is fine even with an overlapping interpretation if I is contrastively stressed. Plausibly, as advocated in e.g. Seuren (1996: 315-321; 2004: 175-185), stressed cases like (iib) have a different and more complex structure than their seeming noncontrastive parallels, one related to (iic).

5 I see no way to strengthen (7.28) to require the neighboring arc to be an *initial* Term arc, because of cases like e.g. (i):

(i) Murray seemed clever to himself.

Here any arc headed by Murray in the main clause is an R-successor$_I$ of a foreign successor and hence not initial. It is possible though that a correct elaboration of (7.28) would require the antecedent arc to be an *antioblique* Term arc, this concept defined below. But I have not studied this possibility.

6 It might seem that (7.28) must be further restricted to only certain reflexive arcs, excluding, for instance, various types of *long distance* reflexive for which the neighbor condition could appear too strong; see Postal (2006). For instance, consider (i):

(i) Janet believes that no one but herself can solve the problem.

Condition (7.28) would wrongly block (i) if it is assumed that the relevant anaphoric arc is that inside the complement 1. But this problem vanishes if, as suggested in Chapter 1, herself also heads a main clause R-foreign successor$_{II}$, such an arc determining the locality underlying the notion *reflexive*.

7 Cases like (7.29b) might well be ungrammatical for reasons independent of those of relevance here. Specifically, about + DP$_1$ phrases could represent a complex structure in which DP$_1$ is embedded in a larger DP whose head denotes a subject matter. If so, then (7.29b) could be bad for the same reason as the long form of (i):

(i) Ellen spoke about the subject of Sally's father with him(*self).

Evidence for such a complex structure is provided by facts like:

(ii) a. Ellen spoke about (the subject of) Sally's father but I did not speak about that subject.

b. Ellen spoke to (*the subject of) Sally's father but I did not speak to him/*that subject.

It remains unclear how to fully implement the needed analysis. Perhaps a version of (7.28) could then predict the ungrammaticality of (7.29b). But even if the speculations of this note are correct, eliminating cases like (7.29b) as supporting data, (7.28) remains motivated since other cases mentioned are not reducible to an analysis like that considered here.

8 The idea that the DP in a passive by phrase represents an underlying 1 is often denied in Barrel (A) linguistics; see Postal (2004: Chapter 8, section 5) for discussion and references. Collins (2006) presents a Barrel (A) account in which the relevant DP *is* an underlying 1, but in which it is denied that by + DP is a PP or even a phrase. This view seems to me untenable but space precludes discussion.

9 Levine (2001: 171) cites examples of this use of tell followed by pronominal it from the Brown and British National Corpora, e.g.:

(i) You could tell it just by looking at his flabby features.

Numerous people he personally consulted apparently found such examples perfect. Granting that, (i) remains ungrammatical for me unless the it is elided. For dialects accepting (i), 'determine' tell is simply irrelevant to the issues here or in the work Levine was reviewing. But these data do not represent counterexamples to any claim I have made.

However, Levine says rather that my claim about tell 'turns out to be factually unsupportable.' But this could only be the case via a conclusion from the fact that *other* speakers accept things like (i) that someone who claims they do not accept then *must* be mistaken. Implied is that (i) is not only grammatical for the speakers Levine is citing *but must be taken to be such for me as well.*

But no logic determines that. I might be mistaken about (i) for my idiolect; or those who say they accept (i) might be mistaken about theirs, or we all might be mistaken. I can't follow then why the logical possibility, an a priori normal hypothesis in the face of speaker disagreement, that (i) is bad for some speakers and good for others, was seemingly *not even worthy of consideration.*

10 There is also no independent evidence that the context in question *permits* a weak definite pronoun anteceded by an expletive, but this is irrelevant.

11 Since I have analyzed periphrastic passives as involving prepassive$_{II}$ arcs, which erase their local successors, such a predecessor/successor pair cannot by definition determine a copy arc. For that to exist, the successor would have to be the seconder of a replacer of the predecessor, which would

mean that local successor$_{II}$ and local predecessor$_{II}$ would erase each other, violating (3.49) of Chapter 3, the Remote Erasure Asymmetry Condition. A prepassive$_{II}$ arc could second an *anticopy* arc for its local successor$_{II}$ 1 arc, such an arc being sponsored by the local successor$_{II}$. But that would yield an unerased 1 arc, arguably violating (4.25) of Chapter 4, which precludes a final 1 arc in a clause with a prepassive$_{II}$ arc. What is possible is for the arc passive$_{II}$ arc to be replaced by a copy arc seconded by its higher clause successor arc, which I claim is systematically the case.

12 Oehrle's discussion calls attention to the contrast between his (3a, b), which I also have not accounted for. In present terms, involved are at least the following. First, there is a sense of <u>give</u> whereby it means roughly 'contribute', far more specific than the general sense of <u>give</u> which just denotes transfer of possession (of a wide variety of sorts). Second, with this sense, when <u>give</u> arguably takes a covert 2 object, its 3 object must apparently demote to 5. Other verbs also share this property:

(i)a. That bank loans *(to) foreigners.

b. She rents *(to) students.

c. They sell *(to) terrorists.

d. That store won't ship *(to) Patagonia.

It is doubtful that one can generalize to every verb taking a 3 object and a covert 2 object:

(ii) Rosalie writes (to) soldiers

The case for recognizing a covert 2 object (denoting what is written) is identical for both versions of (ii) and surely no worse for either than the case for recognizing such in (i). But I argued earlier that the short version involves a final 3 object, and thus (ii) seems to contrast with Oehrle's (3) and with (i). Constraints on 3 objects occurring with covert 2 objects deserve extensive study.

Chapter 8 Visser's Generalization

8.1 A Much Discussed Passivization Failure

As understood in past literature, *Visser's Generalization*, hereafter: VG, stated informally, expresses a relatdion between (i) control by the 1 (in some sense) of a main clause C of the final 1 of a complement clause of C and (ii) passivization in C. It states that these two phenomena are incompatible; see e.g. Bach (1979), Bresnan (1978, 1982b: 354), Chomsky (1977b: 13-14), Culicover and Jackendoff (2001, 2005: 435), Jacobson (1982), Landau (2000, 2003), Larson (1991), Pollard and Sag (1994: 277, 285, 304-308, 316) and Wasow (1977: 512-513, 1981: 305). [1] The initial generalization is due to Visser (1973), the term to Bresnan (1978, 1982b).

Standard illustrations of VG involve main clauses based on the verb <u>promise</u>: [2]

(8.1)a. Mike promised Sylvia to call Rachel.

b. *Sylvia was promised (by Mike) to call Rachel.

That the right generalization references control is supported by the fact that *noncontrol* structures with the same verb do not preclude passives of the corresponding DP (Chomsky, 1977a: 14, note 13; Bresnan, 1982b: 355):

(8.2)a. Mike promised Sylvia a life of luxury.

b. Sylvia was promised a life of luxury by Mike.

(8.3)a. Mike promised Sylvia that he would clean the garage.

b. Sylvia was promised by Mike that he would clean the garage.

That the right generalization references in particular *subject* control is further supported since object control cases in general do not bar passives:

(8.4)a. Sylvia advised/convinced/ordered/persuaded/told the student to sharpen the pencils.

b. The student was advised/convinced/ordered/persuaded/told (by the professor) to sharpen the pencils.

Although reasonable, the just sketched common past opinion is at best misleading in several respects. I will argue that facts like (1b) do not represent a (single) principle specifically barring the interaction of passivization and subject control. And, as previously argued (Postal, 1990b; 2004: Chapter 8), VG type restrictions are not specific to passive structures. Rather, the (1b) blockages are a function of several distinct principles, only one of which is specific to control and one of which is the basic passive

principle (7.16). These facts critically impact the current study, since the following explanatory account collapses without the distinction between 2 objects and 3 objects and appeal to 4 objects is also relevant. [3] Further, the concept quace turns out to play a central role.

I cannot review *past* accounts of VG. But the recurrent idea that VG is just the constraint that the complement DP of a passive by phrase cannot be a controller (e.g. Bresnan, 1982b: 354; Dalrymple, 2001: 345; Huddleston, 2002c: 1270), is not viable. [4, 5, 6] Although this principle properly blocks (1b), while rightly not blocking any of (8.4b), it faces significant counterexamples. [7]

First, passive by phrases are fine controllers in nominalizations:

(8.5)a. Pollard and Sag (1994: 289)

The promise by Sandy to leave the party early caused quite an uproar.

b. Culicover and Jackendoff (2005: 435)

the promise to Susan by John to take care of himself/*herself

c. the attempt by his sister to clear herself/*himself/*yourself of those charges

d. the vow (by Achilles) to Zeus (by Achilles) to avenge the murder

Second, there are fine cases of clausal by phrase complement control with passivized expletive 1s:

(8.6)a. Williams (1980: 216)

It was decided by the committee to have dinner at 6.

b. Landau (2003: 476)

It was decided (by the party goers) to leave (immediately).

c. It was never planned by that embezzler to have to testify against himself.

And control via by phrase complements of adjuncts is standard:

(8.7)a. The problem was solved by Marvin without even tiring himself/*yourself.

b. That was stated by Ceasar's wife after entertaining herself/*himself with one of the slaves.

Finally, as argued in Postal (1990b; 2004: Chapter 8) and discussed below, VG-like patterns are also found with constructions *which are not passives* and which contain no by phrases. So the 'no by phrase complement controllers' principle is not only lethally too strong but also too weak to determine those aspects of English syntax linked to VG.

8.2 Other Control Cases

To properly grasp the nature of VG, one must avoid limiting attention to promise paradigms. First, for at least many speakers, including me, *verbs of requesting* in general occur in at least two distinct control patterns. The standard active clause object control pattern is well-known:

(8.8) Jane appealed to/asked/begged/beseeched/called on/called out to/demanded of/gestured to/implored/petitioned/pleaded with/prayed to/requested/signed to/signaled to/wrote (to/∅) Brendan to leave the monastery.

One might assume that such cases, at least those with *non*-prepositional objects, permit passivization freely. For example, Trask (1993) gave a putative definition of VG which built in (for no discernable reason) a claim of unrestricted object controller pasivizability:

(8.9) Trask (1993: 299)

> "The observation that an object NP with a following complement can always and only be passivized if that complement relates to the object."

Notwithstanding the context and the choice of words, formulation (8.9) was not a definition or observation but a general claim.

However, as the unpassivizable *object controllers* in (8.10a, b) show, it is a partly false one.

(8.10)a. Brendan was appealed to/asked/*begged/*beseeched/called on/called out to/contracted with/*demanded of/gestured to/implored/petitioned/pleaded with/prayed to/requested/signed to/signaled to/written to/*written by Jane to leave the monastery.

b. Barrett (1997: 96)

(i) John begged Mary to leave the party.

(ii) *Mary was begged to leave the party.

While most object controllers, even in request verb clauses are passivizable, some are evidently not. Minimal pairs like (8.11d) are rather striking:

(8.11)a. Jane signaled/wrote to Brendan to leave the monastery.

b. Brendan was signaled/written to by Jane to leave the monastery.

c. Jane signaled/wrote Brendan to leave the monastery.

d. Brendan was signaled/*written by Jane to leave the monastery.

Moreover, while (8.10) illustrates that many controllers found in PPs are passivizable, many are not. So, all the *manner of speaking* verbs (see Chapter 2, (2.70)) take PP complement controllers in at but preclude pseudopassivization based on that PP type, contrasting with the good cases of (8.10):

(8.12)a. Grant grunted/screamed/shouted/snarled/whined/whimpered/yelled at Lee (to shut up).

b. Lee was grunted/screamed/shouted/snarled/whined/whimpered/yelled at by Gil (*to shut up).

Here there is a clear contrast linked to the presence or not of the optional infinitive, which alone permits (object) control. [8]

Unlike VG cases, unpassivizable object control cases such as those in (8.10) have not received significant attention. But they, as well as the subject control examples ultimately fall under the principles taken here to account for VG.

There also exists, with the right (for me, very narrow) choice of infinitival complement active clause subject control with predicates of the *request* class; see e.g. Bach (1979: 521), Bowers (2005b: 19-20), Hornstein (2003: 35-37), Ladusaw and Dowty (1988), Landau (2000: 184-185; 2003: 480) and Larson (1991): [9]

(8.13)a. Chomsky (1972c: 48)

John begged Bill to be permitted to stay.

b. Jane appealed to/asked/begged/beseeched/called on/called out to/demanded of/gestured to/implored/petitioned/pleaded with/prayed to/requested/wrote (to) Brendan to be allowed to leave the monastery.

The narrow constraints on the complement required for this pattern are *not* of direct concern here. [10] What is initially is that, in contrast to the object control forms in (8.10), with subject control, no verb of the class permits passivization of its object: [11]

(8.14) *Brendan was appealed to/asked/begged/beseeched/called on/called out to/demanded of/gestured to/implored/petitioned/pleaded with/prayed to/requested/written (to) by Jane to be allowed to leave the monastery.

Bowers (2005b: 20) noted the fact for <u>ask</u>, providing:

(8.15)a. John asked the girls to go to the concert with him.

b. John asked the girls to be allowed to go to the concert with them.

c. The girls were asked by John to go to the concert with him.

d. *The girls were asked by John to be allowed to go to the concert with them.

This should be taken as another illustration of VG. These paradigms show the systematicity of VG restrictions and undermine any view that the VG property illustrated with <u>promise</u> is, even viewed entirely internal to English, an idiosyncracy of that verb.

That conclusion is reinforced by the fact that the verbs in (8.16), which unremarkably take object control, also permit subject control under circumstances parallel to those for request verbs. Moreover, for these, passives of subject control cases are also impossible, although, like request verbs, these forms permit unproblematic object control passives:

(8.16)a. Velma bugged/hassled/nagged/noodged/pestered Duncan (to call his mother).

b. Duncan was bugged/hassled/nagged/noodged/pestered by Velma (to call his mother).

c. After Doolittle's famous bombing of Japan, when President Roosevelt was pestered to reveal where the planes came from, he just said, "ShangriLa. ...
www.chinarivers.com/adventure1.html -

(8.17)a. Armando bugged/hassled/nagged/noodged/pestered the baby sitter (to be allowed to watch television.).

b. The baby sitter was bugged/hassled/nagged/noodged/pestered by Armando (*to be allowed to watch television).

This arguable further instantiation of VG may not have been previously noted in the literature. [12]

8.3 One Aspect of Visser's Generalization Is Not Directly Linked to Control

I now argue that the constraint blocking certain cases of object control passivization is identical to one of the constraints that block the subject control cases, that is, which underly VG. To sharpen the focus, let us concentrate on a single contrasting pair:

(8.18)a. Sylvia asked Brendan to leave the monastery.

b. Sylvia asked Brendan to be allowed to leave the monastery.

The overall syntax of two these cases might appear identical, the only difference being the structure of the complements and the associated distinct control relations.

But attention to the 2 object/3 object contrast shows that this is wrong. The post-verbal DP in (8.18a) is a 2 object while that in (8.18b) is a 3 object. So the postverbal DP in (8.18a) heads the same type final arc as the first object in e.g. (8.19a) while the postverbal DP in (8.18b) heads the same type final arc as the single object in (8.19b).

(8.19)a. Sylvia asked Brendan for a loan.

b. Sylvia asked Brendan a question.

These claims are supported by the fact that the object in (8.18a) like that in (8.19a) is not bound by the characteristic restrictions shown in earlier chapters to limit the distribution of 3 objects compared to that of 2 objects, while the object in (8.18b) *is* subject to these.

These claims are illustrated as follows:

(8.20) Complex DP Shift

a. Sylvia asked to leave the monastery both of the children who were starting to hit each other.

b. Sylvia asked for a loan the guy she had been dating for several months.

c. *Sylvia asked to be allowed to leave the monastery the person who was in charge of the meeting.

d. *Sylvia asked a question the guy she had been dating for several months.

(8.21) Topicalization

a. That child, Sylvia asked to leave the tepee.

b. That guy, Sylvia asked for a loan.

c. *That officer, Sylvia asked to be allowed to leave the tepee.

d. *That officer, Sylvia asked a question.

(8.22) In Situ Relative Pronouns

a. that child, asking whom to leave the tepee,…

b. that guy, asking whom for a loan,…

c. *that officer, asking whom to be allowed to leave the tepee,…

d. *that officer, asking whom a question,…

(8.23) Nominal Object Raising

a. an odd child to ask to leave the tepee

b. an odd guy to ask for a loan

c. *an odd officer to ask to be allowed to leave the tepee

d. *an odd officer to ask a question (ignore reading where 'officer' is questioner and contrast with the grammatical <u>an odd officer to ask a favor of</u>)

These data support the contrasting object claim, revealing a correlation expressible as in (8.24):

(8.24) Both the objects in subject control clauses and the object controllers which don't passivize manifest 3 object properties, while passivizable object controllers have the properties of 2 objects. [13]

Much past VG discussion focused on <u>promise</u> clauses; observe then that (8.24) holds for <u>promise</u> subject control clauses:

(8.25) Complex DP Shift

a. *Sylvia promised to buy ice cream both of the children who were starting to hit each other.

b. *Sylvia promised ice cream both of the children who were starting to hit each other.

(8.26) Topicalization

a. *That child, Sylvia promised to buy ice cream.

b. *That child, Sylvia promised an ice cream cone.

c. That officer, Sylvia promised that she would call Ted.

(8.27) In Situ Relative Pronouns

a. *that child, promising whom to buy ice cream,...

b. *that child, promising whom an ice cream cone,...

c. that officer, promising whom that she would call Ted,...

(8.28) Nominal Object Raising

a. *an odd child to promise to buy ice cream

b. *an odd child to promise an ice creram cone

c. an odd child to promise that she would buy ice cream

So the object of verbal promise behaves like a 3 object when it has a subject control infinitival complement, just as the first object does in the ditransitive paradigm with this verb. The behavior of the DP object differs, and is rather that of a 2 object, when the complement is a that clause.

Generalization (8.24) clashes with what I take to be the conventional wisdom about the relevant paradigms, expressed for instance by Culicover and Jackendoff (2005: 435). They take the control paradigms of order (object control) and promise (subject control) to have syntactically the same structure with the only difference a function of distinct verbal lexical semantics. But they observe this leaves unexplained the failure of subject control promise to allow its object to passivize, striking given their observation of contrasts like:

(8.29)a. *Susan was promised by John to take care of himself/herself.

b. Susan was promised a new bike by John.

This highlights another clear negative consequence of the failure of Barrel (A) ideas to incorporate a distinction between 3 object and 2 object. [14]

8.4 Visser's Generalization and Constraints on 3 Object Passivization

Taking (8.24) as established, the first question is why can't 3 object contollers or 3 objects in subject control clauses passivize. Mere 3 object status alone cannot be a sufficient explanation since many ditransitive 3 objects have been sent to passivize, including the first object with the very verb promise, as in (8.2)/(8.29b). The answer I propose is that the subject control cases violate (7.16a, b). They fail the requirement that a 3 object can only passivize in a clause *with a final 4 object*. Put differently, both 3 objects in subject control clauses and 3 object controllers fail to passivize because they are not, as

might first appear, ditransitive first objects but rather *are single objects*, whose passivization is blocked by (7.16a, b) for the same reason that all passivization of Array 2 single objects is.

Focus on particular cases of failed passivization in control clauses:

(8.30)a. Michael promised Sandra to call the plumber.

b. *Sandra was promised by Michael to call the plumber.

c. Michael begged Sandra to call the plumber.

d. *Sandra was begged by Michael to call the plumber.

If (8.30b, d) are blocked by the entailment of (7.16a, b) requiring an output 4 object to cooccur with any passivized 3 object, then some aspect of the grammar must determine that the infinitival phrase 'object' in (8.30a, c), that is, <u>to call the plumber</u>, is *not* a 4 object. The infinitival phrases must contrast with e.g. the *second* (DP) objects in e.g. (8.31a):

(8.31)a. Michael promised Sandra a new hair dryer.

b. Sandra was promised a new hair dryer by Michael.

In this case, the 4 object <u>a new hair dryer</u> satisfies condition (7.16a, b), allowing the passive (8.31b).

The required result for the infinitival case is determined, even under the assumption that such phrases are *initial* 2 objects, by a generalization whose essence was given in Postal (1998: 110). This stated that <u>that</u> clauses cannot be final 4 objects, as a special case of a broader claim that they cannot be final 1s, 2 objects, 3 objects, 4 objects, 5 objects, 6 objects or 8s either. These restrictions were imposed by stipulating that the complement clauses at issue could only bear a single final traditionally unrecognized Central relation, represented by the edge label 9. [15]

The idea was that *complements* which are 1s, 2 objects, 3 objects, 4 objects, 5 objects or 6 objects must under most conditions demote to a nontraditional relation whose edge label is 9. Moreover, it should be assumed that only clauses (with unerased P arcs) can head arcs with the stated edge label.

Refinement is required because Postal's (1998: 110) *Complement Clause Condition* only limited <u>that</u> clauses. But *non-<u>wh</u>* infinitival clauses obey the same restrictions motivating the condition for <u>that</u> clauses, as (8.32) illustrates: [16]

(8.32)a. Would that/*that the birds sang/*for birds to sing bother Moriarity.

b. Ted considers that/*that birds sing/*for birds to sing to be illegal.

c. Ted gave that/*that birds sing/*for birds to sing his ok.

d. Lory would be outraged by that/*that she was called for jury duty/*(for her) to be called for jury duty.

e. They prayed for that/*that the rescue ship arrive/*for the rescue ship to arrive.

f. I counted on that/*that I would soon retire/*for me to soon retire to be acceptable to her.

Case (8.32a) shows a restriction on the phrase types being final 1s, [17] (8.32b) a restriction on their being final 2 objects, (8.32c) a constraint precluding their being final 3 objects, (8.32d) shows they cannot be final 8 objects and (8.32e, f) illustrate they cannot be complements of other Ps.

All these restrictions follow from limiting the permissible final *Central* relations of the cited phrase types:

(8.33) **The Generalized Complement Clause Condition**

If A is a final Central arc whose head defines *a non-wh infinitival or a that clause*, A is a 9 arc.

The highlighted portions here are informal and imprecise. I will not seek to rectify that. Distinguishing wh and non-wh infinitives is motivated by the fact that the former have a distribution closer to that of standard DPs, and, in contrast to the situation illustrated in (8.32), can appear as final 1s, 2 objects, 3 objects, obliques, etc., although occurrence as 8 objects in passives is dubious for unknown reasons:

(8.34)a. Has when to file the petition been determined?

b. They proved when to file the petition to have been repeatedly discussed.

c. She never gave when to file the petition a moment's thought.

d. ??She was baffled by when to file the petition.

e. They talked about when to file the petition.

f. ?I counted on when to file the petition to become clear.

Differences between the two types of infinitive are particularly relevant to subject control cases, where object passivization is fine with subject control into a wh infinitive: [18]

(8.35)a. Ernie asked Luisa when to have himself/*herself nominated.

b. Luisa was asked by Ernie when to have himself/*herself nominated.

c. The two porn stars asked the cameraman when to approach each other.

d. The cameraman was asked by the two porn stars when to approach each other.

Cases such as (8.35b, d) might seem to provide a basic test for formulations of VG, which must ultimately take into account minimal pairs like (8.36):

(8.36)a. Luisa was asked by those guys a. *to be allowed to e-mail each other/b. how to most easily e-mail each other.

However, I suspect that cases like (8.36b) are ultimately irrelevant to an account of VG. Least importantly and misleadingly, contrasts like (8.36) will follow from the assumptions already specified plus the posit that wh-infinitival clauses can be final 4 objects, a view derivative from the claim that they are not subject to principle (8.33). That conclusion is, moreover, in line with the fact illustrated in (8.34) that unlike non-wh infinitivals, they can be final 1s, 2 objects, 3 objects, etc. If though, wh infinitivals can be final 4 objects, then cases like (8.35b, d) and (8.36b) can be taken to be 3 object passives and, unlike those like (8.36a), will not be barred by (7.16a, b). Moreover, the failure of cases like (8.35b, d) to have expletive or locative inversion variants supports the claim that they involve 3 object passives, seen earlier to be incompatible with such variants:

(8.37)a. *At that time there were asked by Ernie when to have himself nominated several of the expensive consultants.

b. *In that private room was asked by the two porn stars when to approach each other the former director of the film.

However, the conclusion that the grammaticality of (8.36b) is consistent with earlier principles is misleading because such cases will be barred by the other key condition introduced later (see (8.104)) if e.g. (8.36b) involves the same notion of control relevant to (8.36a) and VG generally. The latter is the nub of the issue since there is good reason to deny that the type of control found in (8.36b) is the same as that in (8.36a). Many students of control have drawn a distinction between fundamental types, often called *obligatory control* (OC) and *nonobligatory control* (NOC). The latter covers what was in an earlier period referred to as *superequi NP deletion*; see Hornstein (1999, 2003) and Landau (2000) for recent accounts of this distinction. A key idea is that the controller/controllee relation must be local in some sense for OC but not for NOC. Roughly, this means that the controllee must be the 1 of the immediately lower clause for OC but not for NOC.

Notably, the property of nonlocality is found for control of wh infinitives, as seen in (8.38): [19]

(8.38)a. Dorothy realized when to criticize herself.

b. Dorothy finally realized that when to criticize herself would remain mysterious to any professor.

c. Dorothy realized that it remained unclear that when to criticize herself was an unanswerable question.

Hornstein (2003: 12-14) lists the following properties distinguishing OC from NOC:

(8.39)a. Only OC:

(i) precludes arbitrary control (lack of antecedent);

(ii) requires a local antecedent;

(iii) requires a c-commanding antecedent;

(iv) requires a *de se* reading of the controlled element;

b. Only NOC

(i) allows a strict (nonsloppy) reading under VP anaphora;

(ii) permits split antecedents;

c. Note though that Landau (2000: 31) gives evidence that OC does not always require a c-commanding controller and that there are cases of OC with split antecedents.

I have already indicated that control into wh complements satisfies (8.39b) and I believe that in general such control falls under NOC. If that is right, then principle (8.104) below, which is the key element in the present account of VG, must ultimately be formulated so as to reference only the OC type of control. The right formal way to do that is far from obvious, a matter briefly touched on when the condition is directly addressed initially in section 5.

It could seem that an outright inconsistency emerges in the present account, given (8.40):

(8.40)a. *Jane was promised by Sidney to walk the dog.

b. Jane was promised by Sidney that he would walk the dog.

As touched on at the beginning of this chapter, such contrasts are often cited to justify the existence of VG, on the ground that only (8.40a) involves control. However, my account of the badness of (8.40a) has so far not invoked any special property of control structures. Rather it has appealed to passive principle (7.16a, b) interacting with the consequences of the generalized Complement Clause Condition, which inter alia precludes *both* that clauses and non-wh infinitivals from being final 4 objects. The seeming inconsistency is that this analysis might appear to wrongly also block (8.40b). However, the key aspect of (7.16a, b) relevant to blocking (8.40a) is that they are constraints on the passivization of *non-2 objects*. What follows then is not an inconsistency but simply an entailment about (8.40b): it can only be a 2-object passive, rendering its lack of a final 4 object entirely irrelevant to satisfaction of (7.16a, b) and hence to its well-formedness.

Significantly, various pieces of evidence argue that cases like (8.40b) are indeed 2 object passives. First, since expletive and locative inversion passives were both shown in Chapter 6 to (only) be subtypes of 2 object passives, the fact that the following grammatical that clause cases contrast with the seemingly parallel infinitival ones supports the claim at issue:

(8.41)a. At that time (there) were promised (by the judge) that their appeals would be heard/*to hear their appeals several of the recently convicted protesters.

b. In that courtroom (there) were promised (by the judge) that they would be pardoned/*to give them protection many of the witnesses against the head of the rebellion.

Moreover, the participial absolute construction was seen to accept participles linked to 2 objects, but for me to bar those linked to non-2 objects. But this construction accepts promise passive participles with that clauses, again contrasting with only seemingly parallel infinitival cases:

(8.42)a. With the witnesses finally promised (by the judge) that they would be heard in secret,...

b. *With the witnesses finally promised (by the judge) to allow more coffee breaks,...

Example (8.42b) is ill-formed in current terms because it can only involve a participial absolute formed on a 3 object passive. This follows from the fact explicated further below that the object of promise with a subject control non-wh infinitival complement can only be a 3 object. Further, these distributions are consistent with the fact that the factors distinguishing 2 objects from 3 objects show unequivocally that in *active* clauses with promise and a that clause, in contrast to the infinitival complement case, the single postverbal DP is, on the contrary, a 2 object, not a 3 object, thus yielding a contrast with the situation in active promise clauses with non-wh infinitival complements:

(8.43)a. Complex DP Shift

(i) I promised that she would receive a pardon all of the defendants who testified against her.

(ii) *I promised to get her a pardon all of the defendants who testified against her.

b. Left Extraction

(i) Which one of the defendants did you promise that they would soon be released?

(ii) *Which one of the defendants did you promise to get them pardons?

c. In Situ Human Relative Pronouns

(i) Jane, promising whom that she will get a pardon is a waste of time,...

(ii) *Jane, promising whom to get her a pardon is a waste of time,...

I return to this issue in Chapter 9.

However, that [promise + DP + that clause] represents a structure in which the DP is a 2 object does *not* reflect a principle of English valid for *all* verbs in such contexts. For instance, write occurs in that configuration but its human object shows the signs of being a 3 object.

(8.44)a. They wrote Jerome that his pardon application was rejected.

b. *Jerome was written that his pardon application as rejected.

c. *They wrote that his pardon application was rejected the convict who you had met at Yale.

d. *Which convict did they write that his pardon application was rejected?

In other words, the postverbal object of write behaves in the presence of a that clause just as it does with an infinitive; in both cases the nominal manifests the restrictions of a 3 object. Given that they are such, the fact that that clauses, like infinitivals, cannot, according to the Complement Clause Condition, be final 4 objects rightly determines the badness of passives like (8.44b) on the same grounds that it determines standard VG passive cases with infinitives like (8.40a).

There is a further relevant contrast between that clause complement clauses involving promise and write. Namely, the latter permits a variant with the human object in a to phrase, that is, as a 5 object in my terms, while, for speakers like me at least, the former does not:

(8.45)a. *I promised to Valerie that I would contact her cousin.

b. I wrote to Valerie that I would contact her cousin.

Present terms yield a simple account of such differences, consistent with the failure of (8.40a) to be a grammatical passive. This assumes that both verbs take a 3 object even with a that clause but that the following hold (see Chapter 9, section 3):

(8.46)a. When the 3 object of promise occurs with an untopicalized that clause, it must advance to 2

b. The 3 object of write cannot advance to 2 under any circumstances.

Constraints (8.46a, b) interact with the other assumptions I have made to account for the distributional differences between the relevant verbs which have been documented. One virtue of (8.46) is that it permits one to say that promise takes an initial 3 object regardless of whether its initial 2 object is a simple DP, a non-wh infinitival or a that clause. It has already been shown that in the first two cases, the human object of this verb is moreover also a *final* 3 object.

8.5 Visser's Generalization Does Not Fully Reduce to Independent Passive Principles

One should not conclude that VG has been shown to be a logical consequence of passive principle (7.16a, b) plus (8.33). Despite a core of motivation, this conclusion would be a serious

oversimplification. For there are at least four unaddressed problems. *First*, the results claimed so far remain highly unprincipled. Even granting (counterfactually) that all attested ungrammatical passives of subject control cases reduce to principle (7.16a, b), the explication has a conceptual hole. This is revealed by the contrast between (8.40a, b). The former can be assumed to be blocked by (7.16a, b) in combination with the Generalized Complement Clause Condition. The latter, I claimed, was grammatical because when promise takes a that clause, the human DP associated with it turned out to be a final 2 object.

The unraised, hence unanswered, question is what precludes the following situation:

(8.47) Clause C takes a human final 2 object and yet manifests subject control of C's non-wh infinitival complement.

For any expression having the properties in (8.47), (7.16a, b) are irrelevant and nothing yet proposed would block passives corresponding to such active clauses. So far, the principles invoked block the standard promise examples of VG only because of the as yet unprincipled fact that the passivized object turns out to be a 3 object. If nothing in the grammar precludes the situation in (8.47) though, the failure to attest apparent VG violations could reflect nothing more than accidental gaps, isolated properties of specific verbs like promise. And while a logical possibility, that is implausible even if attention is restricted to English. *Second*, it cannot seriously be restricted to English since, as Section 10 shows in detail for French, other NLs have VG analogs for which appeal to accidental properties of specific verbs is also not tenable.

Third, recall that the list of bad subject control request verb clause passives in (8.14) contained some based on PP objects not on simple objects. These included:

(8.48) *Brendan was appealed to/called on/called out to/demanded of/gestured to/pleaded with/prayed to/written (to) by Jane to be allowed to leave the monastery.

Moreover, as (8.10) showed, in general these verbs freely allow pseudopassivization in the case of object control. Similar ungrammatical cases were cited for the pester and manner of speaking verb classes. Although the examples are systematically ill-formed, nothing proposed so far blocks such subject control pseudopassives. For even though pseudopassives were claimed in Chapter 5 to be passives of DPs advanced to 3 or 4 status, (7.16a, b) explicitly *exempt* pseudopassives from the requirement of a cooccurring final 3 or 4 object.

The *fourth* so far unaddressed limitation of previous proposals involves the fact, documented in Postal (1990b) and touched on in Postal (2004: Chaper 8), that VG type restrictions also hold for various constructions *distinct from passives,* those I have called Q constructions. Given that I have so far tried to reduce VG to the ban on single object 3 passivization imposed by (7.16a, b), the earlier claims of correlation might seem unimportant, since that might involve nothing more than the repeatedly stressed fact that 3 objects in general are subject to relatively narrow constraints, and, in particular, cannot be Q construction targets. For instance, there is no surprise in parallels like:

(8.49)a. Passive: *Joan was promised by John not to get drunk.

b. Object Raising: *Joan was impossible for John to promise not to get drunk.

Because, independently of such paradigms, Object Raising, indeed all Q constructions, refuse 3 object targets in my type of dialect.

However, this ground for certain VG/passive and nonpassive restriction parallels lacks needed generality, again clearly in the case of the *pseudopassive* cases like (8.48). For these show the same parallelisms as passives of the nonpseudopassive variety, and such correlations do not reduce to independent incompatibilities between 3 objects and Q construction targets.

(8.50)a. Passive: *Brian was appealed to by Jan to be allowed to visit the monastery.

b. Object Raising: *Brian was impossible for Jan to appeal to to be allowed to visit the monastery.

c. Object Deletion: *Brian was too mean for Jan to appeal to to be allowed to visit the monastery.

d. Nominal Object Raising: *a weird person to appeal to to be allowed to visit the monastery

Particularly noteworthy is that the same verbal form with the same complements accepts the constructions of (8.51b, c) in the case of object control:

(8.51)a. Jan appealed to Brendan then to visit the monastery.

b. Object Raising: Brendan was impossible for Jan to appeal to immediately to visit the monastery.

c. Object Deletion: Brendan was too mean for Jan to appeal to immediately to visit the monastery.

d. Nominal Object Raising: a weird person for Jan to appeal to immediately to visit the monastery

Such facts reveal clear parallels between VG-like passive constraints and constraints on non-passive clauses, *which nothing said so far accounts for.*

Wanted then is a treatmentz compatible with the explanatory account of some VG restrictions based on (7.16a, b) but which also solves the four additional problems. I will propose an analysis which depends deeply on the notion of *quace*. A partial clue to the kind of constraint needed is provided by the earlier observation that no attested English cases have form (8.52), where both (i) DP_2 is a 2 object and DP_1 is the initial 1 of the clause and controls the final 1 of the (non-wh) infinitive or gerundive.

(8.52) DP_1 + Verb + DP_2 + infinitive/gerundive

Rather, all the known subject control cases are such that DP_2 is a 3 object. That fact suggests the existence of a constraint barring subject control *in the presence of a 2 object*. To state such a condition requires minimal notions of how control is to be represented.

Given the invisibility of controlled phrases, what is called control is inevitably viewed in current terms as a subcase of the erase relation between arcs. Without offering strong justification, I will assume the following. The control relation holds between a *controller* arc which is a Central arc and the *controllee* arc; the latter I will take to have the designated edge label C(on)tr(o)l. Hence:

(8.53) **Definition: *Controls***

A *controls* B if and only if A is a Ctrl arc and A erases B.

Moreover, evidently, the control relation is a subcase of arc antecedence, and clear cases of control always have Central arc controllers. Various other conditions plausibly govern the relation, including a notion of locality. These can be built into two conditions:

(8.54)a. **The Control Antecedence Condition**

If A controls B, A is a Central arc and arc antecedes B, which is a foreign successor having an R-successor which is a neighbor of A.

b. **The Ctrl Arc Condition**

If A is a Ctrl arc, there is an R-successor of A which is controlled, and if B is a successor of A, B is a Ctrl arc and if A is a successor of a non-Ctrl arc, C, then C is a Central arc.

A key feature of this sketch of ideas about control is that it does not specify that Ctrl arcs, all required to be foreign successors, are either $successor_I$s or $successor_{II}$s, permitting either. The idea is that OC will involve only foreign $successor_I$s, while NOC will involve sequences of successors including both types.

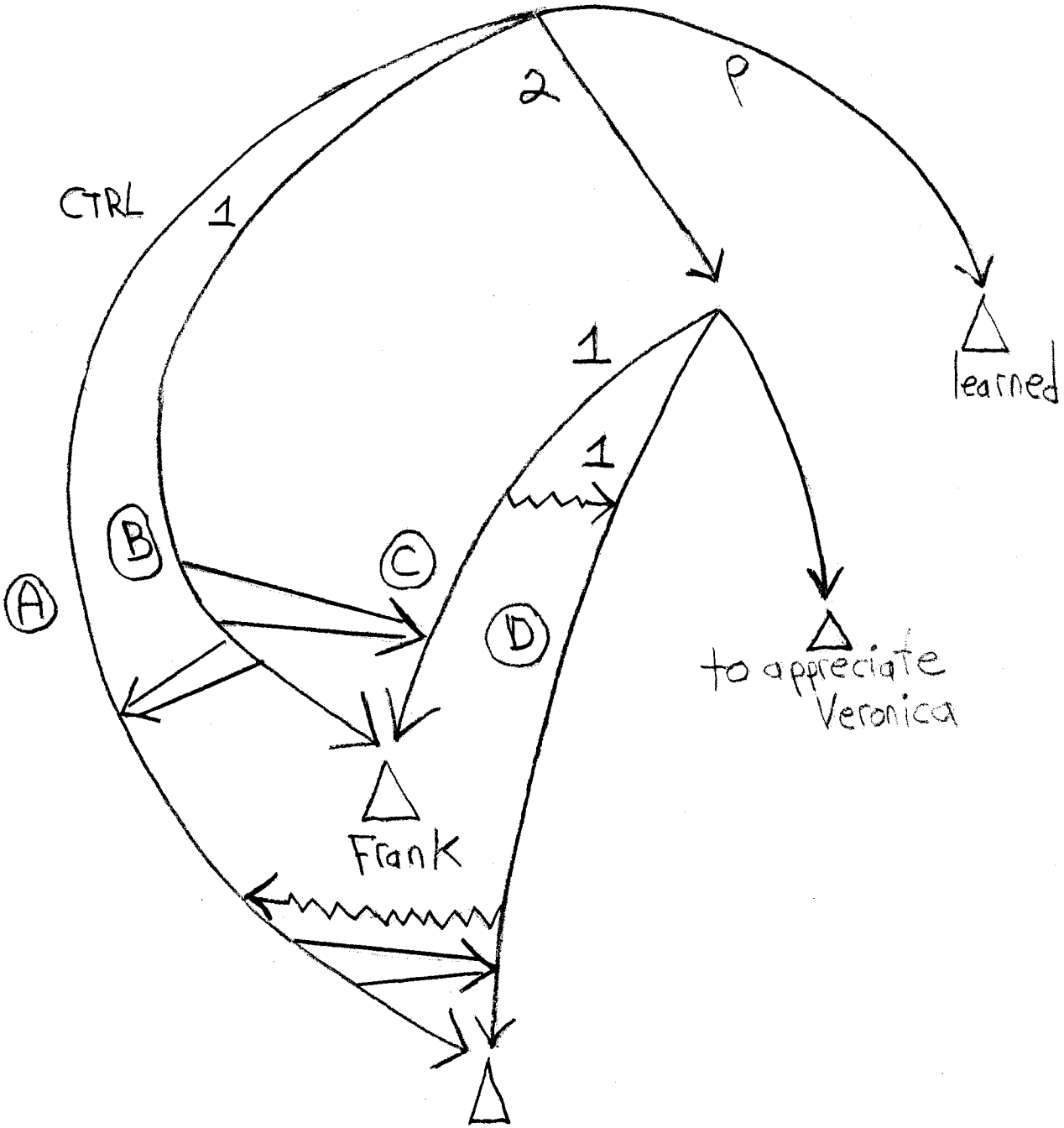
These conditions are highly speculative and no doubt at the best insufficiently articulated. For instance, both the claim that controller arcs are Central arcs, and the claim that each maximal sequence of Ctrl arcs begins with a successor of a Central arc are surely too weak. Clear cases of the latter may always be final 1 arcs, and controllers may always be Term arcs.

While the conditions in (8.53) form nothing like a complete theory of control, they do allow reconstruction of the commonalities of OC and NOC while still distinguishing them, as follows. The standard kind of control in (8.55a) is representable as in (8.55b):

(8.55) **A Possible OC Structure**

a. Frank learned to appreciate Veronica.

b.


CTRL
1
2
p
1
1
A
B
C
D
learned
to appreciate
Veronica
Frank

Here B controls A. It arc antecedes A as is required, since B is an R-successor of C, which seconds D, and A is an R-successor of D. The arc which is a predecessor of the first Ctrl arc in a sequence of such is a Central arc, since it is a 1 arc, and the controller is a Central arc since it is a 1 arc. Moreover, as required, the controlled arc, A, has an R-successor which is a neighbor of its controller, since it itself is such a neighbor.

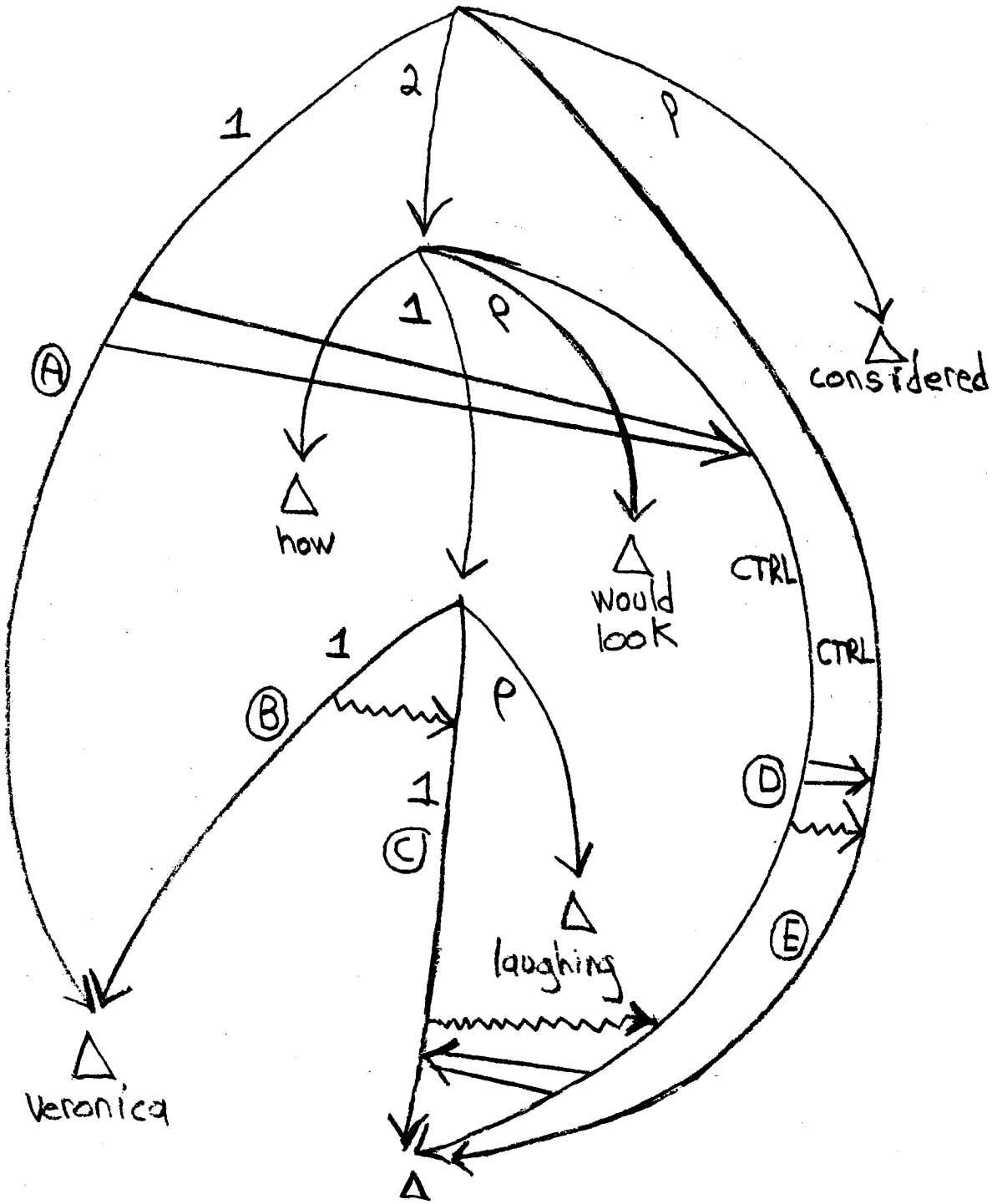
A in (8.55b) is a sucessor$_{I}$ and successor$_{II}$s play no role in OC. That means that the analysis actually takes the controlled element to have overtly raised into the main clause, albeit via the unique type of foreign R-successor$_{I}$ represented by Ctrl arcs. These would then ultimately have to be added to the class of legitimate foreign successor edge labels. The analysis thereby manifests (only) certain, similarities with the proposals of Hornstein and others to reduce OC to raising in Barrel (A) terms; see Hornstein (1999, 2003), Boeckx and Hornstein (2003, 2004) and for criticism Culicover and Jackendoff (2001), Landau (2003). Beyond major theoretical differences, a key descriptive difference between current views and the cited Barrel (A) raising view is that the current speculation recognizes the controller as an inherent element of the containing phrase; it heads an *initial* arc, B, in that. Hornstein's terms really recognze no controller and what is taken to be the controller DP in past work and the current framework is itself derived by raising.

A NOC case with a controlled <u>wh</u> infinitive like (8.56a) could instantiate something like (8.56b):

(8.56) **A Possible NOC Structure**

a. Veronica considered how laughing would look.

b.


1
2
ρ
considered
1
ρ
A
how
would
look
CTRL
CTRL
1
B
ρ
1
C
D
laughing
E
Veronica

Here the control relation characterization is partially distinct from that in (8.55b). Where the erasure in the latter linked neighboring arcs, that in (8.56b) links the main clause controller arc with a Ctrl arc one clause down. Nonetheless, the neighbor condition in (8.54a) is satisfied, due to the existence of the successor$_{II}$ Ctrl arc E, which is a neighbor of the controller. Again A is easily seen to arc antecede E, C, the initial element in the successor chain, is a Central arc and the controller is as well.

An obvious question is what justifies taking the structure of NOC to involve raising only of the foreign successor$_{II}$ type. Why can't NOC be analyzed in the same way as OC, with 'regular' raising, foreign successor$_{I}$ arcs in present terms? While I cannot argue the conclusion deeply, two considerations s at least lend it some plausibility.

First, (8.56a) illustrates that NOC determines the existence of pairs of DPs heading arcs related by the control relation occurring in contexts which could never be those of corresponding preraising/postraising positions. For instance, there is no known overt raising of a 1 of an embedded gerundive clause out of a finite <u>how</u> clause, as would be involved if (8.56a) represented overt raising into the clause whose verb is <u>considered</u>. Reducing such cases of NOC to overt raising would then require positing such raising out of island contexts like <u>wh</u> clauses from which overt raising is not independently attested.

Taking NOC to involve foreign successor$_{II}$s then offers the possibility that the absence of raisings out of islands is a function of constraints on foreign successor$_{I}$s, with foreign successor$_{II}$s subject to different and in many respects at least weaker constraints. A second consideration may support this conclusion. There are a variety of types of so-called long distance reflexives; see Postal (2006) for a number of English cases. A theoretically attractive view of the notion *reflexive* is that it holds only between antecedents and pronominal forms which head neighboring arcs, hence only between sister nominals. Long distance reflexives obviously challenge this view. However, as touched on in Chapter 1, section 6, the foreign successor$_{II}$ concept permits saying that such forms meet the neighbor condition with the neighboring arc headed by the reflexive being a foreign successor$_{II}$.

Notably, long distance reflexives are found in environments parallel to those which allow NOC. So, choosing the English exceptive phrase type of long distance reflexive, the parallelism between e.g. (8.56a) and (8.57) is noteworthy:

(8.57) Veronica considered how your laughing at [no one except her/herself]] would look.

Compare also the distinct environments in (8.58) and (8.59) open to both NOC and exceptive long distance reflexives:

(8.58)a. Veronica realized that the key issue was when to describe you to her internet pal.

b. Veronica realized that the key issue was for no one except herself to describe you to him.

(8.59)a. Veronica realized that what the key issue was was when to describe them to her internet pal.

b. Veronica realized that what the key issue was was whether anyone except herself could be trusted.

Further, if one picks environments where NOC is forbidden, the long distance reflexive type in question is also barred:

(8.60)a. *Emily dislikes Frank, who insulted no one but herself.

b. *Emily dislikes Frank, who constantly praising herself annoyed.

(8.61)a. *Emily discussed the fact that why you criticized no one but herself was irrelevant.

b. *Emily discussed the fact that when to criticize herself interested none of us.

Thus there are indications of a parallelism between NOC constraints and those on long distance reflexives. To the extent this is true, it suggests in current terms that the relevant restrictions constrain foreign successor$_{II}$s.

The control view sketched so far might seem to crash against adjunct control cases like (8.62).

(8.62) Malcom rejoiced without noticing the problem.

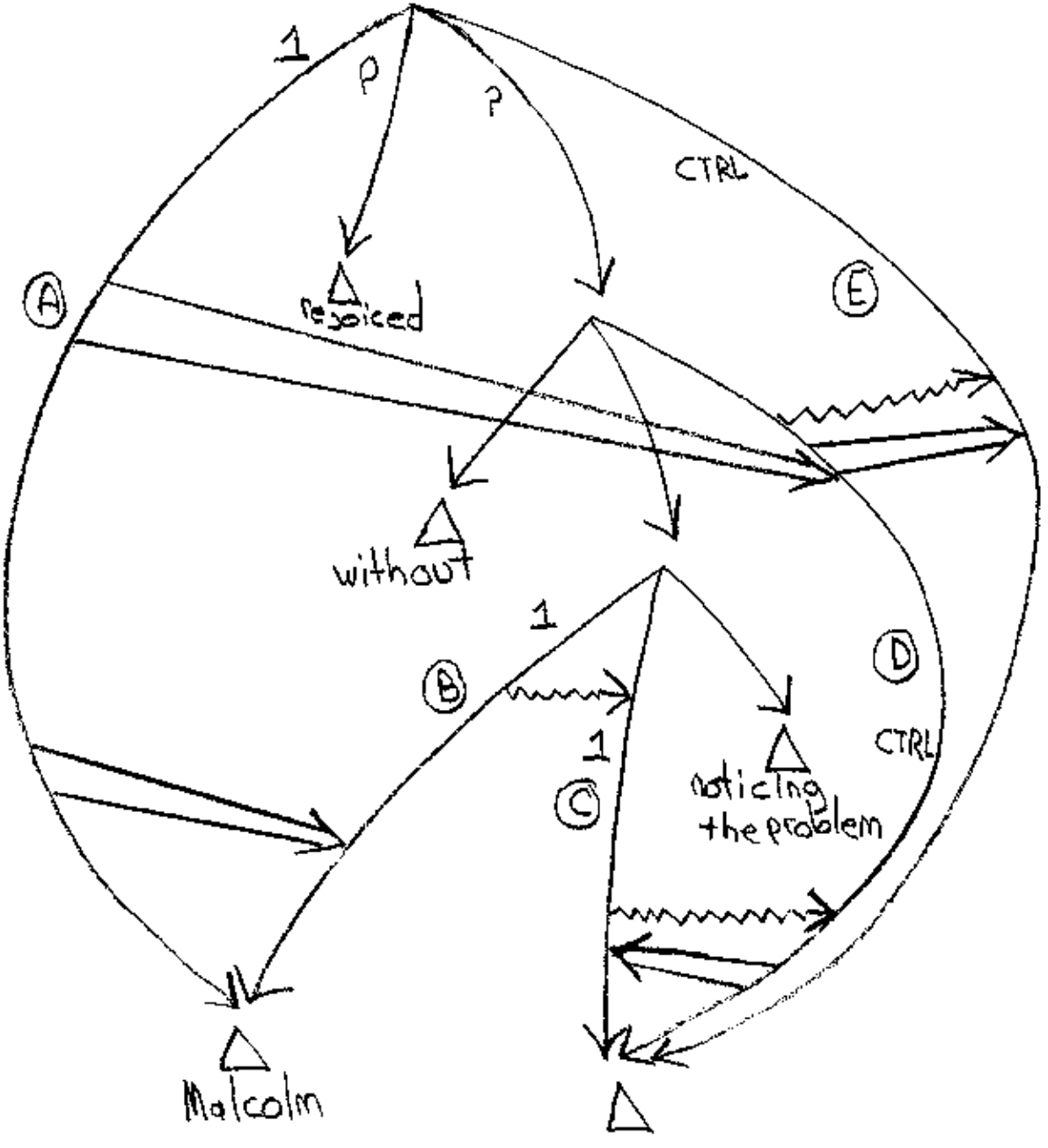
The difficulty is that such structures have been taken to represent OC; see e.g. Hornstein, 1999: 76-77; 2003). The latter claimed:

(8.63) Hornstein (2003: 31)

"The reason is that adjunct control displays all of the diagnostic properties of OC PRO."

But there are no known cases of overt raising linking e.g. the final 1 position of an adjunct and the main clause 1 position of a (moreover unergative) verbal clause. However, given that the lines between OC and NOC are not entirely clear, such cases might represent a type of NOC. Since adjunct control seems to obey the locality requirement taken to be characteristic of OC, this would mean allowing for local subtypes of NOC as well. More precisely, (8.62) could include the structure:

(8.64)


1
P
P
CTRL
A
rejoiced
E
without
1
B
D
1
C
noticing the problem
CTRL
Malcolm

Supporting such an idea is that cases like (8.65) obviously do *not* manfiest a de se interpretation:

(8.65) The old bridge collapsed without harming anyone.

Recall that Hornstein's (8.39aiv) took such interpretation to be a characteristic of OC, a claim which the otherwise critical Landau (2003: 483) agreed to be uncontroversially valid.

A notable characteristic of (8.64) is that the control relation crosses a type of adjunct boundary which overt raising is not known to be able to penetrate. That is, the successor$_{II}$ relation between D and E crosses an island for overt raising.

However, the claim that adjunct control is NOC runs into Hornstein's criterion (8.39e), since it has been claimed that adjunct control is incompatible with split antecedents, which would fail to follow if it instantiates NOC. But Landau (2003: 484, note 14) attested cases of OC with split antecedents; he presented a German example and noted that Koster and May (1982) had cited (8.66):

(8.66)a. John proposed to Mary to help each other.

b. That professor proposed to the student to work together on the rat intelligence report.

Example (8.66b) also seems fine. If though there can be OC not permitting split antecedents as well as OC permitting it, there may well be no strict correlation between NOC and the possibility of split antecedents. In that case, the failure of an adjunct control case to permit split antecents would not force taking it to instantiate OC.

Overall then, the idea that adjunct control is NOC appears not to be clearly untenable, and thus need undermine the bifurcate view of control represented in (8.55)/(8.56).

The key point for characterizing VG will be the possibility of differentiating the kinds of control in (8.36a, b). Given contrasting structures like (8.55) and (8.56) and the assumption that control into <u>wh</u> infinitives is of the latter type, this can be accomplished via the following:

(8.67) **Definition: *Directly/Indirectly Controls***

a. A *directly controls* B if and only if A *controls B* and A and B are neighbors.

b. A *indirectly controls* B if and only if A controls B but does not directly control B.

Given these ideas, a first pass at a condition barring the cooccurrence of subject control and 2 objects can take form (8.68):

(8.68) **The Subject Control/2 Object Incompatibility Condition (Version 1)**

If A is an initial 1 arc and neighbor of B and directly controls a foreign successor$_I$ of a final 1 arc branch of B, which has a 2 arc colimb, C, then B R-local sponsors C.

Such a constraint would seemingly account for the fact that there is no control case parallel to the grammatical (8.40b) and rightly *fails* to block wh infinitival control cases like (8.36b) which, in current terms, embody indirect control. Moreover, (8.68) is compatible with the grammaticality of control cases like (8.69a):

(8.69)a. Most people detest rubbing snakes.

b. Rubbing snakes is detested by most people.

c. Rubbing snakes is difficult for such people to detest.

d. *Rubbing snakes was difficult for Ernestine to give any consideration.

e. *Such gifts are difficult to send soldiers.

Since the complement in (8.69a) is passivizable, it must, according to (7.2) be either a 2, 3 or 4 object. But there is no second object, so condition (7.16a, b) can only be satisfied if (8.69b) is a 2 object passive. Moreover, Object Raising cases like (8.69c) are incompatible with an analysis of the complement as a 3 object or 4 object, since that construction does not accept such objects as targets, as (8.69d, e) reillustrate. So the complement in (8.69a) must head a 2 arc. But that 2 arc is not a colimb of the 2 arc host for control, since it is that 2 arc.

Moreover, (8.68) rightly does not block:

(8.70) It was decided by the director to fire the assistant director.

Here, in addition to the initial 2 object complement infinitive, the expletive *it* is itself a 2 object at one (prepassive) level. [20] This too is compatible with the rule because of the ancestral 'R-local sponsor' condition and the view of *expletives* in Chapter 6, section 2. In those terms, expletives substitute for or displace other constituents, in this case, the infinitival complement. [21] Under this view, the expletive heads an XPL arc sponsored by the clausal 2 arc and has a 2 arc local successor$_I$ which erases that 2 arc. Hence the 2 arc headed by the expletive is R-local sponsored by the 2 arc having as an R-branch the 1 arc predecessor of the controlled arc.

Despite these positive features, as is, (8.68) cannot adequately solve the four problems I sketched. For it embodies nothing which deals with the remaining issues: why are pseudopassives like (8.48) subject to VG and why do VG-like constraints for both plain passives and pseudopassives appear also in Q

constructions? Before addressing these questions properly, it is important to document that the claimed states of affairs actually hold.

8.6 Perlmutter's Generalization

One key to solving the problems involving VG constraints, their appearance in pseudopassives and the existence of parallels in Q constructions is a recognition that the core distributions are special cases of generalizations also holding for *other* constraints on passivization. Relevantly, sometime in the early 1970s, David Perlmutter (personal communication) pointed out a curious correlation, which he described rather along the lines in (8.71):

(8.71) **Perlmutter's Generalization**

To a highly significant degree, if English DPs in context X are unpassivizable, DPs in X are also barred from being Object Raising targets.

One data set he cited illustrates the content of the generalization and shows its remarkable sensitivity even to quite subtle constraints:

(8.72)a. Some of the greatest orchestras in Europe have performed in that concert hall.

b. Some of the largest audiences in Europe have applauded in that concert hall.

c. That concert hall has been performed in by some of the greatest orchestras in Europe.

d. That concert hall was difficult for great orchestras to perform in.

e. ??That concert hall has been applauded in by some of the largest audiences in Europe.

f. ??That concert hall is difficult to applaud in.

Whatever degree of unacceptability one finds in (8.72e) is equally found in (8.72f), and both contrast with their seeming parallels in (8.72c, d) in the same way.

Postal (1990b) attempted an account of Perlmutter's Generalization; but while providing a broad data base supporting it, I only crudely grasped what it represented. The actual proposal there is well worth ignoring. I did argue correctly though that the statement needed generalization, since it not only linked passivization to *Object Raising* but to several other constructions, as illustrated by data such as:

(8.73)a. Max imitated/resembled your cousin.

b. Your cousin was imitated/*resembled by Max.

c. Your cousin was impossible for Max to imitate/*resemble.

d. Your cousin was too strange looking for Max to imitate/*resemble.

e. Your cousin is an impossible person (for a gorilla) to imitate/*resemble.

f. Which duke did everyone who imitated end up resembling?

g. *Which duke did everyone who resembled end up imitating?

I take these data to indicate that the constraint on passivization in (8.73b) is matched by one on Object Raising (8.73c), Object Deletion (8.73d), Nominal Object Raising (8.73e) and Parasitic Gaps (8.73g), the latter cases jointly representing what I call Q constructions.

But, recalling Chapter 2, paradigm (8.73) simply illustrates the failure of nonditransitive 4 objects to be licit passivization targets and the impossibility for any 4 object to be a licit Q construction target. That is, the stars in this paradigm illustrate some properties of Array 1. So Perlmutter's Generalization covers dozens of non-PP cases where the unpassivizable DP is a single 4 object (or 3 object). One other such case not cited in Chapter 2 is provided by the verb get on its sense of 'capture': [22]

(8.74)a. They will ultimately capture/get Moustapha.

b. Moustapha will ultimately be captured/*gotten.

c. Moustapha will be hard to capture/*get.

d. Moustapha was too elusive for them to capture/*get.

e. a difficult terrorist to capture/*get

f. Which terrorist did they track for months before capturing/*getting?

g. Which terrorist did they finally capture/get after tracking for months?

On the basis of a variety of data sets like (8.73) and (8.74), I propose to restate Perlmutter's Generalization here to incorporate two modifications. One simply expands its domain to cover all the Q constructions; but I also reverse the logical order of implication, yielding:

(8.75) **The Generalized Converse Perlmutter Generalization (GCPG)**

To a significant degree, if English DPs in context X are barred from being Q construction targets, then DPs in context X are unpassivizable.

The reason for changing the logical order of implication appears in e.g. (8.76):

(8.76)a. They shipped the expensive statuary to Irene.

b. *Irene was shipped the expensive statuary to.

c. Irene was difficult to ship the expensive statuary to.

d. Irene was too poor for them to ship the expensive statuary to.

e. Irene was a difficult person to ship expensive statuary to.

The facts in (8.76) are counterexamples to an unhedged formulation of the original generalization, but not so with respect to the revised version, which simply makes no claim about the data in (8.76).

This leaves one free to argue that the ill-formedness of (8.76b) is a function of principles having nothing whatever to do with the constraints on Q constructions. In fact, the principle is arguably that already built into (5.28), the Basic English Pseudopassive Condition, of Chapter 5. This determines pseudopassivization in clause C is in general incompatible with the presence in C of a distinct (from the head of the arc which copies the prepassive$_{II}$ arc) final 2 object, 3 object or 4 object, a condition *not* constraining the Q constructions. Compare:

(8.77)a. Boris frequently wrote (amorous notes) to Vivian.

b. Vivian was frequently written (*amorous notes) to by Boris.

c. Vivian was difficult/too hostile for Boris to write (amorous notes) to.

I now take the fact that Q construction constraints *paralleling* VG are found with instances of pseudopassivization as merely a special case of the GCPG. To justify that view, the broader generalization must be shown to hold for other constraints on pseudopassivization distinct from VG. At issue then will be data involving passivization/Q construction parallels like (8.78) which show that the GCPG holds for other PP instances:

(8.78)a. Karen relaxed beside the hotel pool.

b. Ward, Birner and Huddleston (2002: 1446)

*The river was slept beside.

c. *The hotel pool was relaxed beside by Karen.

d. *That pool was hard to relax beside.

e. *That pool was too noisy to relax beside.

f. *Which pool did she clean before relaxing beside?

g. *a nice pool to relax beside

Although initially intriguing, such a paradigm would show nothing about pseudopasivization/Q construction parallels if the grammar determines that the P <u>beside</u> can simply never be stranded. It is important then to test as well *non*-Q construction data like (8.79):

(8.79)a. Which pool was Karen relaxing beside?

b. Pools filled with sharks, one should never relax beside.

Since stranding <u>beside</u> by various left extractions seems unproblematic, I conclude that (8.78) supports the existence of specific pseudopassive/Q construction parallels, that is, supports the GCPG.

A general conclusion is that evaluation of paradigms like (8.78) depends on establishing that more is involved than total unstrandability, a point wrongly ignored in Postal (1990b, 2004). For instance, Postal (2004: 263) cited under(neath) paradigms to show pseudopassive/Q construction parallels:

(8.80)a. Mike hid under(neath) that rocket.

b. Rockets should never be hidden under(*neath).

c. That rocket will be hard to hide under(*neath).

d. That rocket is too small to hide under(*neath).

e. a strange rocket to hide under(*neath)

But underneath, in contrast to the beside of (8.78), can never be stranded, even by non-Q constructions:

(8.81)a. Which rock did they hide under(*neath)?

b. It was that rock that the snake hid under(*neath).

So (8.80) has not been shown to support anything of relevance to the current discussion, since the restrictions are arguably not specific to Q constructions and passives. Thus in trying to support the generalization at issue it is minimally necessary to appeal to paradigms like that involving beside and to avoid those like that containing underneath.

This conclusion is relevant to the extensive set of paradigms of form (8.82) illustrated in (8.83): [23]

(8.82) DP Verb to DP that clause

(8.83) I confessed/expressed/indicated/mentioned/observed/
pointed/out/reported/replied/said/stated/wrote to Wanda that the experiment had failed.

For such cases systematically allow neither pseudopassivation of the object of to nor Q constructions which strand the P; see Postal, 1986: Chapter 6:

(8.84)a. *Wanda was reported to that the experiment had failed.

b. *Wanda won't be easy to report to that the experiment failed.

c. *Wanda is too excitable for me to report to that the experiment failed.

d. *Which manager did he doublecross after reporting to that the experiment had failed?

e. *an odd official to report to that the experiment failed

(8.85)a. Bach (1980: 326)

*Bill was pointed out to that the earth was flat.

b. *Bill was difficult to point out to that the earth was flat.

c. *Bill was too busy (for me) to point out to that the earth was flat.

d. *an odd person to point out to that the earth was flat

This would, however, again show little if the whole paradigm simply precluded to stranding.

Just that was suggested by remarks in Pullum and Huddleston (2002a: 630), who provide:

(8.86)a. *Who did she declare to that she was not going to take any more abuse?

b. To whom did she declare that she was not going to take any more abuse?

c. "Construction [i] is ungrammatical because the gap following *to* is located before a content clause."

But I do not find their starred example ungrammatical, and accept all of (8.87): [24]

(8.87)a. It was Wanda who it was first reported to that the experiment failed?

b. Which of the inspectors was it first reported to that the experiment had failed?

c. None of those officials was it ever reported to that the experiment had failed?

d. Carl, whose commanding officer it was ultimately reported to that he had been drunk, …

e. Who are we going to **complain to that** of all the presidential candidates, we can not find a suitable man that can lead us out of the mess we find ourselves? **…**

www.gamji.com/article6000/NEWS6794.htm

Thus in my English, facts like (8.84) argue that the construction only precludes an object of to which is a pseudopassivization or Q construction target, that is, only when the result arguably conflicts with the GCPG.

Huddleston (2002a: 278) gives a number of cases marked as to preclude pseudopassivization of their PP complement, permitting checking how the claim of pseudopassivization/Q construction parallels holds up for a sample of such data.

(8.88)a. The fugitive made for the barn.

b. *The barn was made for by the fugitive.

c. *The burning barn was impossible for him to make for.

d. *The barn was too distant for him to make for.

e. *Which barn did he shoot at after making for?

f. *a strange barn to make for

g. Which building did he make for?

This case supports the GCPG since the P is strandable, and yet Q constructions are barred. Evidently, since other instances of for do permit pseudopassivization, involved here is a constraint referencing as well the verbal usage (make = 'direct oneself toward').

Another case cited by Huddleston involves the expression stand by 'supported':

(8.89)a. The director stood by that employee.

b. *That employee was stood by by the director.

c. *Such an employee is difficult to stand by.

d. *That employee is too unpleasant for anyone to stand by.

e. *Which employee did they promote after standing by?

f. *an odd employee to stand by

g. He was one of those employees who no manager was willing to stand by.

A distinct one hinges on the expression stand for:

(8.90)a. Wallingford will not stand for such conduct.

b. *Such conduct will not be stood for.

c. *Such conduct is difficult to stand for.

d. *That sort of conduct is too unpleasant to stand for.

e. *What kind of conduct did they justify after standing for?

f. *a strange type of behavior for the captain to stand for

g. a type of conduct which no leader can stand for

Cases not found in Huddleston (2002a) yield similar patterns:

(8.91)a. Vernon headed for Cleveland.

b. *Cleveland was headed for by Vernon.

c. *Cleveland is not easy to head for.

d. *Cleveland is too far away to head for.

e. *Which city did they go around after heading for?

f. *a weird city to head for

g. Cleveland, which he said he was heading for,...

(8.92)a. They shouldn't sell to children.

b. *Children should not be sold to.

c. *Children are impossible for us to sell to.

d. *Children are too risky for us to sell to.

e. *Which children did they corrupt by selling to?

f. *odd children for them to sell to

g. Which children would you be willing to sell to?

(8.93)a. We shouldn't buy from those foreigners.

b. *Those foreigners should not be bought from

c. *Those foreigners are impossible to buy from.

d. *Those foreigners are too dishonest to buy from.

e. *Which foreigners did they criticize after buying from?

f. *odd foreigners to buy from

g. Which foreigners did he end up buying from?

(8.94)a. Those offenders will answer to the director.

b. *The director will be answered to by those offenders.

c. *The director was impossible for them to answer to.

d. *The director was too far away for them to answer to.

e. *Which managers did they praise before answering to?

f. *an odd authority for them to answer to

g. Which authority do they answer to?

(8.95)a. Sandra doesn't care for sushi.

b. *Sushi wasn't cared for by Sandra.

c. *Sushi is easy (not) to care for.

d. *Sushi is too yucky for me to care for.

e. *Which food did she prepare despite not caring for?

f. *an odd kind of food (not) to care for

g. What kind of food do your friends (not) care for tonight?

(8.96)a. Little Johnnie told on Mildred.

b. *Mildred was told on by Little Johnnie.

c. *Mildred was not easy for Little Johnnie to tell on.

d. *Little Johnnie was too nice for Mildred to tell on.

e. *Which classmate did Mildred lie to after telling on?

f. *a strange girl for Little Johnnie to tell on

g. Which of them did she tell on first?

There is then a good evidentiary base for the conclusion that a range of constraints barring *pseudopassivization* correlate with those barring Q constructions, where, moreover, the constraints in question do *not* reduce to a mere ban on stranded prepositions and are not found with *non-Q*

construction left extractions. This supports the existence of the GCPG exists and supports the idea that it genuinely holds for pseudopassivization as well as for simple passives.

The 'other side' of the claimed correlation holds as well. DP objects or DP complements of PPs which *are* licit passivization targets are in general also good Q construction targets. I will not illustrate the parallel for objects, since it is an obvious feature of 2 objects as shown by the general acceptability of such as Q construction targets. So I document the point only for PP complement DPs, and only in a restricted way, utilizing those cited as pseudopassivizable in Huddleston (2002a: 278):

(8.97)a. Evelyn asked for that meeting.

b. That meeting was asked for by Evelyn.

c. The meeting was easy for Evelyn to ask for.

d. a strange sort of meeting for her to ask for

(8.98)a. They called for a vote.

b. A vote was called for.

c. An immediate vote will be impossible to call for.

d. A vote would be too boring for me to call for.

(8.99)a. They disposed of the polluted soil in the lake.

b. The polluted soil was disposed of in the lake.

c. The polluted soil was impossible to dispose of.

d. What kind of soil did they worry about after disposing of in that way?

(8.100)a. She tampered with his VCR.

b. His VCR was tampered with.

c. That VCR was easy to tamper with.

d. a wrong VCR to tamper with

I conclude then at this point that: (i) there is a GCPG; (ii) the GCPG subsumes both regular passives and pseudopassives and (iii) the VG restriction/Q construction parallels I cited earlier are special cases of the GCPG.

8.7 Quace-Based Constraints on Pseudopassivization and Q Constructions

Conclusion (iii) indicates that real understanding of VG will require an account of the GCPG. For a reduction of the former to the latter amounts so far to reducing one unsolved problem to another, progress, but of only a limited sort. Needed is insight into the precise principles which have the

informal GCPG as a consequence and, specifically, understanding of why it holds for both plain passives and pseudopassives. Dealing with this problem requires further appeal to the notion *quace*.

To see how a quace-based approach can solve the twin problems of why pseudopassives manifest VG restrictions and why all types of passives are subsumed by the GCPG, let us restate the former problem. This arises from the conclusion argued in section 2 of Chapter 5, that pseudopassives are not passives of 2 objects, more precisely, that the prepassive arc in a pseudopassive inner clause is not a 2 arc (but rather a 3 arc or 4 arc). But condition (8.68), which seems to capture some aspects of VG, refers to 2 objects and hence to this point says nothing about pseudopassives. The current account of VG so far then simply yields no consequences for pseudopassive/VG interactions and so offers no insight into why the pseudopassive variants of VG are subsumed by the GCPG.

The notion quace offers major elements of a potential solution to this lacuna as follows. One can revise the account of the general conditions on (at least; see section 10 for remarks on French) English passivization to include a quace requirement. More specifically, I propose that condition (7.2) should be refined in terms of 2 quace:

(8.101) **The Basic English Periphrastic Passive Condition (Version 2)**

If A is a prepassive$_{II}$ arc, then A is a 2 arc, 3 arc or 4 arc with closed 2 quace.

For this modification to have the desired consequences, several conditions must be met.

First, every legitimate prepassive$_{II}$ 2 arc must have closed 2 quace. This conclusion might seem immediate given the way the notion quace was described in Chapter 1. Since each 2 arc is by definition edge labelled 2, any such arc will have 2 quace. But (8.101) demands more, which is not guaranteed for every 2 arc given the existence of quirky quace. Something must in general *prevent* English prepassive 2 arcs from having a quirky quace, say:

(8.102) **The English 2 Arc Straight Quace Condition**

If A is a 2 arc, A does not have any quirky quace.

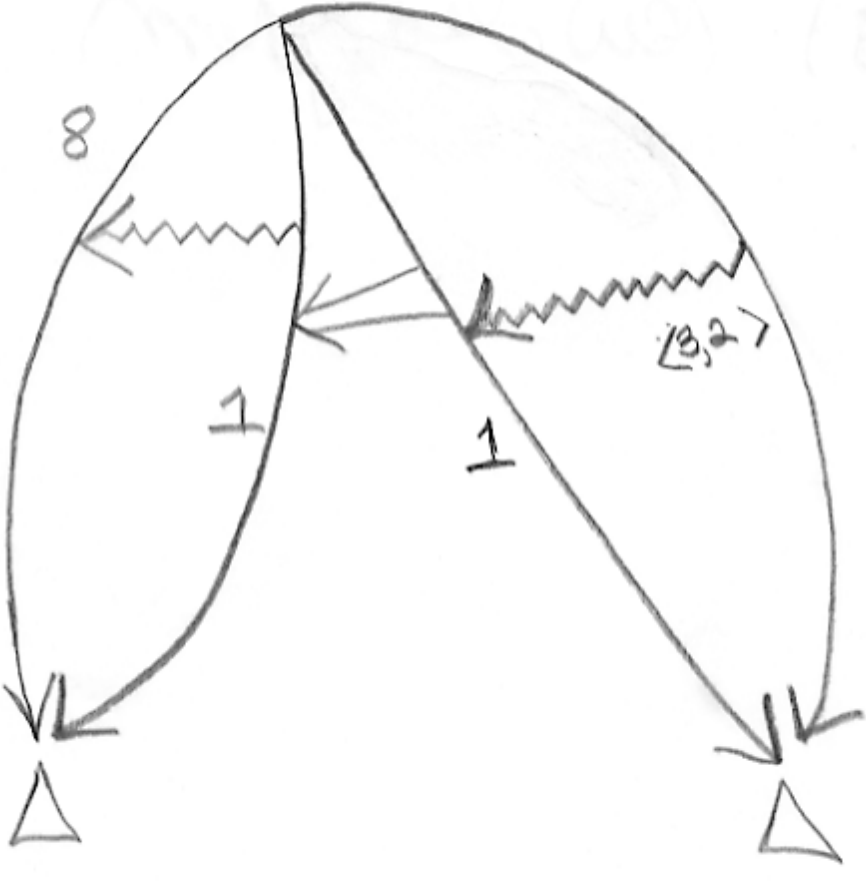
This precludes quirky 1 quace, 3 quace, etc., on any English 2 arc.

Evidently, the situation for prepassive 3 arcs and 4 arcs differs, since the nature of quace markers fails (and should fail) to guarantee the presence of any 2 label on such arcs. Otherwise, the situation is not different for those ditransitive prepassive 3 and 4 arcs *not* involved in pseudopassives and those

prepassive 3 arcs which define the latter under the analysis in Chapter 6. In both cases, (8.101) requires any prepassive 3 arc or 4 arc to have quirky 2 quace.

Questions might arise about the conditions under which that is possible or necessary. Within the framework of model theoretic grammar sketched in Chapter 1, if no universal or English-particular conditions (like e.g. (8.101) are specified, the presence of such quirky quace will be possible for any Central arc. Since this is the cost-free assumption, I will, in the absence of any known indication that restrictions are required, assume it is right. Hence quirky 2 quace will appear (or not) freely in the quace markers of 3 arcs or 4 arcs. Since (8.101) imposes the 2 quace condition on *all* English periphrastic passives, it combines with the assumptions just made to restrict the prepassive 3 or 4 arcs of pseudopassives as well as the prepassive 3 and 4 arcs of those ditransitives which permit passives. These are then assumed to simply take advantage of the possibility of having quirky 2 quace. Despite a key claim of this work that 2 objects, 3 objects and 4 objects all (sometimes) passivize (in my kind of dialect), condition (8.101) states that the passivized object in every English periphrastic inner clause nonetheless must head an arc labelled 2, albeit in the cases of prepassive 3 and 4 arcs, only a non-initial label defining 2 quace. Thus the structure of the inner clause of a periphrastic passive whose prepassive$_{II}$ arc is e.g. a 3 arc will include the structure in (8.103), slightly richer than that indicated in earlier chapters:

(8.103) **Non-2 arc Prepassive Structures**


8
1
1
⟨3,2⟩

In many cases, the requirement that prepassive$_{II}$ 3 and 4 arcs must have 2 quace has no discernible consequences. But the assumption permits extension of the coverage of condition (8.68) from clauses with 2 arcs, prepassive or not, to those containing prepassive 3 and 4 arcs, via a minor revision:

(8.104) **The Subject Control/2 Object Incompatibility Condition (Version 2)**

If A is an initial 1 arc and neighbor of B and directly controls a foreign successor$_I$ final 1 arc branch of B, which has a colimb C with closed 2 quace, then B R-local sponsors C.

As was shown to be required, the assumptions now impose a key aspect of VG explanation on pseudopassives, given that these were analyzed as having prepassive 3 or 4 arcs.

For example, consider:

(8.105)a. Ernie appealed to Jane to go to the concert.

b. Jane was appealed to by Ernie to go to the concert.

c. Ernie appealed to Jane to be allowed to go to the concert.

d. *Jane was appealed to by Ernie to be allowed to go to the concert.

Examples (8.105a, b) involve object control rather than control by an initial 1 arc, and hence one rightfully expects no violation in the latter passive. However, (8.105c) represents subject control and so the VG violation passive (8.105d) will, given the 2 quace on the prepassive 3 arc or 4 arc headed by Jane required by (8.101), violate condition (8.104). [25]

I have yet to specify how appeal to quace contributes to explaining the existence of VG-like restrictions in *nonpassive* parallels of, in particular, pseudopassives. Q quace conditions have not yet been shown to explicate the fact that such VG restrictions fall under the GCPG. For instance, how can the invocation of 2 quace predict passivization/Q construction parallelisms like (8.50), repeated as (8.106):

(8.106)a. Passive: *Brian was appealed to by Jan to be allowed to visit the monastery.

b. Object Raising: *Brian was impossible for Jan to appeal to to be allowed to visit the monastery.

c. Object Deletion: *Brian was too mean for Jan to appeal to to be allowed to visit the monastery.

The answer is that such parallelisms exist because the Q constructions *are, like passives, all subject to conditions requiring their target arcs to manifest closed 2 quace*. Unfortunately, to state such conditions

precisely, one would have to have a serious understanding of each such construction and, further, be prepared to justify proposals about them. The former is not the case and the latter would not be possible *here* in any event. [26] So I have to be content with a partially informal statement like (8.107):

(8.107) **The Q Construction Quace Condition**

If A is an arc *defining the target of a Q construction*, A has closed 2 quace.

Here the highlighted part represents those aspects of the description which have not been analyzed to the point where they can actually appeal to the formalism on which this work is based. [27] One factor differentiating Q constructions from passives is the well-known fact that they can seemingly target the objects of prepositionss. If one adopted the view of apparent extraction from PPs of Chapter 3, section 3, in which phrases have local successor$_1$s of a unique type whose edge label was not specified, then obviously those local successor$_1$s in Q construction cases will have to be permitted to have quirky 2 quace.

Setting aside relevant questions of formalization though, the account now projects the VG phenomenon into nonpassive constructions in just the way it is imposed on passives by (8.101). All of (8.106a-c) etc., are blocked in parallel fashion. Each will have a target arc with the same quace properties as arc D in (8.103). To satisfy condition (8.104), every such arc must fail to have 2 quace but to satisfy either (8.101) or (8.107), each must have 2 quace. Since no object satisfies inconsistent propositions, no arc subject to these inconsistent requirements can appear in the metagraph of a well-formed English sentence.

I have thus argued in effect that the requirement that both prepassive$_{II}$ arcs and the target arcs for Q constructions have closed 2 quace accounts for the VG special case of the GCPG via condition (8.104) It is though worth a brief digression to show how the quace assumptions provide the *general* basis for the GCPG, for this can clarify the overall context in which the key principles (8.101), (8.104), and (8.107) need to be justified.

First, consider several non-PP type cases, beginning with one where a rigorous version of the GCPG would not actually hold. This involves the fact already registered that while *single 4 objects* totally resist passivization and *all 4 objects* preclude Object Raising, Object Deletion, Nominal Object Raising, etc., that is, all Q constructions, in dialects like mine some ditransitive 4 objects can nonetheless be passivized. While I have given no formal representation of this state of affairs, it can apparently be accomplished by simply requiring a 4 arc that has closed 2 quace to be prepassive.

accomplished by simply requiring a 4 arc that has closed 2 quace to be prepassive. And at the same time, a parallel condition can be impsoed on 3 arcs with closed 2 quace, since these also are incapable of defining Q construction targets.

(8.108) **The 3 Object and 4 Object 2-Quace Condition**

If A is a nonreplacer 3 arc or 4 arc with finished 2 quace, then A is a prepassive arc.

The underlying assumption is that one can allow 4 objects to have 2 quace freely, can claim, as in (8.107), that all Q constructions require target arcs with closed 2 quace, and yet still properly preclude such constructions with 4 object targets, via (8.108), since no arc can be both a prepassive$_{II}$ arc and a Q construction target arc. [28] Of course, nothing in this chapter precludes the impossible passivization of single 4 objects or the passivization of many ditransitive 4 objects. But the former is explicated by condition (7.16a, b) of Chapter 7 and the latter was discussed at length in section 8 of that chapter.

An additional non-PP case instantiating the GCPG involves the object of the verb <u>owe</u>, touched on in Chapter 7, in nonmonetary debt-denoting structures like:

(8.109)a. Adrian owed that observation to Melinda.

b. *That observation was owed to Melinda by Adrian.

c. *That observation was impossible for Adrian to owe to Melinda.

d. *That observation was too recent for Adrian to owe to Melinda.

e. *It was that observation that that everyone who owed to Melinda wanted to utilize.

f. *a strange observation to owe to a a foreigner

g. Which observation did Adrian owe to Melinda?

In this paradigm too, if the postverbal DP is a 4 object (likely one resulting from 2 object to 4 demotion), then condition (8.108) will block all of the Q construction cases (8.109b-f). And the passive will be blocked by the fact that even with 2 quace, a 4 object can only passivize in the presence of a final 3 arc, not present in (8.109b).

Turn then to data relevant to the claim that principles (8.101) and (8.107) impose the GCPG in non-VG structures hinging on PPs. One case involves examples like (8.110b, d, f, h, j), which Perlmutter and Postal (1984a) treated as violating a universal condition called the 1 Advancement Exclusiveness Law (see Chapter 4, section 8) :

(8.110)a. Sheila appeals to me (= 'I like her').

b. *I was appealed to by Sheila.

c. A ghost appeared to Larry.

d. *Larry was appeared to by a ghost.

e. That dog belongs to me.

f. *I am belonged to by that dog.

g. Those students matter to her.

h. *She is mattered to by those students.

i. That never occurred to Ruth.

j. *Ruth was never occurred to by that.

On the assumption that the DPs in the relevant PPs are initial 1s, the ungrammaticality of the bad passives follow from that law.

However, that principle fails to entail that those DPs also cannot be Q construction targets; but they cannot be:

(8.111)a. *I am hard for nasty women to appeal to (= 'like').

b. *Herb is too stupid for such a woman to appeal to.

c. *Larry was difficult for most ghosts to appear to.

d. *an odd senior citizen for a ghost to appear to

e. *I am impossible for any dog to belong to.

f. *I am too anticanine for any dog to belong to.

g. *She is easy for such students to matter to.

h. *She is too cold hearted for such students to matter to.

i. *Ruth is difficult for such things to occur to.

j. *Ruth is too stupid for such things to occur to.

Suppose then one rejects the 1 Advancement Exclusiveness Law account but maintains the view that the untargetable DPs are indeed initial (or at least, viable) 1s. One could then account for the facts via principle (8.112):

(8.112) **The Viable 1 Arc 2 Quace Incompatibility Condition**

If A is a distinct R-local successor$_1$ of a viable 1 arc, A does not have quirky 2 quace. [29]

Given earlier conditions (8.101) and (8.107), (8.112) combines with the assumption that the relevant DPs in (8.109) are initial 1s to determine not only the impossibility of the relevant passives, but unlike the 1 Advancement Exclusiveness Law account, also that of the Q construction cases. That such a

claim is in general true for Object Raising for the specific case of passive by phrases was noted in Bresnan (1971) and Lasnik and Fiengo (1974), as discussed in Postal (1990b). It also seems to hold for other Q construction types:

(8.113)a. *Jerome is impossible for an intelligent person to be fooled by.

b. *Jerome is difficult for me to think she was threatened by.

c. *Jerome was too lazy for her to be attracted by.

d. *It was Jerome who they questioned after she was threatened by.

e. *a curious person to be attacked by

Principle (8.112) might also account for data like the following under the plausible assumption that the experiencer DP in the to PP is an initial 1, which has demoted (say, to 3, then to 5):

(8.114)a. It seemed to Ronnie that the gerbil was sick.

b. *Ronnie was impossible for it to appear to that the gerbil was sick.

c. It is critical/crucial/important/obvious to Ronnie that the gerbil is sick.

d. *Ronnie is too blase for it to be crucial/important/obvious to that the gerbil is sick. [30]

Condition (8.112) illustrates the possibility that certain instances of the GCPG, like VG, are a function of *non-lexical* obligatory assignments or non-assignments of 2 quace in particular structures. But for many cases of the GCPG involving PPs, *lexical* specification is arguably at issue. And this recalls that the grammar must in any event divide PPs with intransitive verbs into those capable of being pseudopassivized and those not. Considerable data relevant to this distinction was presented in section 6. But not only were (i) no specifications offered to draw the distinction, (ii) no indication of what would technically be involved was given. While somewhat marginal to the central concern of this chapter, it is worth indicating that the addition of a 2 quace requirement to the basic condition on English periphrastic prepassive arcs in (8.101) offers the possibility of a general technical approach to issue (ii), that is, to specifying which PP embedded DPs are barred by the GCPG from being prepassive$_{II}$ arcs or target arcs for Q constructions.

The ill-formed clauses not blocked by independent nonlexical constraints can be specified to be incompatible with quirky 2 quace by some lexical constraint. One broad class of such constraints would have to refer to various Central arcs zoned by particular intransitive verbs, precluding 2 quace on such arcs. But there are various types of complication. For concreteness, focus on a paradigm like (8.76), partially repeated here:

(8.115)a. The director stood by that employee. (= 'supported')

b. *That employee was stood by (by the director).

c. *Such an employee is difficult to stand by.

In this case, the general idea would be that one constraint associated with the relevant intransitive use of stand precludes quirky 2 quace on an associated Central arc. Actually stating the relevant constraint though faces several difficulties. First, it is unclear what edge label the PP represents. Second, it is likely that the constraint has to reference the semantics of the use of stand, since e.g. the use in (8.116) evidently permits 2 quace on an associated phrase, albeit a different one:

(8.116)a.The director stood on that box.

b. That box was stood on by the director.

c. That box was difficult for the director to stand on.

While one might claim here that meaning reference is not required, since the cases are differentiated by distinct PPs, that is in general not the case.

For there are various cases of fixed intransitive verbs instantiating the GCPG with one use of a fixed preposition but not instantiating it with another use of the same preposition. Consider for instance the contrast between the use of care meaning 'like' in (8.117a, b, c) and the distinct use of that verb meaning 'take care of' in (8.117d, e, f): [31]

(8.117)a. Sandra doesn't care for sushi.

b. *Sushi wasn't cared for by Sandra.

c. *Sushi is impossible to care for.

d. Sandra doesn't care for such patients.

e. Such patients are not cared for by Sandra.

f. Such patients are impossible to care for.

Clearly, the first use instantiates the GCPG, but the second does not, indicating that 2 quace should be lictly assigned only in the latter.

The same type of contrast is seen with appeal (to), which illustrates the GCPG with the meaning 'like' but not when it means 'ask'. Thus a grammar of English must arguably contain constraints of the following partially schematic form:

(8.118) **The 2 Quace Lexical Assignment *Schema***

If A is [{...}] zoned and a neighbor of a P arc *whose semantic representation is* Ω, then A is not a neighbor of an arc with quirky 2 quace.

Here the highlighted part is entirely unformalized. Providing a serious formal account of how lexical constraints of the sort at issue might reference lexical item meanings is a task I have very poor understanding of and one way beyond the limits of this study. Suffice it to say that there would have to be an instantiation of this schema in which the zone specification includes <u>care</u> and the semantic specification picks out the 'like' meaning of that but not the 'take care' one.

8.8 Some Issues Related to Visser's Generalization

I briefly discuss a few issues linked to the VG phenomenon. The primary goal is to show they do not threaten the quace based account of VG argued for in previous sections; the secondary one is to argue that these matters too are at least in part illuminated by appeal to the typology of English object types central to this work.

First, it was observed in Hust and Brame (1976) and much discussed since (e.g., Culicover and Jackendoff, 2005: 436; Landau, 2000: 184-197; Sag and Pollard, 1991), that, despite VG, some passives of object sisters of infinitival complement clauses with the verb <u>promise</u> are nonetheless grammatical. So:

(8.119)a. Bach (1980: 333)

(i) The kids were promised to be allowed to go to Disneyland.

(ii) "Plank (1976) and others have noted the difficulty raised by sentences like the above. I have no non-ad hoc solution to this problem."

b. Manzini (1983: 429)

Bill was *asked/promised to be allowed to shave himself.

Such cases lead one to observe the existence of contrasts like:

(8.120)a. The children were promised by Fred to be allowed to go to the circus.

b. *The children were promised by Fred to have himself checked by a physician.

While (8.119a, c) and (8.120a) do raise descriptive issues, when properly analyzed they are consistent with all the claims made here and thus cannot undermine the present account of VG.

Cases like (8.119) have in recent years been discussed under the rubric of *control shift*, as in:

(8.121) Landau (2000: 183)

"The phenomenon of control shift was first noted by Hust & Brame (1976) and has been at the focus of much interest ever since. The phenomenon is witnessed in constructions with two matrix arguments, normally agent and goal. Whereas in normal circumstances the controller of PRO is fixed either as the agent or the goal, in special circumstances the controller shifts to the other argument."

In such terms, (8.120a) represents control shift, because promise with an infinitival complement is assumed to normally take an agent (initial 1 in my terms) controller. However, the control shift conceptualization of such data is not required by the facts. An alternative simply accepts that verbs like promise permit either 1 control or 2 object control, with each subject to various constraints. As stated earlier, it is not my intention to give an account of what conditions determine when specific verbs require or allow specific types of control relations.

A crucial constraint on 1 control is (8.104), which excludes *initial 1 control* in clauses with 2 quace marked arcs headed by what Landau calls the goal. Cases like (8.120a) cannot then fail to be consistent with (8.104). For in current terms, the initial 1 of the main clause is the DP in the passive by phrase, *which is not the controller* in (8.120a). That role is played by The children, an initial object of the main clause. So from the current perspective, (8.120a) is an uncontroversial case of object control (albeit control by a *passivized* object), inevitably consistent with that part of the present account of VG represented by condition (8.104).

An issue related to cases like (8.120a) involves the grammaticality of what would be the active clause correspondent. While subsequent main clause passivization of the 2 object resulting from the posited advancement of the 3 object cooccurring with promise infinitives manifesting object control may facilitate the advancement, for some speakers at least, such is not required. For instance, Landau (2000: 184) cites active clause cases from Bresnan (1982b), Farkas (1988), Melvold (1985) and Sag and Pollard (1991):

(8.122)a. ?John never promised $Mary_i$ [PRO_i to be allowed to leave].

b. Grandpa promised the $children_i$ [PRO_i to be able to stay up for the late show].

I find such clauses ungrammatical. If they represent instances of 3 object to 2 advancement, one would inter alia expect Complex DP Shift contrasts with subject control cases:

(8.123)a. ?Carl never promised to be allowed to play in the river any of the younger children.

b. *Carl never promised to immerse himself in the river any of the children

I perceive the expected contrast even though it is obscured by the ungrammaticality for me of object

control without controller passivization with promise, so that even (8.123a) cannot be perfect. [32]

While (8.122a) and (8.123a) are consistent with Culicover and Jackendoff's (2005: 436) claim that the complements of all the structures I am proposing to analyze in terms of 3 object to 2 advancement pretty much must be passive permission clauses, that condition is overall too restrictive, as (8.122b) and (8.123b) illustrate, and as is further supported by the following google supplied data:

(8.124)a. According to An,s, she was a close favorite companion to the Prophet and was promised by him to share in the holy war, and to be in paradise.

www.minervapartners.org/html/MosqueINFO.pdf

b. The Catholic Church was founded in ad 33 by our Lord, and was promised by Him to endure until The endtimes (cf. Matt 16:18).

The members.tripod.com/catholicact/actno04.htm

While I have argued that cases like (8.120a) raise no genuine difficulties for condition (8.104), they nonetheless might appear to represent an anomaly with respect to the other aspect of the present VG reconstruction. That appealed to passive principles (7.16a, b), interacting with the claimed fact that the object of promise with a non-wh infinitival complement is a 3 object. How then can (8.120a) be grammatical when (8.120b) is not? This reduces to the issue of why what one might have assumed to be the 3 object in (8.120a) can passivize when that in (8.120b) cannot. Logic permits various answers, for instance, a claim that the infinitive in (8.120a), unlike that in (8.120b), is a final 4 object. But there is no independent basis for that distinction. An alternative assumes that contrary to earlier discussion, the passivized object in (8.120a) has the same status as that in passives with this main verb in clauses having that clause complements, taken earlier to be 2 objects.

In other words, the alternative assumes (8.120a) involves regular 2 object passivization, not seemingly anomalous 3 object passivization. And there is reasonable evidence for that conclusion, visible in (8.125b, c, d), which support a claim that the relevant active clause DP objects are 2 objects.

(8.125)a. All of the children were promised by Fred to be allowed to go to the circus.

b. At that time (there) were promised to be allowed to go to the circus all of those children.

c. With the children promised to be allowed to go to the circus, ...

d. ?The children again got promised to be allowed to go to the circus.

Although I argued earlier that both expletive there passives and locative inversion passives are only possible with 2 object targets, both variants of (8.125b) seem grammatical. Further, it was also argued

that participial absolute constructions are only possible with passive participles linked to 2 object gaps, but (8.125c) also seems grammatical. Then too, for me, get passives link only to 2 object gaps, but (8.125d) is also passably grammatical. If though cases like (8.120a) are 2 object passives, they are rightly independent of the requirement of the existence of a final 4 object with passivized (nonpseudopassive) 3 objects.

What emerges then is that although promise with an infinitival complement is usually thought of as permitting only subject control, it actually allows either subject or object control, subject to specific constraints; see also e.g. Bowers (2005b: 19), Culicover and Jackendoff (2005: 458-459) and Landau (2000: 184-197). The key elements of these might be sketched informally as in (8.126):

(8.126)a. All instances of verbal promise take an initial 3 object and an initial 2 object.

b. When the initial 2 object of verbal promise is an infinitive, then:

(i) the final 1 of that complement is directly controlled and

(ii) the initial 3 object advances to 2 only if it is the controller.

Significantly though, (8.126bii) need not be stipulated. For if it is violated, that is, if the 3 object advances to 2 in the presence of subject control, condition (8.104) will not be satisfied.

Formulation (8.126) is compatible with expletive 1 passives like (8.127) cited in Bresnan (1982b: 355):

(8.127) It was promised to Susan to be allowed to take care of herself.

While I do not accept structures like (8.127), for some speakers they are evidently fine. [33] Such cases manifest initial 3 object control in my terms; but that 3 object advances to 2 without subsequent passivization. Rather the initial 3 object is realized in a to phrase, suggesting 3 object to 5 demotion in the present framework. And that satisfies (8.126), which allows, but does not require, an object controller to advance to 2.

Can sentences otherwise parallel to (8.127) manifest 1 control?

(8.128)a. Kawasaki (1993: 105) cited in Landau (2000: 175)

?It was promised (by the committee) to investigate the matter.

b. It **was promised by them to** clear the weeds and till the cuts.

www.ndp.gov.pk/g1_1.html - 38k

c. It was promised to Susan (by Fred) to detoxify himself.

Google-supplied example (8.128b) suggests that pattern (8.128a) is real. I don't see much quality difference between (8.128) and (8.127), but then I reject the latter. [34] The key is that (8.128a-c) violate

neither (8.126) nor (8.104) nor indeed any principle I have advanced. Condition (8.104) is not violated because the prepassive 2 arc headed by It can be taken to be sponsored by, hence R-sponsored by, the initial 2 arc headed by the infinitive.

One should consider too sentences where, in present terms, the initial 3 object of promise with an infinitival initial 2 object manifests 3 object to 5 demotion but no passivization of any kind, personal or expletive. Given the assumptions in (8.126), two subtypes of cases are conceivable…one with initial 1 control, the other with initial 3 object control:

(8.129)a. Ed promised to Susan to devote himself to philosophy.

b. Ed promised to Suan to be allowed to introduce herself to the prince.

I find neither of these acceptable. For me, although perhaps not many others, a verbal promise clause with an infinitival complement and a to phrase, regardless of whether it manifests subject or object control, is very marginal at best. In other terms, 3 object to 5 demotion in such circumstances is doubtful, although I have no account of why. But neither the subject control case (8.129a) nor the object control case (8.129b) violates any condition I have advocated.

Overall then, the clause types cited in this section seem amenable to plausible analyses internal to the current framework and in any event, despite what is sometimes assumed, do not bear directly on the analysis of VG and do not threaten any proposal made in this chapter to reconstruct the latter.

8.9 The Absence of VG Restrictions in promise Nominalizations

Something should be said about the VG situation with phrases based on the *noun* promise. As various authors have noted, the to phrase variant with initial 1 control is entirely standard in a nominalization:

(8.130)a. Culicover and Jackendoff (2005: 435)

(i) *Susan was promised by John to take care of himself/herself.

(ii) the promise to Susan by John to take care of himself/*herself

b. John's promise to Susan to take care of himself

Significantly, after Culicover and Jackendoff (2005: 435, note 11) observe that the account of VG in Pollard and Sag (1994) fails to account for why (8.130ai) is good despite the bad VG verbal analog (8.130aii), they add: "We take this to be a syntactic fact, but have no further explanation." I believe the present view can account for the contrast.

However, showing this requires providing with some justification a view of nominalization structure and arguing that cases like (8.130ai) are passives, in fact impersonal passives. This is a complex and demanding task and, unfortunately, space precludes undertaking it here.

8.10 A French Analog to Visser's Generalization

Important support for a quace based account of VG derives from French, which manifests a partial analog to English VG. An initial observation due to Maurice Gross via Nicolas Ruwet appears in (8.131):

(8.131)a. Ruwet (1972: 77)

le marquis a menacé Justine de la fouetter.

"The marquis threatened Justine to whip her"

b. Ruwet (1972: 77) crediting Maurice Gross

*Justine a été menacée par le marquis de la fouetter.

"Justine was threatened by the marquis to whip her"

More data and a generalization were provided in:

(8.132) Fauconnier (1976: 161, note 16):

"Quite generally, if x V y P is passivized to y être V par x P x can no longer serve as a controller:

(i) *Jean a été prié par moi de l'accompagner.

'I (sic!; Fauconnier clearly miswrote for 'John') was asked by me to accompany him'

(ii) *Le patron a été supplié par Marie d'être reprise.

'The boss was begged by Mary to be taken back'

(iii) *Le traître a été pardonné par moi d'avoir passé ma vie en prison

'The traitor was pardoned by me for having passed my life in prison'

(iv) *Pierre a été menacé par Paul de le battre.

'Peter$_i$ was threatened by Paul with hitting him$_i$.

These data give a nontrivial indication of an analog of VG holding for French, since one finds French participial passives blocked in cases of 1 control. This conclusion is evidently not affected by well-formed passive/control cases like (8.133):

(8.133) Fauconnier (1976: 153, 154)

a. Pierre a été menacé par Paul d'être battu.

'Pierre was threatened by Paul with a beating'

b. Justine a été menacée par le marquis de subir les pire tortures.

'Justine was threatened by the marquis with the worst tortures'

c. Justine a été menacée par le marquis de se faire fouetter.

'Justine was threatened by the marquis with being whipped'

For (8.133a, b, c) involve control by the initial object, and are thus irrelevant to VG.

A sharp contrast between French and English might appear to exist related to example (8.131a). For this case of 1 control involves an object, one which is certainly not a 3 object. If it is a 2 object, it represents a structure (8.104) claims to have no English parallel. I return to this point.

The really definitive data about French analogs to VG involve, however, the existence, touched on several times earlier, of a type of French clause union passive distinct from participial passives (and from French middles), as illustrated again in (8.134) and (8.135).

(8.134)a. Victor a critiqué Adrienne.

"Victor criticized Adrienne"

b. Adrienne s'est fait critiquer par Victor.

"Adrienne got criticized by Victor"

(8.135)a. Son père a téléphoné les nouvelles à Lucille.

"Her father telephoned the news to Lucille"

b. *Lucille a été téléphoné (e) les nouvelles par son père.

"Lucille was telephoned the news by her father"

c. Lucille s'est fait téléphoner les nouvelles par son père.

"Lucille got telephoned the news by her father"

This clause union passive structure utilizes an infinitival clause embedded below a reflexive clitic-containing form of one of the verbs found in the causative or clause union construction, here faire. These sentences are in fact systematically ambiguous, having causative meanings as well as passive ones. The latter are perhaps best represented by English get passives. The critical point involves constraints on prepassive arcs, represented informally in (8.136a, b) and more precisely in (8.136c):

(8.136) **French Prepassive Arc Conditions**

a. The prepassive arc in a French participial passive (or French middle) is a 2 arc.

b. The prepassive arc in a French clause union passive is a 2 arc or a 3 arc.

c. If A is a prepassive$_1$ arc, then A is a 2 arc or a 3 arc, and if A is a 3 arc it is a neighbor of a final P arc.

Constraint (8.136c) is relevantly illustrated by the hopeless (8.135b), which involves participial passivization of a 3 object, while the se faire passive of a 3 object in (8.135c) is fine.

Return to the verb menacer 'threaten'. It was indicated that with 1 control, it precludes a participial passive. And the same is true of a clause union passive, as (8.137) illustrates:

(8.137) *Justine s'est fait menacer par le marquis de la fouetter.

"Justine got threatened by the marquis to whip her"

So, to the extent that menacer illustrates a French analog of VG, that is found as much with clause union passives of 2 objects as with participial ones.

Turn to the French cognate of promise, which unequivocally takes a 3 object as well as an infinitive:

(8.138) Julien a promis à Lucille de l'aider.

"Julien promised Lucille to help her"

The question is how this verb interacts with an analog of VG. There can be no serious test of this question with a participial passive, given (8.136c), which bars *participial* passives of 3 objects independently of questions of 1 control. But as already observed, clause union passives of 3 objects are fine. And, amazingly, there turns out to be no analog of VG in clause union passives *of 3 objects*; see (8.139):

(8.139)a. Lucille s'est fait promettre par Jean de l'aider. (Thanks to Pierre Larrivée for checking this example)

"Lucille got promised by Jean to help her"

b. je **me suis fait promettre** par ycman de te bannir du FORUM pour ce mensonge abject!!!!

"I got promised by ycman to banish you from the forum for this abject lie"

www.oloff.org/forum/viewtopic.php?p=20479& sid=f4e1635be3bb01f84d1ce0c71e02ca15

c. mais je répète que la population **s'est fait promettre** d'être prêts à tout régler **...**

"but I repeat that the population got promised to be ready to take care of everything"

www.assnat.qc.ca/fra/37legislature1/Debats/journal/ch/050414.htm

d. Note the *plural* agreement on adjectival prêts in c., which indicates that the controller is the missing passive phrase/initial 1.

These factual generalizations are supported by the existence of the lovely minimal pair in (8.140):

(8.140) Thanks to François Kergoat for verifying these examples

a.*Justine s'est fait menacer par le chef de la virer.

"Justine got threatened by the boss to fire her"

b. Justine s'est fait promettre par le chef de ne pas la virer.

"Justine got promised by the boss not to fire her"

That is, while clause union passivization targeting a 2 object, like participial passivization with such a target, yields a VG type violation, clause union passivization targeting a 3 object does not. Why does this extraordinary contrast exist?

The answer reduces to a quace account of VG originally proposed only for English, under the assumptions in (8.141):

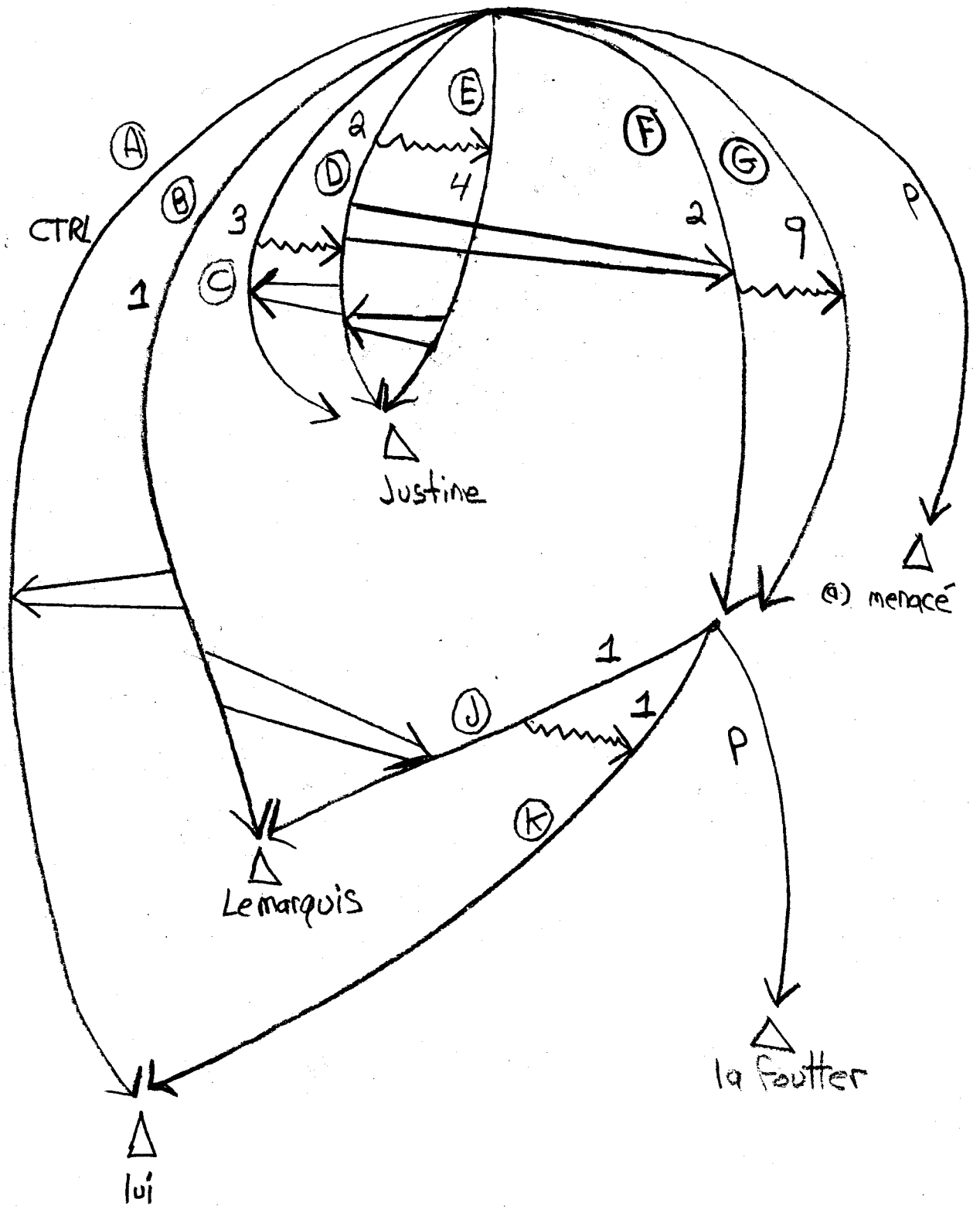
(8.141)a. A French prepassive 2 arc must have closed 2 quace.

b. A French prepassive 3 arc is *not* required to have closed 2 quace.

Condition (8.141a) is a partial analog of the English principle in (8.102) barring *quirky* quace on 2 arcs, which I assume to also be an element of French grammar. Condition (8.141b) is in effect the null hypothesis since it will hold in the absence of French conditions requiring quirky 2 quace marking of 3 arcs, specifically of at least prepassive 3 arcs. And, in contrast to the English situation, I know of no French reason to posit such conditions. Under these assumptions then, the cited facts about French VG analogs follow if one assumes French, like English, incorporates principle (8.104) above, rendering subject control incompatible with an object having 2 quace. Given that French does not *require* assignment of 2 quace to prepassive 3 arcs, no violation ensues when 1 control and clause union passivization based on a 3 object cooccur. But such will be found when 1 control cooccurs with either participial or clause union passivization of a 2 object, which (8.141) plus the basic assumptions about quace guarantee will have closed 2 quace.

Unaccounted for though is one relevant French characteristic, the grammaticality of *active* structures like the <u>menacer</u> example (8.131a). One's first impression is that this is involves a 2 object. If so, the defining 2 arc cannot, given (8.104), have closed 2 quace, seen to be motivated for prepassive 2 arcs, a complication. There are two possibilities in current terms. First, subject control <u>menacer</u> could take a 4 object. This would yield the structure fragment (8.142):

(8.142)


A
B
CTRL
C
D
E
F
G
P
1
2
3
4
2
9
Justine
(a) menacé
1
1
J
P
K
Le marquis
la foutter
lui

And this is consistent with an analog of condition (8.104), since, in the absence of an arguably unmotivated principle *forcing* quirky 2 quace on 4 arcs, it will be able to manifest closed 4 quace not 2 quace. Note that nothing in the account of the VG property here depends on the existence of arc D in (8.142), although there are various reasons to posit it, among them motivating the local successor$_{III}$, I.

I have no independent evidence favoring a 4 object hypothesis for menacer and have not been able to study the question seriously. One problem is that I only know of four tests for a 4 object in French, those of (8.143), which, as illustrated in (8.144), hold for the arguable 4 objects of avoir and vouloir:

(8.143) French 4 objects cannot:

a. be targets of participial passives

b. be targets of se faire passives

c. be targets of object raising (with facile/difficile,...)

d. be sources of reflexive verbal clitics

(8.144)a. Jacques a eu/voulu/critiqué cela.

"Jacques had/wanted/criticized that"

b. Cela a été *eu/*voulu/critiqué par Jacques.

"That was had/wanted/criticized by Jacques"

c. Cela s'est fait *avoir/*vouloir/critiquer par Jacques.

"That got had/wanted/criticized by Jacques"

d. Cela *s'a/*se veut/se critique tout le temps.

"That has/wants/criticizes all the time"

e. Cela sera difficile à *avoir/*vouloir/critiquer.

"That will be difficult to have/want/criticize"

f. *Heureusement, vous vous avez l'un l'autre/*Heureusement, vous vous voulez l'un l'autre/Heureusement, vous vous critiquent l'un l'autre.

"Happily, you have each other/Happily, you want each other/Happily, you criticize each other"

g. Heureusement, je vous ai (, vous)

"Happily, I have you."

Now, it is known that the object of menacer with subject control cannot be a target of a participial passive, a se faire passive, or the target of a middle. And it seems not to be a possible target for object raising either. So these facts are at a minimum *consistent* with a 4 object

hypothesis. But lacking insight into for instance the extent to which *any* infinitival controller can be the target of object raising, I do not know what weight attaches to the latter fact.

On the positive side as well, there is no known counterevidence, specifically, facts like (8.145) need not be taken to represent such:

(8.145)a. Ces types se sont menacés l'un l'autre de s'entretuer.

"Those guys threatened each other to kill each other"

b. Des menaces ont été échangées, ils **se sont menacés de** se tuer.

www.un.org/icty/transf48/050419IT.htm -

"They threatened each other to kill each other/themselves."

Here menacer with a controlled complement occurs happily with a reflexive/reciprocal verbal clitic. But despite first impressions perhaps, this need not be taken as incompatible with (8.143d). Because, given the arc antecedence between main clause 1 arc and a 2 arc, there is no reason to think that (8.145a, b) are instances of 1 control and not of object control, the latter independently shown by (8.133) to be possible with menacer. If so, they can consistently be taken to have 2 objects with menacer without contravening any earlier generalization. [35]

There is though an alternative to a claim that subject control menacer takes a 4 object. This would posit that the relevant DP is a 2 object with obligatory quirky 4 quace. As far as I can determine so far, this also would account for all of the facts, impossibility of passivization, compatibility of active subject control clauses with a 2 object, etc. Since the difference between the two possibilities is subtle, they are hard to distinguish factually and I currently see no basis for choosing one over the other.

8.11 An Apparent Problem

Consider:

(8.146) Jerome impressed Sally as wise.

Such examples based on the verb impress have characteristics of inversion expressions, which I analyze in terms of 1 to 3 demotion. For instance, the 'experiencer' semantics of the object is typical of inversion cases. A minimal inversion analysis would render the DP Sally an initial 1 and final 3 object.

However, in certain respects, Sally does not behave like a 3 object. For instance, it can be a Complex DP Shift target (noted by Wasow, 1981; see note 4 of the Preface) and a Right Node Raising target:

(8.147)a. Jerome impressed as wise everyone present.

b. Jerome may have impressed as wise and he certainly impressed as clever everyone present.

Moreover, in this, it contrasts with the otherwise parallel object of e.g. strike, which does act like a 3 object and hence behaves more regularly under an equally motivated inversion hypothesis:

(8.148)a. Jerome struck Sally as intelligent.

b. *Jerome struck as wise everyone present.

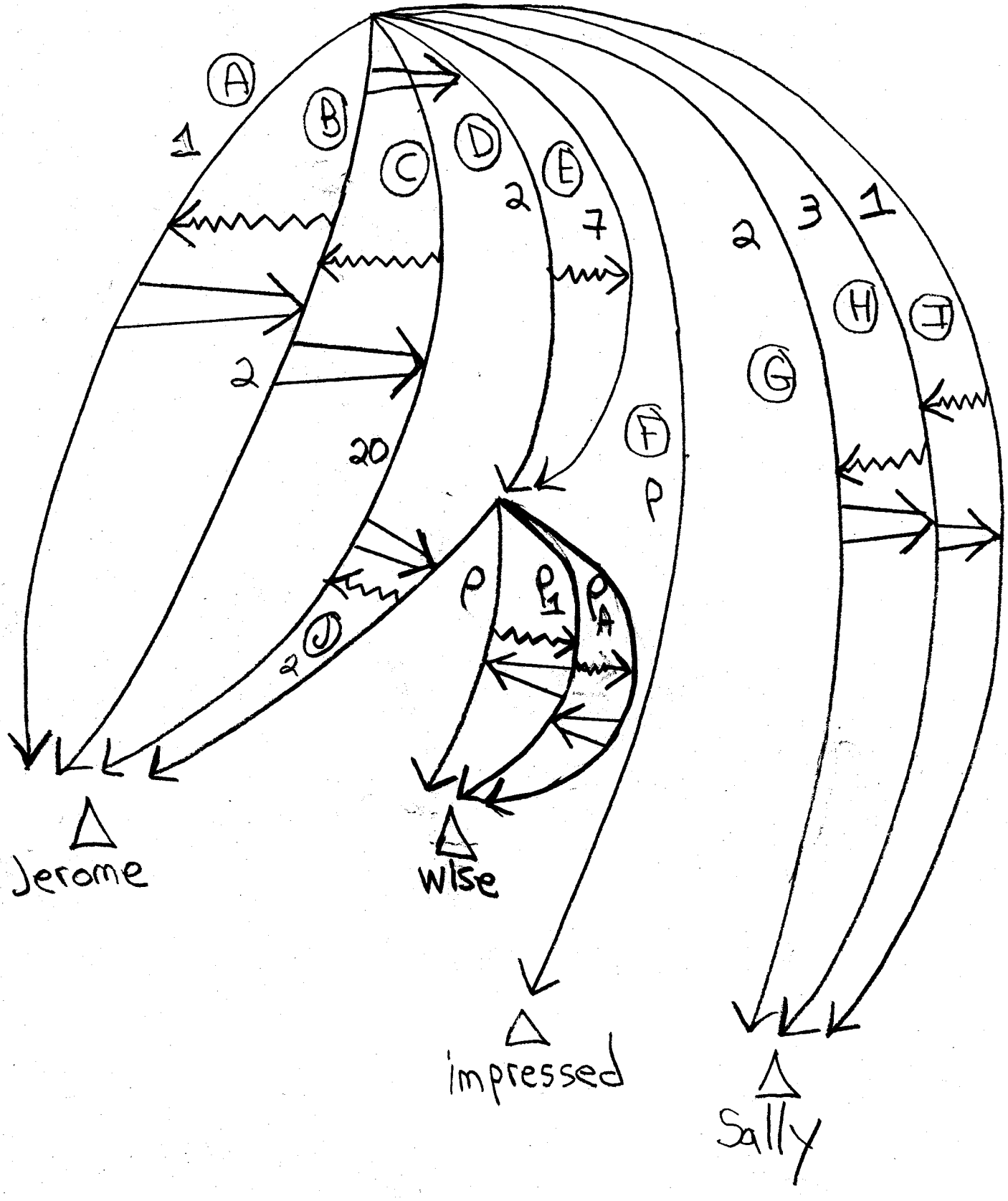
c. *Jerome may have struck as wise and he certainly struck as clever everyone present.

This could suggest that (8.146) involves not only 1 to 3 demotion, exactly like (8.148a), but subsequent advancement of the resulting 3 object to 2. If so, Sally in (8.146) would head an initial 1 arc and final 2 arc.

However, while the cited facts motivate an assumption that Sally in (8.146) does not head a final 3 arc, even acceptance of the inversion structure view does not require that the resulting 3 arc have in particular a 2 *arc* local successor$_I$. An alternative is that the 3 arc has a 4 arc local successor$_I$. Since 4 objects can be both Complex DP Shift and Right Node Raising targets, the alternative is as compatible with (8.147) as is the 2 arc local successor$_I$ view, which is not.

Further, an anlysis of cases like (8.146) involving a 4 arc local successor$_I$ of a 3 arc local successor$_I$ of a 1 arc has an important theoretical advantage. It is consistent with the desired consequences of a system incorporating the Forced Erasure Condition, while the proposal that the 3 arc has a 2 arc local successor$_I$ is not. This is visible in a metagraph fragment like:

(8.149)


A
B
C
D
E
F
G
H
I
J
1
2
20
2
7
2
3
1
2
P
P
P1
PA
Jerome
wise
impressed
Sally

Here B potentially threatens G and G potentially threatens B. Since B is erased by A, it is not threatened by G. But G is not erased by any arc distinct from B; hence it is erasable by B, and thus threatened by it. The Forced Erasure Condition then requires B to erase G, which would thus need some kind of local successor$_{III}$ and could not end up a final 2 arc. This undermines the idea that (8.147a, b) are grammatical because the predecessors for Complex DP Shift and Right Node Raising in such examples are output 2 arcs. This issue doesn't arise if the analog of G is a 4 arc, which would then not be even potentially threatened by any arc.

Moreover, observe that structure (8.149) involves two neighboring 2 arc local successor$_I$s. It is unclear that this ever needs to be allowed, as touched on in Chapters 3 and 4.

So, theoretically, the idea that Sally in (8.146a) is a 2 object is inferior to the proposal that it is a 4 object. Moreover, the latter proposal is superior in a direct factual way. For given condition (8.107) above, it determines that a DP like Sally in (8.146) cannot be a target for Object Raising or other Q constructions, seen to be incompatible with 4 object targets. The 2 object proposal does not determine that, since 2 objects are the archetypically *good* targets of such constructions. But DPs like Sally in (8.146) bar all Q construction targeting:

(8.150)a. *Sally was impossible for anyone to impress as wise.

b. *Sally was too uneducated for anyone to impress as wise.

c. *an odd person for Sally to impress as wise

Contrast these with *noninversion* structures with genuine 2 object targets:

(8.151)a. Sally was impossible for anyone to consider wise.

b. Sally was too uneducated for anyone to consider wise.

c. an odd person to consider wise

Taking the object with impress to realize a 2 arc local successor$_I$ of a 3 arc local successor$_I$ of a 1 arc might seem to raise a passivization problem. For the relevant sentences lack passive correspondents:

(8.152)a. Bill impressed John as pompous.

b. Bowers (1993: 626)

*John is impressed (by Bill) as pompous.

However, this fact does not bear on the issue of whether Sally in (8.146a) heads a 2 arc or 4 arc local successor$_I$ of a 3 arc since no passive anomaly arises from either assumption. Under the 4 object proposal, such passives are doubly blocked. They fall under the ban imposed by (7.16a, b) on the

passivization of single 4 objects. Moreover, under either analysis, passivization would violate the requirement in (4.41) that passive victim arcs must be viable. But arc A in (8.149) is not.

Overall then, the 4 object proposal for DPs like Sally in (8.146a), unlike the 2 object proposal, raises no known problem for any theoretical assumption made here. Further, it offers a simple way to differentiate the dialect type I have been talking about from Stowell's, mentioned in note 6 of the Preface. Recall that Stowell rejects (8.147a) as much as he does (8.148b). In other words, he apparently treats Sally in the former as a final 3 object as well. One can say that his dialect precludes the inversion 3 arc local successor$_I$ from having a 4 arc local successor$_I$, that is, would have a constraint like:

(8.153) If A is 3 arc local successor$_I$ of a 1 arc, A is not a local predecessor$_I$ <of a 4 arc>.

The bracketed part might be redundant. In any case, the DP heads of the relevant 3 arcs would then obey the constraints on final 3 objects, which is what the (tiny amount of data) available about Stowell's idiolect indicate.

Notes to Chapter 8

1 As the text citations indicate, there is broad recognition of the existence of VG, which cuts across advocacy of distinct theoretical frameworks. I know of no literature challenging its existence (but see note 2). However, Foley and Van Valin Jr. (1984: 308) cite (i) in passing as grammatical, and make clear that John is the controller:

(i) Mary was promised by John to leave early.

Lacking any other information about the form of speech at issue in (i), I cannot consider what differences from the account given of VG in what follows would be required for an English dialect in which (i) is, contrary to all other attestions known to me, grammatical.

2 It is sometimes implied that promise is almost the only verb defining clauses illustrating VG; Landau (2000: 22, 157, 170, note 10) stated this view three different times. See also Boeckx and Hornstein (2003, 2004), Culicover and Jackendoff (2001: 504; 2005: Chapter 12) and Landau (2003). That this is an error emerges clearly from what follows.

3 Discussions of promise control structures typically focus on the principles determining the controller(s) for particular types of controlled complements. See Culicover and Jackendoff (2001, 2005), Landau (2000), Pollard and Sag (1994) and Sag and Pollard (1991) for discussion and relevant references. I have nothing to say about this important issue here. That silence has, I believe, no implications for the validity of the claims made in this chapter.

4 Williams (1980: 207) argues that the VG violation in (i) is a function of the c-command condition relating argument and predicate mentioned in note 12 of Chapter 2 as an inadequate basis for the passive failure with the psychological usage of strike.

(i) *John was promised by Bill_i $[\text{PRO to leave}]_i$

But the considerations of that note show his account fails for (i) as well, as should be clear from what follows.

5 Huddleston (2002a) does not use the term 'Visser's Generalization', uncited in the nonetheless very extensive index of Huddleston and Pullum (2002).

6 Bresnan's (1982b) claim that VG followed from the constraint on passive by phrase complements was a special case of a much broader principle she proposed. This claimed that controllers had to bear a restricted set of grammatical functions *not including* specifically that of a passive agent phrase. This broader constraint is refuted by the data cited in the text which counterexemplify the narrower claim which it entails.

Farrell (1994: 82 note 16) observed the inadequacy of the general claim even for English, citing (ia,b), neither of which satisfies the condition:

(i)a. This problem can't be solved without investigating every angle.

b. Joan pleaded with the teacher to give her son an A.

7 Jacobson (1982: 222) claimed a parallel between VG and the putative fact that a passive by phrase cannot antecede a reflexive, supported by (ia, b):

(i)a. John showed Mary to himself.

b. *Mary was shown by John to himself.

But I find (ib) no worse than (ia). Poor verb selection makes it hard to see what even (ia) means. With the happier choice of verb in (ii), both examples are perfect, indicating the absence of any constraint precluding reflexive antecedence by a passive by phrase:

(ii)a. Vincent compared Veronica to himself.

b. Veronica was compared by Vincent to himself.

Supporting that conclusion, Williams (1994: 221) cited (iii) as well-formed. Again though, the issue is clouded by poor verb choice, eliminable by substituting sent.

(iii) The book was given by John to himself.

8 That pseudopassivization cannot even combine with *object* control in manner of speaking verb clauses presumably renders irrelevant to VG analysis the fact that such also preclude pseudopassivization with subject control:

(i)a. Grant grunted/screamed/shouted/snarled/yelled at Lucille to be allowed to watch television.

b. *Lucille was grunted/screamed/shouted/snarled/yelled at by Grant to be allowed to watch television.

These verbs apparently just preclude pseudopassivization with an infinitival complement.

Moreover, the data of (8.12b) seem to represent even more general constraints for the manner of speaking verb construction. These verbs also preclude pseudopassives in control-free clauses with that clause complements:

(ii)a. Grant grunted/screamed/snarled/yelled at Lucille (that the faucet was leaking).

b. Lucille was grunted/screamed/snarled/yelled at by Grant (*that the faucet was leaking).

A similar constraint pattern appears with swear, and vow, which take subject control:

(iii)a. Marilyn swore/vowed to Zeus to give up cocaine.

b. *Zeus was sworn/vowed to by Marilyn to give up cocaine.

While one could assume, as I did in (Postal, 1990b), that (iiib) represents VG, this is arguably unjustified since these verbs also preclude such pseudopassives *without* control:

(iv)a. Marilyn swore/vowed to Zeus that she would give up cocaine.

b. *Zeus was sworn/vowed to by Marilyn that she would give up cocaine.

Presumably, both (iii) and (iv) fall into the domain of various pseudopassivization constraints distinct from VG touched on later in this chapter.

Parallel conclusions holds for propose:

(v)a. Marianne proposed to Vaughn to sign herself/himself/themselves up for the Marine Corps.

b. *Vaughn was proposed to (by Marianne) to sign herself/himself/themselves up for the Marine Corps.

While the subject control passive is bad, so are the object control and split antecedent control cases (see Hornstein, 2003: 36). These are not VG properties; they show that for some reason the PP with propose systematically precludes pseudopassivization.

Culicover and Jackendoff (2005: 433-437) cite other verbs permitting subject control with PP complements but which bar pseudopassivization, including pledge (to), agree (with), learn (from). These too ground arguments parallel to those just gone over indicating that the pseudopassivization failures are independent of VG. For instance, agree precludes pseudopassivization with that clause complements as well as controlled infinitives:

(vi)a. Vic agreed with Susan to call the doctor/that the doctor should be called.

b. *Susan was agreed with by Vic to call the doctor/that the doctor should be called.

Although I will not document this here, I believe that essentially all the environments cited in this note where a PP object cannot passivize are equally environments where the PP object cannot be a target of a Q Construction. Given the development in section 7, these facts would follow from lexical specifications that the relevant verbs cannot head a P arc neighbor of an output arc with quirky 2 quace, at least when other conditions are met. For instance, this might hold for the manner of speaking verbs only given the presence of an arc headed by a complement clause.

9 This was wrongly denied in:

(i) Hornstein (2001: 64, note 20), who claimed:

"Observe that what the controller in a given sentence is must be considered a structural fact not a lexical fact. To see this consider a verb like 'ask'. It optionally takes an object. *When it does it requires object control* – (i). When there is no object present, it requires subject control – (ii):

(i) John asked $Mary_i$ PRO_i to leave the party.

(ii) $John_i$ asked PRO_i to leave the party." (emphasis mine: PMP)

The error was in effect corrected without citing the earlier claim in Hornstein (2003: 35).

10 The literature contains considerable discussion of the requirements on controlled complement clauses in cases regarded as exceptionally taking subject control. I have nothing to say about this property; see Culicover and Jackendoff (2005: 440-444) and Landau (2000: 183-197).

11 Hornstein (2003: 36) cites both of the following as grammatical:

(i) John was asked/begged to be allowed to leave early.

These might appear at first glance to be counterexamples to the text claim. But, even accepting Hornstein's judgment, they are not. For he explicitly indicates that the only reading manifests no subject control but rather arbitrary interpretation for the final 1 of the infinitival complement. I find both of (i) ungrammatical under any reading; this is in part unsurprising since for me, as indicated in the text, beg, unlike ask, does not allow its object to passivize even with object control.

12 Verbs of the pester class also permit controlled (gerundive) complements with the controller internal to a PP in into. These cases permit passivization without problem:

(i)a. Armando bugged/hassled/noodged/pestered the baby sitter into baking a pie.

b. The baby sitter was bugged/hassled/nagged/noodged/pestered by Armando into baking a pie.

The meanings of e.g. Armando bugged the baby sitter to bake a pie/into baking a pie. differ sharply. The infinitival case does not entail the actuality of the event denoted by the complement, while the causative gerundive case does.

13 Conclusion (8.24) is partly foreshadowed in Bach (1979: 523; 1980: 303), Bowers (1993, 2005b), Chomsky (1977a: 14, note 13), Larson (1991: 104- 5) and Wasow (1981: 305 note 6).

(i) Chomsky (1977a)

"Note that the NP object of *promise*, for many speakers, resists *wh*-movement, as in *whom did you promise t a job*, whom *did you promise t to offer Mary a job*. The phenomenon seems independent of (12), relating probably to a similar resistance to *wh*-movement in indirect object structures quite generally: e.g. *whom did you give a book*, etc."

Bach observed that the object of promise with an infinitival complement had the 3 object property of resisting left extraction and Complex DP Shift, citing:

(ii)a. ?Who did you promise to do the dishes?

b. ?I promised to leave the house all the little boys in the basement.

While the left extraction constraint is less than robust or absent for many, Bach seemingly finds the constraint in (iib) to be such as well, in my experience, a quite exceptional judgment.

Larson (1991: 104) gave a sentence analogous to (iib) two question marks. For me (iib) is impossible. Wasow cited a personal communication from Ivan Sag to the effect that the object of promise with an infinitival complement was not subject to Complex DP Shift and observed that this provided a similarity with the properties of the first objects of standard ditransitives. But this did not lead Wasow to a developed account of VG in these terms. And the VG analysis in Pollard and Sag (1994) reveals no influence of Wasow's observation. Larson observed that the object of promise with an infinitival complement had several of the characteristics I treat as features of 3 objects, including resistance to left extraction (citing Stowell, 1981) and to object raising, and noted the similarity of these properties to those of the first object in standard ditransitives.

(iii) Larson (1991: 104)

*John was tough to promise to leave.

Bowers (1993, 2005b) proposals, building on those of Bach (1979), are, modulo sharp differences in general theoretical assumptions, probably even closer to an account like (8.24), especially that in his later paper:

(iv) Bowers (2005b: 18)

"Notice that this theory also provides a straightforward explanation for VG (Bowers 1993 2001a): the inherent Dative-marked argument of promise is simply not passivizable, due to the 'inertness' principle, whereas the object of a verb such as persuade, which has structural Case, must be assigned nominative Case by T in constructions such as the passive that lack an accusative Case-assigning probe in v. According to my analysis, then, VG actually has nothing at all to do with the failure of the Agent (whether explicit or implicit) to control the subject of the infinitive complement. Instead, it is simply one of a number of different cases where an apparent object is impassivizable because it is actually a dative argument (see Bowers 1993: 626-632, Bowers 2001a: 320-322, for details)."

Operating in a framework significantly distinct from Barrel (A) ideas, Bach (1979) differentiated the syntactic structures entered into by subject control and object control verbs, although not in a way at all parallel to the present proposals. Landau (2000: 170-171) provides a compact account.

14 There is no reason to believe that the unpassivizable 3 objects in question here fail to satisfy the *other* condition on 3 object passivization, the requirement in (7.16) of Chapter 7 that they represent *viable or antioblique* 3 arcs.

15 Clauses limited to the single final Central relation 9 can bear certain final nonCentral relations, including that defining right node raised constituents, as in:

(i) The first expert may have thought and the second expert certainly thought that the rodent was infected.

16 Restrictions of the type at issue here were probably first systematically studied in Emonds (1970); see also Emonds (1972a).

17 For remarks on why the analogs of cases like e.g. (8.32a,) with preauxiliary position complement clauses are good, see Postal (1998: 110-111).

18 Chomsky (1980a: 36) cited:

(i) John was asked what to do.

But this is at least partially distinct from e.g. (8.35b, d), even ignoring the absence of an explicit <u>by</u> phrase, in that the infinitival final 1 can fail to be linked to a DP in the main clause, representing then so called 'arbitrary control'.

19 This is denied by Landau (2003: 482) citing (without page references) earlier claims to that effect in Mohanan (1985) and Chomsky (1986a). But such negative claims to the effect that no instances of long distance control into <u>wh</u> infinitives can be found can only be supported, never proved. They are susceptible to even a few bona fide counterexamples. To me, (8.38b, c, d) seem to be such. Moreover, Mohanan (1985: 646-647) does not, on my reading of the text, say that long distance control of <u>wh</u> infinitives is impossible, only that this is impossible *if* the latter is in object position. Moreover, the article's page 647 rightly cites (i) as grammatical:

(i) John said that Mary had always assumed that how to feed himself was the major question.

20 This claim is hardly self-evident. But an a priori plausible alternative analysis in which (8.70) would involve passivization of the infinitive with extraposition of an infinitival 1 is dubious since non-<u>wh</u> infinitivals do not, for the most part, seem to passivize except, perhaps, under one circumstance not found in (8.70). That renders an analysis of (8.70) as involving passivization of the complement itself suspect. The special circumstance is that plain infinitivals can be taken to passivize in a clause C if they have been raised into C, as in:

(i)a. To do that might have been believed to have been illegal.

b. To do that would be considered (to be) impolite of you.

c. To do that was proved to be illegal.

These contrast with e.g.:

(ii)a. Those explorers planned that/to do that.

b. That/*To do that was planned by those explorers.

c. Karen might have longed to visit Rome.

d. That/*To visit Rome might have been longed (for) by Karen.

More relevantly, participial absolutes with passive participles were seen earlier to require 2 object targets; but (iii) is grammatical:

(iii) With it finally decided by the director to fire the assistant director, ...

21 Such an account was developed in some detail in Johnson and Postal (1980: Chapter 10).

22 I believe parallel paradigms exist for the same phonological verb on its sense of 'strike with a missile' as in The hunter got the bear with a 30 calibre bullet and on its sense of 'be a subscriber to' as in He gets the Washington Post on weekends.

23 To say 'extensive' is no exaggeration; dozens and dozens of verbs sanction the pattern,

24 Moreover, the explanation stated by Pullum and Huddleston is partly incompatible with earlier judgments by one of those authors, as Langendoen and Pullum (1972) cited as grammatical all of:

(i)a. Who did you mention it to that S?

b. Who does it suggest nothing to that S?

c. Who isn't it apparent to that S?

d. Who were you persuaded by that S?

although they starred:

(ii)a. *Who did you mention to that S?

b. *Who were you shown by that S?

25 The account of VG which now includes (8.104) actually provides a double basis for the ungrammaticality of the standard VG illustrating examples with promise like (1). Originally, these were just taken to violate condition (7.16) barring prepassive 3 arcs not neighbors of final 4 arcs. But they will also violate (8.104).

An account of VG centrally based on (8.104) also accounts for the observation in (i):

(i) Sag and Pollard (1991: 101)

"Visser's generalization of course also applies to 'short' passives (those that lack a *by*-phrase)."

For (8.104) is indifferent to the viable 1 arc or its 8 arc local successor$_1$ in a passive.

26 One important issue is the extent to which a 2 quace requirement on Q constructions is more than a parochial feature of English, a matter beyond the scope of the present study.

27 While I am unable to provide a formal account of the conditions on Q constructions, the 2 quace requirement clearly differentiates them from various left extractions, like interrogative extraction, negative fronting and topicalization. Since these do not require 2-quace marking, all else held constant, they are much freer in the DP positions they can target, as partially illustrated by many of the cited PP paradigms.

28 The restriction to *nonreplacer* 3 or 4 arcs in (8.108) is required by earlier assumptions. These determine for periphrastic passives of any object type not only that the prepassive$_{II}$ arc has 2 quace but that the equivalent resumptive arc taken to be the relevant final arc of the inner clause also does. The latter must obviously not be forced to be a prepassive arc. The existence of the resumptive arc (copy arc) was proposed in section 7 of Chapter 7, where it was linked to the raising of passivized phrases associated with periphrastic passives.

29 The specification 'quirky' in (8.112) is required because of e.g. my 2 arc local successor$_I$ analysis of adjectival clauses in section 9 of Chapter 4. The resulting output 2 arcs are R-local successor$_I$s of 1 arcs and have straight 2 quace, but must not violate the condition (8.112) is intended to impose.

30 Actually, (8.112) may not be motivated as a basis for (8.114b) since the prepositions in these are unstrandable even under non-Q construction extraction:

(i) *Who did it appear/seem to that the gerbil was sick?

But this is not true of the adjectival cases:

(ii) Who was it critical/crucial/important/obvious to that the gerbil was sick?

31 A complicating factor is that the verb's 'like' sense is a negative polarity item, but the other is not:

(i)a. *Herb cares for sushi.

b. *Everyone cares for sushi.

(ii)a. Herb cares for handicapped children.

b. Everyone takes turns caring for Aunt Lydia.

32 If, for speakers like me, there is a constraint permitting 3 object to 2 advancement for <u>promise</u> with an infinitive only if the resulting 2 object is passivized, it would block cases where the 2 arc local successor$_I$s are the target arcs for Q constructions:

(i)a. *Nancy will be impossible to promise to be allowed to go.

b. *Nancy is too irresponsible to promise to be allowed to go.

c. *an odd child to promise to be allowed to go

These are in fact ungrammatical for me

A further issue though involves the status of cases like (i) for those who accept cases like (8.122). While I have no information about that, the facts would have to be evaluated aginst the following observation. Although objects of some standard object control verbs can be Q construction targets, others appear to largely bar this for no known reasons:

(ii)a. Fran was impossible to ask/convince/order to control her caloric intake.

b. ??Fran was impossible to challenge/pester to control her caloric intake.

(iii)a. Fran was too weak to ask/convince/order to control her caloric intake.

b. ??Fran was too weak to challenge/pester to control her caloric intake.

(iv)a. a strange individual to ask/convince/order/to control her caloric intake

b. ??a strange individual to challenge/implore/pester to control her caloric intake

This suggests that for speakers who accept (8.122) but reject (i), the facts might be a special case of the mysterious constraint operative in (ii)-(iv), in which case they would arguably not bear on the hypotheses of interest.

33 A quite different situation would be represented by something like (i):

(i) *It was promised Susan to be allowed to take care of herself.

I doubt such a sentence can exist. There are three subcases. If Susan is a final 2 object, then the passivized expletive would have to be a 3 or 4 object, but the conditions of passivization of non-2 objects would not be met. If Susan is a final 3 object, then the general conditions for taking (i) to be a 4 object passive would be met. But as considered further in Chapter 10, extraposition expletive 4 arcs are in general obligatorily erased, rendering their being prepassive arcs impossible, with any verb. These considerations also account for why there are no cases of the form (iia) or corresponding passives:

(ii)a. *I told Mary it that the game was over.

b. *It was told Mary that the game was over.

Here too the 3 object would force the expletive to demote to 4. Finally, analyzing (i) in terms of passivization of the infinitive with introduction of an expletive 1 and extraposition of the infinitival 1 is not possible because unraised infinitives do not passivize. This leaves no possibility, I believe, for a viable structure for (i).

34 This seems to be a lexical property, as the otherwise parallel (i) seems fine:

(i) It was proposed (by Conrad) to Vernon (by Conrad) to buy the company.

35 The claim that quirky 2 quace on 4 arcs is unmotivated in French needs to be defended against the possibility that just that underlies the fact that what I take to be final 4 objects, as in (8.143),

obligatorily determine nonreflexive clitics *of the same form* that final 2 objects do. But I cannot argue this here.

36 One needs evidence from other NLs for the existence of analogs to VG and for a quace based account. The following suggestss that VG holds for Afrikaans:

(i) Le Roux (1980: 65) gave various control data from Afrikaans, quotes the then unpublished remark by Chomsky in (iia) and stated about several subject control verbal cases (iib):

(ii)a. "We can therefore accommodate in a natural way the well-known resistance of verbs of subject control to passivization."

b. "As is clear from the sentences in (38), the verbs <u>sweer</u> 'swear', <u>onderneem</u> 'undertake', <u>leer</u> 'learn' do in fact resist passivization."

However, nothing available supports (or undermines) an approach in Afrikaans based on quace.

Chapter 9 Clauses with that Clause Complements

9.1 Some Basic that Clause Passive Considerations

The focus of this chapter is on the analysis of various clauses having that complements, and especially those containing as well what seem to be 3 objects. The goal is to show that the ideas already introduced provide explanatory bases or at least effective descriptive possibilities for various puzzling restrictions. It will also be argued that the study of that clauses provides essential evidence for the important though somewhat opaque claim about English periphrastic passives discussed in Chapter 7, section 7, that taking them to involve a covert resumptive pronoun.

Consider first relatively simple examples, those without any other object phrases:

(9.1)a. Marco asserted/believed that Marianne was sick.

b. Marco meant that Marianne was sick.

c. Marco figured/thought that Marianne was sick.

d. *That theory expresses that such people are sick.

One's first impulse is to analyze all of (9.1a-c) in the same way and to simply claim that the verb express cannot take a that clause complement. However, as discussed in Postal (2004: Chapter 8), these straightforward assumptions are both untenable, as emerges clearly from the consideration of the passive clauses linked to such examples. For each example type in (9.1) is associated with a distinct pattern of passivization possibilities, defining a four way typology of verbs taking that clause complements. The four classes were designated types *I, II, III, IV* in Postal (2004: Chapter 8), a terminology I adopt here.

Type I cases like (9.1a) have *two* associated passives, one with an expletive 1 (hereafter: an *expletive passive*) and one in which the that clause itself is passivized (hereafter, a *clausal passive*):

(9.2)a. It was asserted/believed by Marco that Marianne was sick.

b. That Marianne was sick was asserted/believed by Marco.

Cases like (9.1b), representing type II, have *no* associated passives:

(9.3)a. *It was meant (by Marco) that Marianne was sick.

b. *That Marianne was sick was not meant (by Marco).

Cases like (9.1c), representing type III, have *only* an associated expletive passive:

(9.4)a. It was felt/figured/thought by Marco that Marianne was sick.

b. *That Marianne was sick was felt/figured/thought (by Marco). [1, 2]

Finally, cases like (9.1d), representing type IV, have, despite the ungrammaticality of the active form, an associated clausal passive but no expletive passive:

(9.5)a. *It is properly expressed by that theory that such people are sick.

b. That such people are sick is properly expressed by that theory.

While any account of English syntax must ultimately provide an explication of this four-way division of clause types involving <u>that</u> clauses, this task remains, as I write, largely unrealized to the best of my knowledge. Type I cases, which reveal maximal freedom, need little comment. Type IV cases were discussed in Postal (1998: 111-119), and I will have nothing further to say about them here. Attention will thus focus on types II and III.

A repeated claim which even at best could address only some of the attested distinctions is that the clause types lacking associated clausal passives are those which preclude a simple DP object. Theoretical issues aside, this proposal was shown in Postal (2004: Chapter 8) to be factually untenable since many type II and type III cases do allow simple DP objects, e.g.: [3]

(9.6)a. That meant that we would be indicted.

b. *It was meant (by that) that we would be indicted.

c. *That we would be indicted was meant by that.

d. That meant something (namely, that we would be indicted).

(9.7)a. Aristotle intended/pledged that she would resign.

b. It was intended/pledged by Aristotle that she would resign.

c. *That she would resign was intended/pledged by Aristotle.

d. Aristotle did not intend/pledge that/anything/such a thing.

Moreover, as I also noted, one cannot account for the facts by a simple division of verbs taking <u>that</u> clauses into those which permit passives vs. those which do not. For the existence of type III paradigms shows, and e.g. (9.7) illustrates, that some verbs not allowing clausal passives allow expletive passives.

A second and more serious objection (also cited in Postal, 2004; Chapter 8) to assuming that the relevant ban on clausal passives can be reduced to the absence of grammatical DP objects is that those clause types which bar clausal passives also bar topicalization of the that clause and structures where the that clause would represent a Q construction gap.

(9.8)a. That the rodent was infected, none of them believed/proved/*felt/*figured/*thought.

b. That the rodent was infected was hard to believe/prove/*feel/*figure/*think.

c. That the rodent was infected was too far fetched for anyone to believe/prove/*feel/*figure/*think.

d. That the rodent was infected was an impossible thing for anyone to believe/prove/*feel/*figure/*think.

This correlation indicates that the failure of type III that clause complements to passivize is not a fact in itself but is related to some more general property which also blocks topicalization. So, the failure of clausal passivization with verbs like feel, figure, think, etc. remains a mystery.

A clue to a good part of the needed explanation is provided, however, by two sorts of considerations. The first is the theoretical claim in Postal (1994b, 1998) that the English topicalization construction involves an invisible resumptive pronoun in the extraction site and the similar claim in Cinque (1990) and Postal (1994a, 1994b, 2001a, 2001b) that, in effect, Q constructions also do. The second is that, as noted in Postal (2004: 281), generalization (9.9) holds:

(9.9) Verbs taking that clauses which allow clausal passives also permit:

a. their that clause complement object to topicalize

b. their object to be a gap for Q constructions with a that clause antecedent;

c. their object to independently be a weak definite pronoun anteceded by a that clause.

In general, verbs with that clause complements which preclude clausal passives lack these properties. Data set (9.10) illustrates the relevant correlations:

(9.10)a. Marion asserted/believed/proved that he was guilty but I did not assert/believe/prove it.

b. Marion felt/figured/thought that he was guilty but I did not *feel/*figure/*think it.

c. That he was guilty was impossible to assert/believe/prove/*feel/*figure/*think.

d. That he was guilty was too incredible to assert/believe/prove/*feel/*figure/*think.

e. That he was guilty was an incredible thing to assert/believe/prove/*feel/*figure/*think.

This pattern of facts led Postal (2004: 282) to suggest that the basis for (9.9) is that all the constructions involved inherently require invisible weak pronouns in the relevant positions and that

general constraints on the antecedence of such pronouns will carry over to these invisible pronouns. For that explanatory pattern to work, a passive clause must, of course, also in general inherently involve an invisible pronoun. But, following the discussion in Postal (2004: 282), Chapter 7, section 7 already argued that there is evidence for that conclusion independent of the behavior of that clauses. More precisely, I claimed that the raising of the head of the prepassive 2 arc, 3 arc or 4 arc in an English periphrastic passive requires an invisible resumptive pronoun in the inner clause, which is respectively a 2 object, 3 object or 4 object whose defining copy arc is erased by the foreign successor seconding that copy arc.

Return then to the issue of unpassivizable that clauses with type III verbs like e.g. think. Given what was just specified, an immediate problem is the existence of contrasts like (9.11b, c), given (9.11a):

(9.11)a. *Freddie thought it.

b. *That 2 and 2 is 9 was thought by Freddie.

c. It was thought by Freddie that 2 and 2 is 9.

Specifically, how, given present assumptions about the invariable presence of a resumptive pronoun in the inner clause of a periphrastic passive, can type III expletive passive (9.11c) *escape* being as ungrammatical as e.g. (9.11b), an ill-formedness putatively imposed by the resumptive pronoun requirement given the constraint illustrated in (9.11a)? The answer must lie in the nature of that constraint.

My assumptions require that both (9.11b, c) have a schematic structure like (9.12), where *RP* denotes an resumptive pronoun anteceded by the passivized object:

(9.12) ...was thought RP by Freddie

But only in (9.11b) does the passive fall under the constraint holding for (9.11a). To allow (9.11c) to avoid being blocked, one can appeal to the fact that in the good case, the antecedent of the RP is an expletive while in the bad case it is a that clause. Specifically, appealing to the concept *arc antecede* of Chapter 1, one could formulate the restriction underlying (9.11a) as in (9.13):

(9.13) **The Type III Verbal Object Antecedence Condition**

If a 2 arc B which is [{feel, figure, think, ...}] zoned is arc anteceded by A, A is an R-successor of an XPL arc.

Condition (9.13) blocks cases like (9.11b), since there is no XPL arc at all in its metagraph, hence no possibility that the resumptive 2 arc my assumptions require could have an appropriate arc antecedent.

But (9.13) rightly remains consistent with the grammaticality of (9.11c). For that can have an analysis in which the initial 2 arc sponsors the XPL arc headed by it, that would, as required by (6.24) of Chapter 6, the XPL Arc Condition, have a 2 arc local successor$_{I}$ which erases the initial 2 arc and which is the arc passive$_{II}$ arc. Hence that arc passive$_{II}$ 2 arc would have the foreign successor in the auxiliary clause which is an arc antecedent of the copy 2 arc I have posited.

9.2 Type II Verbal Clause Structures

While the claim that English periphrastic passives always link to invisible resumptive pronouns combines with condition (9.13) to explain key properties of type III structures, that merely initiates an account of all the problems associated with <u>that</u> clause passivization. Turn then to the properties of type II structures, which I illustrate with examples based on a usage of the verb <u>mean</u> involving sincerity of assertion (distinct from that in e.g. (9.6) above): [4]

(9.14)a. Stella really meant that her son would help you.

b. Stella said that her son would help you and she really meant it.

c. *That her son would help you was really meant by Stella.

d. *It was really meant by Stella that her son would help you.

Given that (9.14b) shows that this verb usage allows as object a weak pronoun *not* anteceded by an expletive, the verb cannot be of type III, and (9.13) is not invoked. Moreover, even expletive passives are barred, as with other class II verbs cited in note 5, a matter for which no explanation has been provided:

(9.15)a. Veronica answered/gathered/heard/did not mind/replied that he was a spy.

b. *That he was a spy was answered/gathered/heard/not minded/replied by Veronica.

A key fact is that the usage of <u>mean</u> in (9.14) takes ordinary DP objects, and those *also* fail to passivize:

(9.16)a. Victoria really meant that/something a bit different.

b. *That/Something a bit different was meant by Victoria.

The same property holds for the other type II verbs:

(9.17)a. What Veronica answered/gathered/heard/did not mind/replied was that he was a spy.

b. *What was answered/gathered/heard/not minded/replied by Veronica was that he was a spy.

This suggests an edge label basis for the properties of the type II paradigms independent of issues of pronominal distribution. One possibility is that these verbs take 4 objects, or, more plausibly, 2 objects which obligatorily demote to 4. Such an assumption would block passives like (9.16b), via the

now multiply cited entailment of principle (7.16) that 4 objects can only passivize in the presence of 3 objects, that is, in ditransitive clauses.

One could also account for some properties of the type II paradigms by claiming the objects of these verbs are 3 objects, which would also bar passivization via condition (7.16). However, that hypothesis is easily disconfirmed. First, 3 objects bar left extraction (in my type of dialect), and e.g. Complex DP Shift in probably all dialects. But the objects of type II verbs form in general perfectly fine left extraction and Complex DP Shift gaps, as already illustrated in (9.17a). See also:

(9.18)a.What did Victoria mean?

b. the sort of thing she meant

c. Victoria meant very seriously the things she told you.

So I conclude that <u>mean</u> in particular and type II structures in general are subject to a condition requiring a 2 object, <u>that</u> complement or not, to demote to 4:

(9.19) **The Type II Verbal Object Demotion Condition**

If A is a viable 2 arc which is [{anwer, gather, mean, mind, reply ...}] zoned and locally erasable by a 4 arc, A is a local predecessor$_{I}$ of a 4 arc. [5]

While this determines that a <u>that</u> clause 2 complement with type II verbs must head a 4 arc, such a state of affairs is potentially in conflict with the Generalized Complement Clause Condition, (8.33) of Chapter 8, which does not allow a <u>that</u> clause to head any final Central arc except a 9 arc. Satisfaction of this condition can be brought about in non-ad hoc ways as far as I know in only two circumstances. The first is if the 4 arc local successor$_{I}$ determined by (9.19) is copied, e.g. because it is an R-predecessor$_{I}$ of an arc defining topicalization. The other is if the 4 arc which (9.19) requires locally sponsors an XPL arc whose required 4 arc local successor$_{I}$ erases the XPL arc's 4 arc sponsor, requiring that arc to be a local predecessor$_{III}$ of a 9 arc. This combination of facts defines extraposition of the <u>that</u> clause complement.

But it seems that topicalization of the <u>that</u> clause object of a type II verb is bad; strikingly though, this is not the case with a DP object:

(9.20)a. The things she said, I don't believe she really meant.

b. *That her son would help you, she really meant.

c. That story, I never heard/read in the Tribune.

d. *That she had been run over, I never heard/read in the Tribune.

Since 9 arcs can never be the R-predecesssors of Top arcs (see the discussion around (9.66) and (9.67) below), I take facts like (9.20b, d) to reveal a requirement that a 4 arc headed by a that clause with type II verbs have a 9 arc local successor$_{III}$, induced by the presence of the extraposition expletive and its advancement from XPL to 4.

The relevant question then is the fate of the head of the XPL arc; that would be expected to determine a morphological pronoun it as a final 4 object in cases like (9.14a) and (9.15a), when no such expletive is visible (or possible) in such type II structures. To account for this, the present analysis needs a condition requiring erasure of the posited expletive 4 arc. Suppose one formulated this as:

(9.21) **The Expletive 4 Arc Erasure Condition**

If B is an R-local successor of an XPL arc sponsored by an arc headed by a complement clause and a neighbor of a P arc A, then A erases B if and only if A is a 4 arc.

This rightly determines the impossibility of visible expletive objects in type II structures. And sections 3 and 4 indicate that it also has proper consequences in ditransitive paradigms. The question arises though whether the expletive arc erasure it determines is general enough.

Specifically, only a small number of English clauses manifest the pattern:

(9.22) DP verb (P) expletive *it* (PP/adverb) *that* clause

For most verbs taking that clause objects, no overt object extraposition expletive it possible. Remarkably, as Williams (1980) observed (see note 1), this absence even holds for type I verb structures, which have corresponding *expletive* passives:

(9.23)a. Irving determined/discovered (*it) that the rodent was dead.

b. It was determined/discovered by Irving that the rodent was dead.

c. Irving demonstrated/showed (*it) that the rodent was dead.

d. It was demonstrated/shown by Irving that the rodent was dead.

Moreover, type III verbs indicate that there is no general solution to the mismatch between expletive absence in objects and passivized expletives which claims that all of the latter arise only through extraposed passivized clauses; this is illustrated by the contrasts in (9.4).

Since in all of the relevant cases, the expletive can be passivized and, of course, the that clause can be as well in the type I cases, nothing forces *all* 2 object elements of type I or type III paradigms to

unconditionally demote to 4. For the former, their that clauses must be able to head prepassive$_{II}$ 2 arcs and the expletive 2 objects these determine must be able to head them in both paradigms. But this leaves unaccounted for the bad cases of (9.23a, c), which would contain unpassivized expletives. This might suggest that (9.21) should be generalized in some way to determine the erasure of some expletive nonprepassive 2 arcs, to at once block the long forms of (9.23a, c) while allowing their short forms. An alternative would claim that while type I and type III paradigms are not subject to any general requirement of 2 object to 4 demotion, they are governed by a requirement that *expletive* 2 objects *not heading prepassive arcs* demote to 4. Such a demotion would then yield an output subject to the unmodified erasure requirement of condition (9.21).

While I am aware of no decisive evidence choosing between the alternatives just sketched, there are relevant facts, specifically, contrasts like:

(9.24)a. Valerie believes (*it) that the rodent is dead.

b. Valerie believes *(it) to be possible that the rodent is dead.

c. Valerie proved (*it) that the rodent was alive. [6]

d. Valerie proved *(it) to be possible that the rodent was alive.

e. It was believed by Valerie (to be possible) that the rodent was dead.

Since it is justified that (9.24b, d) involve raising, see Postal 1974, 2004: Chapter 8; Postal and Pullum (1988), but that (9.24a, c) do not, there is a correlation in such paradigms between expletives linked only to that clauses in lower clauses, which cannot be invisible, and those linked to that clause complements of the main clause, which must be. Since, as (9.24e) shows, either type of expletive can passivize, there is ground for taking both to head main clause 2 arcs not required to have 4 arc local successor$_I$s, at least if they are prepassive. Suppose then one proposes the following:

(9.25) **The Extraposition Expletive 2 Object Demotion Condition**

If A is a non-prepassive 2 arc R-successor$_I$ of an XPL arc sponsored by a 2 arc headed by a that clause, then A is a local predecessor$_I$ of a 4 arc if and only if A is not an R-successor$_I$ of a 20 arc.

Condition (9.25) says in effect that unpassivized extraposition expletive 2 objects must demote to 4 except in the case where their main clause 2 object status results from raising, in which case they cannot demote to 4.

Consideration of (9.25) provides some reason to prefer the alternative it represents to that of modifying (9.21) to determine the erasure of some expletive 2 arcs. The reason is that (9.21) requires

the erasure of the relevant expletive 4 arcs absolutely. But (9.25) assumes that the covert character of expletive 2 objects is not absolute in two senses. It depends on the raising property and it is bled by passivization. It would thus be complicated and inelegant to combine the consequences of (9.21) and those of (9.25) in a single statement based on the direct erasure of some expletive 2 arcs.

The approach I have sketched offers a straightforward approach to the limited number of instances in which even an *unraised* overt object expletive can occur with a <u>that</u> clause *without passivization.* These are the relatively rare grammatical instances of pattern (9.22), a variety of which were cited in Postal and Pullum (1988), including most of the following:

(9.26)a. I blame it on you that we have no beer.

b. I dislike it that she insulted the minister.

c. They doubt it ?(very much) that they will be able to come.

d. I hated it that he behaved that way.

e. I mentioned (it) to Fred that the rodent was dead.

f. They didn't mind it that the restaurant did not have take out.

g. I owe it to you that I got the job.

h. Everyone regrets (it very much) that your gerbil died.

i. They spread it around that I was a vampire.

j. Emonds (1972a: 29)

I like it that they played those records very much.

k. That lady couldn't bear/stand it that the child was abandoned.

My hypothesis is that the <u>that</u> clauses associated with these cases head initial 2 arcs, as do all the other complement-containing clauses considered so far. But the expletives they manifest head final 3 arcs.

That could a priori come about in two ways; the complements themselves could demote to 3, then regularly determining the option of expletive 3 arcs, or the 2 object complements could determine expletive 2 arcs, which then have 3 arc local successor$_1$s. I conclude that the former view is more adequate, based on the existence of clear properties of the complement clauses associated with the overt object expletives. Thus I will say in these cases that these verbs allow, and in the case of those of e.g. (9.26a, b, d, g, i, j) moreover *require*, that their initial <u>that</u> clause complement demote to 3:

(9.27)a. **The Complement Clause Demotion to 3 Qualification Condition**

If A is an initial 2 arc headed by a <u>that</u> clause and has a 3 arc local successor$_I$, then A is [{bear, blame, disslike, doubt, hate, mention, mind, owe, stand,...}] zoned.

b. **The Obligatory Complement Clause Demotion to 3 Condition**

If A is an initial 2 arc headed by a <u>that</u> clause and is [{blame, dislike, hate, like, owe, spread, stand,...}] zoned, then A has a 3 arc local successor$_I$.

Given these assumptions, in a case where a complement has demoted to 3, when an expletive is introduced, determining, via (6.24), the XPL Arc Condition, that the clausal 3 object demote to 9, the expletive arc local successor$_I$ of the defining XPL arc is a 3 arc, hence properly *not* erasable given (9.21).

For the verbs listed in (9.27a) but not in (9.27b), failure to instantiate the mere *option* of 2 object to 3 demotion leaves a complement 2 arc, which could then be prepassive or which could determine an expletive 2 arc which could be prepassive. Hence cases like (9.26e, g) are not impeded from having both clausal and expletive passive correspondents:

(9.28)a. It was mentioned to Fred that the rodent was dead.

b. That the rodent was dead was mentioned to Fred.

c. That the rodent had died was doubted by everyone.

d. It was doubted by everyone that the rodent had died.

e. That your gerbil died was regretted by everyone.

f. It was regretted by everyone that your gerbil died.

But for those verbs listed in (9.27b), for which the complement demotion to 3 is obligatory, either clausal or expletive passives should be impossible, since *single* 3 objects cannot passivize. This is correct:

(9.29)a. *That he behaved that way was disliked/hated/liked by everyone.

b. *It was disliked/hated/liked by everyone that he behaved that way.

c. *That the restaurant did not have take out was not minded by those people.

d. *It was not minded by those people that the restaurant did not have take out.

e. *That I got the job was owed to you.

f. *It was owed to you that I got the job.

There is evidence beyond passivization facts and simple expletive visibility that cases like (9.26) do involve complements that are 3 objects demoted to 9 and expletives which are 3 objects. As to the latter, recall that 3 objects, unlike 2 objects, cannot correspond to of + DP sequences in nominalizations, Verbs mentioned in (9.27b) should then lack corresponding nominalizations with that clauses, which seems correct:

(9.30)a. His blaming of it on Joan (*that the gerbil died) was wrong.

b. Their demanding of it (*that I reveal the hiding place) was wrong.

c. His dislike of it (*that she smoked) was very strong.

d. His hatred of it (*that they behaved that way) surprised Louise.

e. Their owing of it to you (*that they got job offers) is not in doubt.

f. Their spreading of it around (*that she was pregnant) annoyed the secretary.

For verbs like mention, for which complement demotion to 3 must be regarded as optional, the facts are partially different:

(9.31)a. His mentioning of it (*that the rodent was dead) upset Sarah.

b. *His teaching of her (of) that song was very time consuming.

The short nominalization of (9.31a) is grammatical because it corresponds to a simple DP, to which (9.27) is irrelevant. But the long nominalization of (9.31a) would have to correspond to a complement demotion to 3, with the expletive hence being a 3 object. This proposal reduces the ill-formedness of the long form of (9.31a) to the same principle which blocks (9.31b).

I turn to evidence that the complements cooccurring with overt object expletives have themselves demoted to 3 object. Observe that extraposed complements linked to visible expletives which are, as the first objects of ditransitives or passivized 3 objects, *uncontroversial* (at this stage of the present work) 3 objects are islands:

(9.32)a. He gave it some consideration/a lot of thought that she remain standing that long.

b. It was given some consideration/a lot of thought that she might remain standing that long.

c. *How long did he give it some consideration/a lot of thought that she might remain standing?

d. *How long was it given a lot of consideration/some thought that she might remain standing?

And a cooccurring overt object expletive with one of the verbs in (9.30) also yields a that clause island, not present when the expletive is (in my terms) covert:

(9.33)a. How long did he demand (*it) of them that they remain standing?

b. How long did he spread (*it) around that they remained in the bedroom?

c. How long did he mention (*it) to you that she could stand on her head?

A contrast parallel to (9.33c) was previously explicitly noted:

(9.34) Valois (1993: 506, note 9)

"As pointed out to me by Beatrice Santorini, we would then have to explain why extraction is only possible when the expletive is null:

(ii) What did they mention that they filled?

(iii) *What did they mention <u>it</u> that they filled?"

However, there might appear to be a paradox, since no such island property is found with passivized expletives with such verbs:

(9.35)a. How long was it demanded of them that they remain standing?

b. How long was it mentioned to you that she could stand on her head?

But these data actually reveal no paradox. They can be grammatical because they correspond not to passives of the long forms of cases like (9.26e) but rather to their short forms, those in which, just as in (9.36), a 2 object expletive is passivized with no induction of islandhood;

(9.36)a. Jerome asserted that she could stand on her head for hours.

b. It was asserted by Jerome that she could stand on her head for hours.

c. How long was it asserted by Jerome that she could stand on her head?

For the verbs in (9.35) allow but do not *require* 2 object to 3 demotion of their complement clauses.

Finally**,** a contrast relevant to the current discussion is seen in (9.37):

(9.37)a. I took it that he could stand on his head for that long.

b. I took it for granted that he could stand on his head for that long.

Although at first glance parallel, these are quite different; the expletive is obligatory in (9.37a), optional in (9.37b):

(9.38)a. *I took that he could stand on his head for that long.

b. I took for granted that he could stand on his head for that long.

I suggest that the former cases instantiate obligatory demotion of the complement to 3; that use of the verb <u>take</u> should be listed in (9.27b), while the second is an opaque raising case, accounting for the possibility of an explicit expletive which is a final 2 object and grammatical because of the

conditions in (9.25). By 'opaque' I mean that for granted is an irregular predicate occurring only in the complement of a raising to object structure with the main verb take.

These assumptions determine that (9.37a, b) should differ in passivization possibilities, island facts, and nominalization types, as they do: [7]

(9.39)a. *It was taken that he could stand on his head.

b. It was taken for granted that he could stand on his head.

c. *How long did they take it that he could stand on his head?

d. How long did they take (it) for granted that he could stand on his head?

e. *Their taking (of it) that he could stand on his head was foolish.

f. Their taking (of it) for granted that he could stand on his head was foolish.

Key in (9.39d) is the reading in which How long modifies stand on his head. These contrasts follow from the assumption that the expletive in (9.39a) is a 3 object, the complement an extraposed 3 object, while that in (9.39b) is a 2 object. The 3 object posit predicts the failure of passivization in (9.39a) via principle (7.16) since there is no final 4 object, predicts the island behavior since complement 3 objects are islands and predicts the nominalization failures from the general fact that English nominalizations cannot be formed from clauses containing 3 objects.

While for practical reasons, this chapter is largely limited to that clause complements, there are parallels to key properties which have been cited with other types of complement. First, there are similar cases with infinitival complements:

(9.40)a. They owed it to Mike to stand on their heads for some length of time.

b. *It was owed to Mike by those students to stand on their heads for some length of time.

c. *What length of time did they owe it to Mike to stand on their heads?

d. *their owing of it to Mike to stand on their heads

The evidence indicates that this owe paradigm (compare the owe cases with that clauses above) behaves as predicted by a claim that the expletive is a 3 object. Arguably then, this use of owe with an infinitive requires the initial infinitival 2 object complement to demote to 3.

And the same points hold for the following infinitival hate paradigm, relevantly parallel to earlier hate cases with that clauses:

(9.41)a. Chomsky (1981a: 190)

John would hate it for him to win.

b. *It would be hated by John for him to win.

c. *By what score would John hate it for him to win?

d. your hatred of it (*for John to win)

Second, I believe that a productive irrealis <u>if</u> clause complement construction, whose existence was argued for in Pullum (1987), manifests 3 object expletive <u>it</u>; see also Postal and Pullum (1988):

(9.42) Wendy would really appreciate/hate/like/love/prefer it if Kim stood on her head for a while.

These expletives and the associated complements have the general properties to be expected of 3 objects not cooccurring with final 4 objects and of extraposed 3 object complements:

(9.43)a. *How long would you really appreciate/hate/like/love/prefer it if Kim stood on her head?

b. We would have to deal with her appreciation/hatred/liking/love of it (*if Kim stood on her head). [8]

However, there is one important set of complications.

While many of the verbs permitting the irrealis <u>if</u> complement structure with a visible expletive <u>it</u> do indeed bar passivization of the expletive, as condition (7.16) would require if it is a (single) 3 object, some do not:

(9.44) It would be appreciated/preferred by the dean if Kim did not stand on her head during the meeting.

This fact might seem doubly mysterious, given the previous data from objects with these verbs, which otherwise behave like 3 objects.

Integrated (though here informal) proposals which can account for these facts would be the following:

(9.45) **Informal Assumptions about Irrealis <u>if</u> Complements**

a. All such complements:

(i) head initial 2 arcs;

(ii) must head final 9 arcs; [9]

b. In general, the initial 2 arcs are required to have 3 arc local successor$_I$s;

c. But, for the relevant 2 arcs, with *some verbs*, including <u>appreciate</u> and <u>prefer</u>, the requirement in b. only holds if the 2 arc does *not* sponsor an XPL arc having a prepassive 2 arc R-local successor$_I$ (such an R-successor required by condition (6.24)). This account claims that cases like (9.44) involve passivized expletive 2 objects and that the <u>if</u> complements themselves head 9 arc

local successor$_{III}$s of 2 arcs. [10] The latter entailment means that such 9 arcs should not, unlike those which are 9 arc local successor$_{III}$s of 3 arcs, form islands, which appears correct:

(9.46)a. *In what way would those nurses greatly appreciate/prefer it if he entertained the patients?

b. In what way would it be greatly appreciated/preferred by those nurses if he entertained the patients?

c. *That is the length of time that they would very much appreciate/prefer it if you spoke for?

d. That is the length of time that it would be very much appreciated/preferred if you spoke for.

9.3 Ditransitive Clauses with <u>that</u> Clause Complements

I turn to apparent ditransitive clauses whose second objects are <u>that</u> clauses, including:

(9.47)a. Maurice phoned/wrote Jane that information/letter/that the deal had collapsed.

b. Maurice cabled/e-mailed/radioed Jane that information/that the deal had collapsed.

c. Maurice taught/told Jane that/that the deal had collapsed.

d. Maurice promised Jane that/that he would call you.

One reason for invoking ditransitivity here is that the cited verbs all evidently permit the second object to be a simple DP, yielding a ditransitive by definition.

Despite appearances, the structures in (9.47) are partly heterogenous. First, those in (9.47a) do not permit the immediately postverbal DP to passivize; those in (9.47b, c, d) all do:

(9.48)a. *Jane was phoned/written (by Maurice) that the deal had collapsed. [11]

b. Jane was cabled/e-mailed/radioed (by Maurice) that the deal had collapsed.

c. Jane was taught/told (by Maurice) that the deal had collapsed.

d. Jane was promised (by Maurice) that he would call you.

Second, while all the verbs of (9.47) permit a PP variant in <u>to</u> corresponding to double DP structures, for me only <u>write</u> seems to clearly allow such a PP with a <u>that</u> clause, although other speakers are freer (see e.g. (8.27), (8.28) and (8.29)).

(9.49)a. Maurice *phoned/wrote to Jane that the teacher was a vampire.

b. ??Maurice cabled/e-mailed/radioed to Jane that the deal had collapsed.

c. *Maurice taught/told to Jane that the teacher was a vampire.

d. *Maurice promised to Jane that he would call you.

I claim that appeal to 3 object to 2 advancement is the key to the contrasts in (9.48). If all these verbs take (human) 3 objects plus 2 objects (including that clause 2 objects), then the failure of passivization in (9.48a) is treatable as a function of the fact that neither phone nor write permits 3 object to 2 advancement. In contrast, all of (9.47b, c, d) would allow 3 object to 2 advancement, as already suggested for the promise case with that clauses in Chaptet 8. Potential direct passivization of the 3 objects in (9.47a) would then fall under the requirement of principle (7.16) that 3 objects passivize only when accompanied by a final 4 object. That condition cannot be met in (9.48a) since, as argued in Chapter 8 and enforced by (8.33), that clauses can never be *final* 4 arcs. If this approach is correct, one expects that passivization with these two verbs might be possible when the initial 2 object is a DP:

(9.50)a. Jane was phoned the information by Steve.

b. *Jane was written a letter by Steve.

This is right for phone but as touched on in Chapter 7, section 6, it fails for write.

Given the antioblique/viable conditions in (7.16), a reasonable speculation attributes this to the fact that phone takes an initial 3 arc, that is, is a Class A ditransitive, while the 3 object with write is an advanced oblique. I would add that write takes an oblique of the intended recipient kind discussed in Chapter 7, section 4, which can advance to 5 (yielding the to phrase possibility in (9.49a)) and optionally to 3. Note that when one phones information to someone, they receive it, while when one writes someone a letter, there is only an intention that they receive it. A true assertion about letter writing then does not depend on actual receipt.

If (9.48a) are properly blocked because they have to represent 3 object passivization, then the object DPs in (9.47a) should otherwise behave like 3 objects, not like 2 objects. Significantly then, they resist left extraction, subconstituent left extraction and Complex DP Shift, standard features of 3 objects: [12]

(9.51)a. *Which nurse did Jane phone/write (friends of) that Ted had died?

b. *Jane phoned/wrote that Ted had died the nurse who had cared for him in the hospital.

c. *It was Mike who$_1$ Martha phoned/wrote (friends of) that Harriet was a spy.

Then, consistent with the claim that 3 object to 2 advancement is the basis for passives like (9.48b, c, d), the objects of these verbs, in contrast to the situation in (9.51), behave like 2 objects:

(9.52)a. Which nurse did Jane e-mail/tell/promise (friends of) that the deal would collapse?

b. Jane e-mailed/told/promised that the deal would collapse the nurse who had cared for

him in the hospital.

c. It was Mike who$_1$ Martha e-mailed/told/promised (friends of) that Harriet would be interviewed.

The idea that the passive contrasts in (9.48) result from the fact that phone and write bar, but the other verbs allow, 3 object to 2 advancement with a that complement (though not with DP second objects) is supported further by expletive and locative inversion passivization contrasts:

(9.53)a. *At that time (there) were phoned/written the details/that the deal was completed several of the foreign investors.

b. During that semester (there) were taught *lots of nonsense/that France was a world leader in baseball the students in that new professor's class.

c. At that meeting (there) were told *risque stories/that they would be excessed several high ranking executives.

Recalling the discussion in Chapter 6, these are the expected facts if the postverbal objects with phone and write are 3 objects in all the cases, while with the other verbs they are 3 objects in the ordinary ditransitive case but 2 objects with that clauses. For it was shown there that neither expletive nor locative inversion passives could be formed on 3 objects.

The issue at this point is how to formulate the constraints on 3 object to 2 advancement so as to capture the contrasts and similarities just documented. Recall that the last version of a constraint on (ditransitive) 3 object to 2 advancement proposed was (3.77) in Chapter 3. This condition specified putative circumstances under which 3 object to 2 advancement is allowed; it listed only one of the verbs, teach, relevant to the concerns of this chapter. Clearly though, any ditransitive verb claimed to allow 3 object to 2 advancement must be included in the ultimate version and, concomitantly, verbs which do not permit this must be excluded. The verbs phone and write are now seen to be among the latter.

Evidently though, merely expanding the verb list in (3.77) is insufficient to account for the facts of this section. First, the verbs of (9.47b, c, d) permit 3 object to 2 advancement with that clause complements but not with ordinary DP second objects. Second, the ungrammaticality of the to phrase forms in (9.49c, d) contrasts with the grammaticality of the corresponding cases where the underlying 2 object is a DP:

(9.54)a. Maurice taught/told that to Jane.

b. Maurice promised that reward to Jane.

This suggests that with the relevant verbs, 3 object to 2 advancement in the that clause context is required since such a requirement would not only feed passivization but bleed the possibility of 3 object to 5 demotion needed to allow parallels to (9.54) with that clauses.

Overall then, a further condition on 3 object to 2 advancement is required for some verbs, one which should embody a biconditional, not only requiring 3 object to 2 advancement under certain conditions but precluding it under all others:

(9.55) **The {promise, teach, tell,....} 3 Object/2 Arc Local Successor$_{I}$ Condition**

If A is a viable 3 arc which is [{promise, teach, tell, ...}] zoned, then A is a local predecessor$_{I}$ of a 2 arc if and only if A is a neighbor of a final 9 arc.

Given that the zoning condition in (9.55) lists verbs which will be included in the ultimate reformulation of (3.77) and which in general permit 3 object to 2 advancement, its effect will be to bar such advancement when there is no final 9 arc while rendering it obligatory in the presence of a final 9 arc. Because 9 arcs are only compatible with clausal constituents and because (4.13) specifies that 9 arcs are invariably local successor$_{III}$s (or their replacers), this will, moreover, require the complement to be extraposed. I return to this point. Since condition (9.55) requires 3 object to 2 advancement in the presence of an extraposed 2 object that clause, it feeds the possibility of 2 object passivization of the initial 3 object but bleeds the possibility of demotion to 5 under that condition, the latter bleeding exactly what is seen in (9.49c, d). For 2 objects which do not yield extraposed that clauses as final 9s, (9.55) precludes advancement of the 3 object to 2, hence precludes passivization but leaves open the option of 3 object to 5 demotion. This is the distribution of facts which is observed.

Return then to (9.48b). The relevant verbs, cable, e-mail, etc., permit passivization of their underlying 3 object, even with an extraposed that clause, like those characterized in (9.55), and so are also arguably subject to 3 object to 2 advancement with a that clause. But, as (9.49b) indicates, they contrast with teach, tell, promise in also permitting a to phrase with an extraposed that clause complement. So adding cable, e-mail, etc. to (9.55) would wrongly block all of (9.49b). Apparently, they are subject to a separate constraint. This will block 3 object to 2 advancement in the absence of

a complement 2 object but not require it when such are present, leaving open the option of 3 object to 5 demotion with a that clause.

(9.56) **The {cable, e-mail, radio,....} 3 Object/2 Arc Local Successor$_l$ Condition**

If A is a viable 3 arc and [{cable, e-mail, radio, ...}] zoned, then A is the local predecessor$_l$ of a 2 arc only if A is a neighbor of a final 9 arc.

While rightly allowing 3 object to 2 advancement with the listed verbs in the presence of a complement clause, (9.56) disallows that in other environments, accounting for the failure of their 3 objects to manifest 2 object behavior with initial DP 2 objects:

(9.57)a. *I am unaware of who he cabled/e-mailed/radioed that?

b. *They cabled/e-mailed/radioed the information everyone on the island.

The facts for verbs of the type listed in (9.56) are though for me cloudier than those for the other classes recently discussed. And while I conclude that the judgments in (9.49b) are basically correct, some readers might have some doubts on that score. Relevantly then, Google searches show minimally that one of them has the bulk of the claimed properties:

(9.58)a. They **e-mailed me** a copy, so I can post it.

www.templetons.com/brad/copymyths.html

b. a good friend of mine **e-mailed a copy to me** requesting that I do the meme

jrocas.com.ph/archives/20-questions-20-answers/

c. Another nurse **e-mailed me** that some arm ports cannot be used for blood **...**

www.cancerlynx.com/armport.html

d. This past Monday another assistant, Chantal Benoît, **e-mailed to me that** Steyn is traveling

www.bostonphoenix.com/boston/news_features/dont_quote_me/multi-page/documents/03917097.asp

e. I **was e-mailed that** there is another picture of Michelle in the calendar in the magazine

heatherw.com/mk/olds/mag99a.htm

(9.58a) shows that e-mail can occur in ditransitives with a DP second object; (9.58b) illustrates that it permits 3 object to 5 demotion with a DP 2 object; (9.58c) indicates that it occurs in clauses with that clause complements and a preceding object, (9.58d), that the clause type in (9.58c) alternates with one involving a PP in to, hence arguably manifesting 3 object to 5 demotion with a that clause and (9.58e) shows that the object in cases of type (9.58c) passivizes.

A virtue of the system of varied analyses of DP + that clause structures advanced here is its relation to a rather striking fact: while there are instances of overt object extraposition expletive it, like e.g. (9.26), there appear to be no English examples (with any main verb) of a ditransitive structure whose second object is an extraposition expletive it followed by a that clause, that is none parallel to (9.59a, b, c): [13]

(9.59)a. *They taught her it (very easily) that six times six was twelve.

b. *How high did they teach her (*it) that pterodactyls could fly?

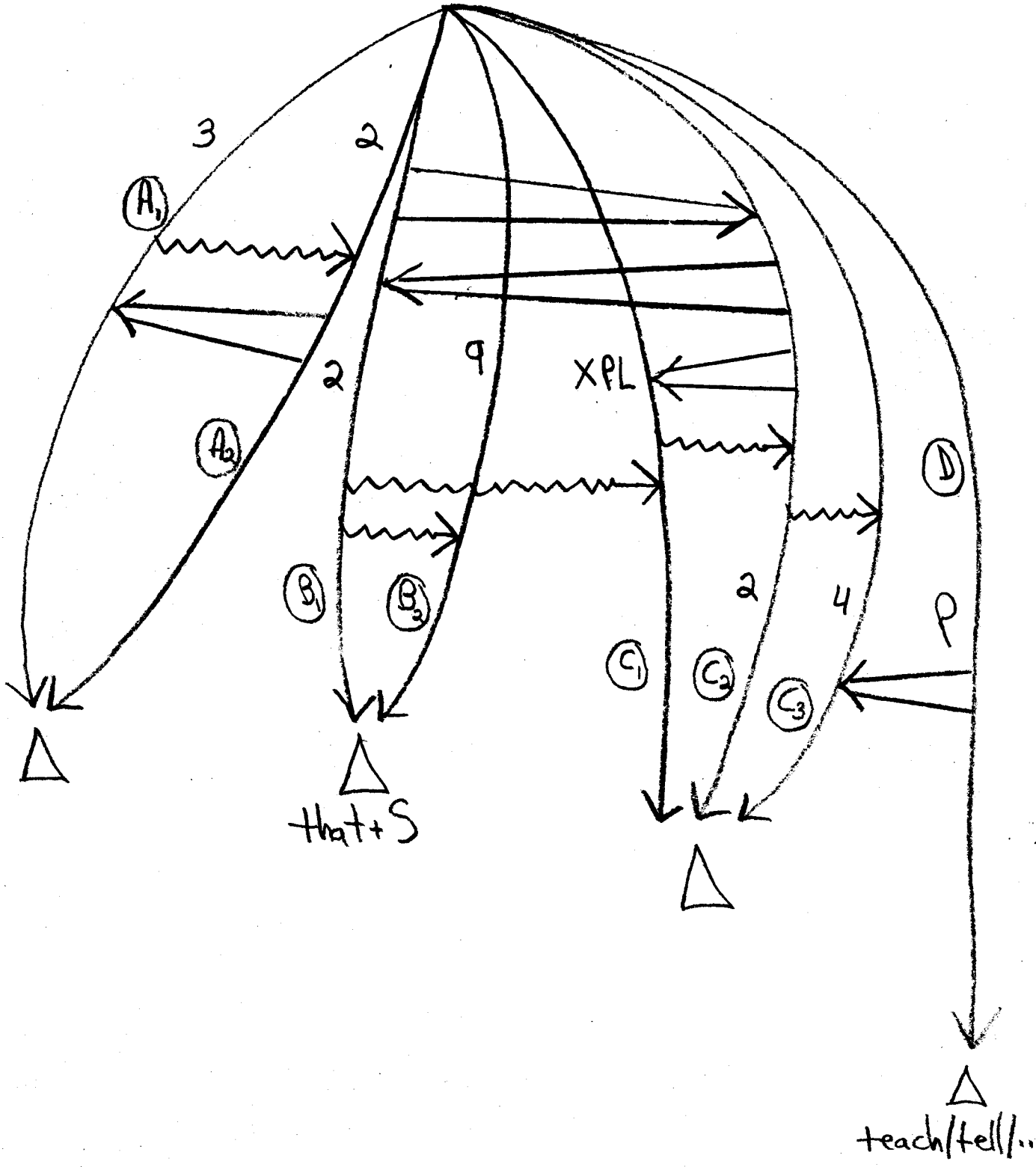
c. They taught her it very easily, that dance step.

When cases like (9.59a) are, contrary to the star marking, good, there is an intonational break after the pronominal form, one typical of *right dislocation*. This indicates that the pronoun is not an expletive but rather the resumptive pronoun associated with right dislocation, as in the nonclausal case (9.59c). The examples then fail to instantiate the pattern claimed to be inexistant.

The overall expletive gap in question has already been in good part accounted for. There are two basic cases. In one, the viable 3 arc of the verb has no 2 arc local successor and yields an output 3 arc. But that means, given (5.39), the 3 Object-Induced 2 to 4 Demotion Condition, that any expletive 2 arc will be forced to demote to 4, and the resulting expletive 4 arc will be erased because of (9.21), the Expletive 4 Arc Erasure Condition. This precludes pattern (9.59a) in cases where there is no 3 object to 2 advancement, as with verbs like phone and write.

The other case, represented by verbs like teach, tell, etc., where the initial 3 arc found with a neighboring initial 2 arc headed by a that clause does have a 2 arc local successor$_1$, is somewhat more complex, and involves alternatives. The first of these is represented in (9.60):

(9.60)


3
2
A1
2
9
XPL
A2
D
B1
B3
2
4
P
C1
C2
C3
that+S
teach/tell/..

Here the initial 2 arc, B_1, defining the complement clause sponsors an XPL arc, C_1, which then has its required 2 arc local successor$_I$, C_2, which ereases B_1, determining a 9 arc local successor$_{III}$, B_2, for that arc. The initial 3 arc, A_1, has a 2 arc local successor, A_2, which erases the expletive 2 arc, C_2. All these steps follow from previous assumptions. But the fact that C_2 has in particular a 4 arc local successor$_{III}$ does not, and this is necessary since the posited expletive arc head is invisible and one obviously wants the XPL arc's erasure to be forced by condition (9.21).

This highlights the fact that previous discussions of 2 arcs threatened by advanced 3 objects have not specified conditions determining the edge labels of the local successor$_{III}$s of those 2 arcs. In many cases, as in (9.61c), the edge label could not plausibly be taken to be 4:

(9.61)a. They supplied her cocaine.

b. They supplied cocaine to her.

c. They supplied her with cocaine.

d. *They supplied her cocaine. (on an analysis where her is a 2 object, hence e.g. a licit target of Complex DP Shift, as in e.)

e. *They supplied cocaine the woman who you met on the flight from Cancun.

While it is not evident what the edge label of the arc corresponding to the with phrase is, perhaps 8, it should not be 4 since no arcs independently taken to be 4 arcs determine flagging with any preposition.

Significantly though, with verbs like teach, tell, etc., where recognition of 4 arc local successor$_{III}$s induced by 3 object to 2 advancement seems motivated, there is nothing to argue that the relevant edge label is *not* 4, since these verbs never appear in structures where 3 object to 2 advancement yields overt demoted phrases. Let us then define:

(9.62) **Definition: A ω-*Forces B to* C**

A *ω-forces B to* C if and only if A is a ω arc and threatens B and C is a local successor$_{III}$ of B.

Then one can posit:

(9.63) **The 4 Arc Forcing by 3 Object to 2 Advancement Condition**

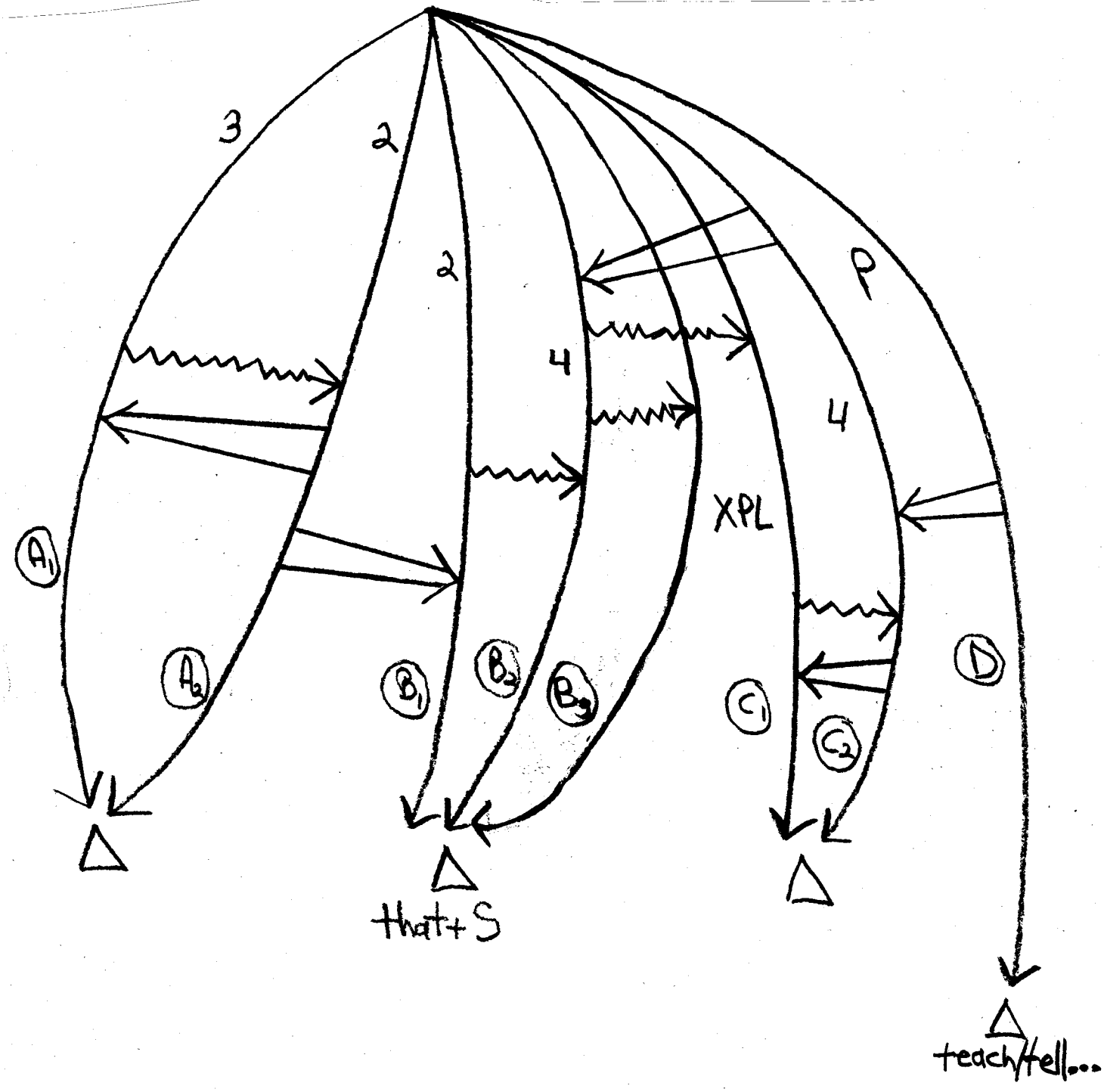
If A is a 2 arc which is ω-forced to B by a local successor of a 3 arc, B is a 4 arc if and only if A is [{teach, tell, ...}] zoned.

This now properly determines that arc C_3 in (9.60) is a 4 arc. Moreover, if one assumes that verbs like supply are *not* listed in (9.63), it also predicts the ungrammaticality of (9.61d, e). Of course,

there will have to be additional conditions for verbs which allow ditransitive 3 object to 2 advancement but which induce other types of local successor$_{III}$s of 2 arcs. These can ultimately be added as further conjuncts in the consequent of (9.63).

While (9.60) is, as far as I can tell, a legitimate analysis, a distinct one is represented in (9.64):

(9.64)


3
2
2
4
XPL
4
P
A1
A2
B1
B2
B3
C1
C2
D
that+S
teach/tell...

Here, unlike in (9.60), the initial 2 arc, B_1, does not sponsor an XPL arc which would lead to its erasure by the 2 arc local successor$_I$ of that. Rather, the initial 2 arc is erased by the 2 arc local successor$_I$, A_2, of the 3 arc, A_1. But (9.63) comes into play again and forces B_1's local successor$_{III}$ to be a 4 arc. But that alone could not yield a grammatical output, because the head of B_2 is a <u>that</u> clause, and a final Central arc with such a head can, according to (8.33), the Generalized Complement Clause Condition, only be a 9 arc. That problem is eliminated by the fact that the clausal 4 arc, B_2, sponsors an XPL arc, C_1, which then regularly, necessarily has a 4 arc local successor$_I$, C_2 which erases the clausal 4 arc, determining that it has a 9 arc local successor$_{III}$. Condition (9.21) then rightly requires C_2 to be erased by the P arc, D.

Viewed as just described, the two partially distinct analyses yield the same surface arc output and each is adequate to account for the attested sentences and no bad ones. Unsurprisingly then, no evidence known to me suggests that either analysis is blocked.

9.4 A Paradigm

The analyses of this chapter provide the conceptual tools to expxlicate the complex and puzzling paradigm in (9.65):

(9.65)a. They taught/told Alison that.

b. They taught/told Alison that six times six was twelve.

c. They taught/told that to Alison.

d. *They taught/told to Alison that six times six was twelve.

e. They indicated/observed/mentioned/pointed out to Alison that six times six was twelve.

f. *They taught/told that piece of idiocy (despite my objections) ~ the girls who were interested in modern mathematics.

g. ?They repeatedly taught/told that six times six was twelve (despite my objections) – the girls who were interested in modern mathematics.

h. Alison was taught/told that at that time.

i. Alison was taught/told that six times six was twelve at that time.

j. *At that time (there) were taught/told such things ~ the girls who were interested in modern mathematics.

k. At that time (there) were taught/told that six times six was twelve ~ the girls who were interested in modern mathematics.

l. That six times six was twelve, they never taught/told anyone.

m. *That six times six was twelve, they taught/told despite my objections ~ the girls who were interested in modern mathematics.

n. That six times six was twelve, they never taught/told to anyone.

First, the paradigm involves verbs of the sort listed in (9.55), hence verbs whose clauses require 3 object to 2 advancement if and only if there is a final 9 arc headed by a that clause. Examples (9.65a, b) illustrate the basic property that such verbs take ditransitive structures with either regular DP or that clause second objects; (9.65c, d) show the possibility of 3 object to 5 demotion exists only in the former case, a fact explained by the obligatory 3 object to 2 advancement required by (9.55) with that clauses and only with these. (9.65e) shows that with other verbs taking that clauses, 3 object to 5 demotion is unproblematic. Finally, (9.65n) shows that with a topicalized that clause, the verbs in question permit 3 object to 5 demotion, although (9.65d) indicates that in the untopicalized correspondent this is impossible.

The contrast between (9.65f, g) reveals the expected difference between cases where the first object must be a 3 object and that where it has advanced to 2 object. (9.65h, i) indicate the possibility of passivization of both the ditransitive 3 object in the latter and the resulting 2 object in the former. (9.65j, k) reveal the contrasting patterns of expletive and locative inversion interaction with passivization, a function of the fact documented in Chapter 6, that such interactions are grammatical only with 2 object passivization.

As for the last three cases, (9.65l) merely shows that in this paradigm, the that clause can be topicalized. (9.65m) reveals though that if it is, the goal DP behaves as a 3 object, not as a 2 object, in precluding Complex DP Shift, although for the apparent untopicalized correspondent in (9.65g), Complex DP Shift is marginally possible, indicating 2 object status.

Although the topicalization interactions might seem mysterious, they have mostly already been essentially accounted for. Required is one so far unhighlighted assumption about topicalization. The facts show that with the relevant verbs, when a that clause object is topicalized, the result behaves like a ditransitive clause, one with a final 3 object and DP 4 object. But the 'corresponding' clause in which a that clause is not topicalized behaves as if it manifested 3 object to 2 advancement. These properties depend on the assumption of Postal (1998) already touched on that topicalization

links to a resumptive pronoun heading a copy arc which replaces the foreign predecessor determining the topicalization. This can be made precise:

(9.66) **The Topicalization Resumption Condition**

If A is a Central arc foreign predecessor$_1$ of a 30 arc and R-predecessor$_1$ of a Top arc, A is copied.

Beyond (9.66), a further assumption is needed, one alluded to previously in note 3 of Chapter 4. Namely, *every* 9 arc must be headed by a clause. A first approximation might be:

(9.67) **The 9 Arc Clausal Condition**

If A is a 9 arc, there is a P arc B which is a branch of A.

I hedge about (9.67) because it ignores questions of the structure of complementizers, left extracted phrases, etc. When those are considered, 9 arcs would likely have to be taken to be separated from their facilitating P-arcs by certain intermediate branches. Such matters are beyond the scope of this discussion.

Given (9.66) and (9.67), it follows that topicalization cannot take an extraposed clause as its target if the notions of resumptive pronoun and constituent containing a P arc *are disjoint*. This seems a more than plausible assumption, but I will not seek to make it precise here. A worst case brute force specification would just say that a resumptive arc cannot have a P arc R-branch.

The independent evidence for the claim that topicalization cannot target extraposed clauses is clear, as seen in (9.68):

(9.68)a. It struck/seemed to Jerome that six times six was twelve.

b. *That six times six was twelve, it struck/seemed to Jerome.

c. I never took it that the beaver was telepathic.

d. *That the beaver was telepathic, I never took it.

e. They will see to it soon that he is informed.

f. *That he is informed, they will see to it soon.

In the bad cases here, the resumptive pronoun associated with a 9 arc foreign predecessor$_1$ of a Top arc would head a resumptive 9 arc, one whose head is a pronoun. Such data contrast with that of:

(9.69)a. ?*Laura claimed that that he had lied could not be proven.

b. That he had lied, Laura claimed could not be proven.

c. Frank was the first to deduce that 3 x 3 was 11.

d. That 3 x 3 was 11, Frank was the first to deduce.

For in (9.69b, d), the predecessor arc for topicalization is not a 9 arc defining extraposition, which does not exist in such cases, but rather a 1 arc in the former and a 2 arc in the latter. [14]

These conclusions mean that topicalization in cases like (9.65, m, n) must be based on a 2 arc foreign predecessor$_1$, leaving the clauses without any (final) 9 arcs. From that it follows that (9.55) precludes 3 object to 2 advancement in such cases, leaving the same sort of final ditransitive structure found with an initial DP 2 object. It is no accident then that the properties of these three examples remain unchanged if the topicalized <u>that</u> clause is replaced by a (topicalized) DP.

The discussion permits a further argument favoring the hypothesis that <u>that</u> clauses occurring with overt object expletive <u>it</u> have demoted to 3, the relevant 3 arcs having sponsored XPL arcs with 3 arc local successor$_1$s headed by the expletives. More precisely, whenever such demotion to 3 of <u>that</u> clause 2 objects is obligatory, topicalization of the <u>that</u> clause to yield structures parallel to the topicalization of 2 objects headed by <u>that</u> clauses like (9.65n) should be impossible. Exactly that is seen in (9.70):

(9.70)a. I blamed it on Fred that the snake escaped.

b.*That the snake escaped, I blamed on Fred.

c. They hate it that you supported Lester.

d. *That you supported Lester, they hate.

e. She immediately took it that you were Canadian.

f. *That you were Canadian, she immediately took.

These data follow from the fact that a 3 arc cannot be the predecessor of a 30 arc R-predecessor of a Top arc, a special case of the fact that English 3 objects do not left extract. In other words, the bad cases here are due to exactly the factor underlying the ungrammaticality in:

(9.71)a. They never gave it any thought that he was a werewolf.

b. *That he was a werewolf, they never gave any thought.

Contrasting cases like (9.72) cited in note 7 are due to the fact that these involve no demotion to 3, and the topicalized <u>that</u> clauses are 2 objects:

(9.72)a. I took for granted that she was unhappy.

b. That she was unhappy, I took for granted.

Expectedly then, cases where 2 object to 3 demotion for that clauses is optional, e.g. with mention, happily permit topicalization of the that clause, because the predecessor of the 30 arc in that case can be a 2 arc:

(9.73)a. She never mentioned (it) to Larry that you were a spy.

b. That you were a spy, she never mentioned to Larry.

The discussion so far has left untreated issues involving the interaction of ditransitives and that clause objects. At issue is the fate of the expletives involved in my terms in the determination of the 9 arc local successor_{III}s headed by the that clauses in the extraposition cases. Two classes of cases need distinguishing. One involves verbs like write where that clauses occur with final 3 objects. There are two assumptions one might make here. The XPL arc headed by the expletive might be sponsored by the initial 2 arc headed by the complement, hence would have, given (6.24), the XPL Arc Condition, a 2 arc local successor_{I}. That in turn would be forced to have a 4 arc local successor by (5.39), the 3 Object-Induced 2 Object to 4 Demotion Condition, like other locally erasable (by 4 arcs) 2 arcs occurring with a final 3 arc, and would then be erased according to (9.21), the Expletive 4 Arc Erasure Condition.

Alternatively, the initial 2 arc headed by the complement could be forced to have a 4 arc local successor_{III} by (5.39). The resulting complement 4 arc would then have to sponsor an XPL arc which would have a 4 arc local successor_{I}; the latter would then be erased according to (9.21). Either alternative would rightly determine the invisibility of the posited expletive. I am unaware of evidence deciding between the alternatives, or which determines that both analyses are not viable.

Finally, another set of issues left unmentioned so far relates to the interaction between 2 object to 4 demotion (forced by a final 3 arc) and the resumptive pronoun associated with topicalization. Specifically, in a case like the following there are logically alternative analyses:

(9.74) That Carol is pregnant, he never told anyone.

The issue is rather parallel to that involving the interaction of 2 object to 4 demotion and expletives. Namely, in (9.74), one could claim that that the initial 2 arc is the foreign predecessor_{I} underlying topicalization, yielding a 2 arc headed by a resumptive pronoun, which 2 arc then must, given the output 3 arc, have a 4 arc local successor_{I}. Or, again, the initial 2 arc could have a 4 local successor_{I} forced by the neighboring 3 arc, and that complement 4 arc could be the foreign predecessor_{I} underlying the topicalization structure. Once more, I know of no evidence deciding between these

alternatives or indicating that both are not possible, which is the conclusion to be adopted in the absence of any indication of further needed constraints.

9.5 Brief Remarks on Particles, 3 Objects and that Clauses

Evidence supporting the key conclusion of section 4 is available from the interaction of certain that clause complement cases with specific *particles*. This depends on certain general constraints on particles of a more general character, which, I believe, provide another distinguishing trait of 3 objects as against 2 objects and 4 objects, at least in certain dialects, which include mine and one described as well, I believe, in Emonds (1973: 82-83).

The issue involves the possibility of *particle* placement between a verb and its closest object. As is well-known, this is often possible. But, as Emonds observed, in some dialects, a particle cannot have such a locus when the closest object is the first of a ditransitive and hence, in my terms, a 3 object:

(9.75) Emonds (1973: 82)

a. The secretary sent (*out) the stockholders a schedule.

b. Some student paid (*back) the bank his loan.

c. John read (*off) Mary the figures.

d. A clerk will type (*out) John a permit.

e. He has brought (*down) Dad some cigars.

Emonds remarked that some speakers accepted the starred versions of (9.75); see (9.76).

(9.76) Fraser (1965: 112)

He gave back the man the axe.

But Emonds also explicitly noted that others do not. [15] I am one of the latter, but hardly unique:

(9.77) Kayne (1984b: 116)

*?They handed down John the tools.

(9.78) Smaby and Baldi (1981: 173-174)

a. Seymour sent the children out the cookies.

b. *Seymour sent out the children the cookies.

My suggestion is that the relevant facts for my dialect and those of the authors just cited are consequences of condition (6.87b), requiring any neighbor, A, of an unerased Prt arc to linearly precede the Prt arc if A has closed 3 quace. Since it can be assumed that all unerased English 3 arcs

meet this condition, they all must linearly precede neighboring Prt arcs. And the 4 arcs headed by second objects will also precede particles if they have closed 3 quace, but not otherwise.

But the inseparability property does not, of course, hold of at least some objects which are not 3 objects, even in paradigms which are alternates to ditransitives:

(9.79)a. The secretary sent out a schedule to the stockholders.

b. Some student paid back his loan to the bank.

c. John read off the figures to Mary.

This being the case, the distribution of particles can, in dialects like mine, likely be taken as a further test for whether a phrase is a 3 object.

The test is striking in the case of single objects, e.g. those in active clauses like (9.80):

(9.80)a. Miriam wrote back a long letter to that rock star.

b. Miriam wrote (*back) that rock star a long letter.

c. Miriam wrote (*back) that rock star about the music.

d. Miriam wrote (back) about the music.

The distribution in (9.80) is fully consistent with earlier evidence from left extraction, Complex DP Shift, etc., showing that the postverbal DP in (9.80c) is a 3 object, but that that in (9.80a) is not.

Single 3 objects can also be found in 4 object passives of ditransitives, where condition (6.87b) also draws needed distinctions:

(9.81)a. The student paid them/Jim back that (sum).

b. That sum was never paid them/Jim back.

c. That sum was never paid (*back) them/Jim.

See also:

(9.82)a. Miriam cabled/phoned that rock star (back).

b. Miriam cabled/phoned (*back) that rock star.

Taking (6.87b) as the relevant principle then, one can consider its implications for objects associated with <u>that</u> clauses. One would expect that for cases where I have, on independent grounds, taken a DP preceding a <u>that</u> clause to be a final 3 object, that should be inseparable from the verb by particles, while those DPs taken to involve a 2 object should be separable. That is just what is seen in:

(9.83)a. I cabled/e-mailed/phoned/wrote those guys (back) that I did not accept the offer.

b. I cabled/e-mailed/phoned/wrote those guys (back) the information.

c. I cabled/e-mailed/*phoned/*wrote back those guys that I did not accept the offer.

d. I cabled/e-mailed/phoned/wrote (*back) those guys the information.

Here (9.83a, b) show that none of these verbs preclude the particle back following an object and preceding either a DP object or a that clause. But (9.83c, d) show that back intervening between a verb and an object is in general ill-formed with these verbs, regardless of what follows that object. The exceptions are that just when the phrase following the first object is a that clause, the particle can precede back with cable and e-mail but not with phone or write. But section 3 showed that only the former verbs allow 3 object to 2 advancement when their initial 2 object is a that clause. Hence in the good cases of (9.83c), the particle does not precede a 3 object. But phone and write were seen not to allow 3 object to 2 advancement in my dialect, so that the variants of (9.83c) containing those also violate (6.87b) and are regularly ill-formed. All the cases of (9.83d) are bad because none of these verbs permit 3 object to 2 advancement with a nonclausal initial 2 object, so each represents a violation of (6.87b).

The final evidence supporting the overall analysis derives from the topicalized 'correspondents' of cases like (9.83c). Since topicalization precludes the (9 arc) environment allowing 3 object to 2 advancement for the verbs which otherwise permit it, even the good cases of (9.83c) should have bad analogs in the presence of that clause topicalization because the particle will then intervene between a verb and a 3 object. And that is just what is found:

(9.84)a. I never cabled/e-mailed back those guys that she would accept the offer.

b. *That she would accept the offer, I never cabled/e-mailed back those guys.

That is, again, in the presence of that clause topicalization, the relevant structures behave as ordinary ditransitives, predictably in current terms, since the element heading the last 4 arc is then the resumptive pronoun associated with topicalization.

Notes to Chapter 9

1 Williams (1980: 222) noted that although type III verbs do not permit actives containing the expletive, they do have passives like (9.4a).

(i) Marco felt/figured/thought (*it) that Marianne was sick.

I return to this property below.

2 The type III verb figure in (9.4) is distinct from the type I verb figure out:

(i)a. Marco figured out that Marianne was sick.

b. It was figured out by Marco that Marianne was sick.

c. That Marianne was sick was figured out by Marco.

3 The point is also observed in:

(i) Huddleston (2002a: 1018):

"And as far as content clauses are concerned, passivisation is not restricted to verbs where the clause could be replaced by an NP object:

[21] i. Can it be wondered that they feel aggrieved?

ii It has been charged that Labour's failure to press for nationalization of insurance was due to its financial linkes with the co-operatives."

4 Other type II verbs include answer, gather, hear, mind, read and reply e.g.:

(i)a. Gladys read (in the Tribune) that he was a spy.

b. *That he was a spy was read by Gladys (in the Tribune).

c. *It was read (in the Tribune) by Gladys that he was a spy.

5 The viable 2 arc specification in (9.19) prevents the condition from wrongly requiring initial 2 arcs replaced by inherent pronominal replacers to have 4 arc local successor$_1$s. If that were required, Unique Eraser Condition violations would occur in grammatical cases like:

(i) Ted learned [that he would be interrogated]$_1$ but did not mind it$_1$.

For in present terms, there is an initial 2 arc in the second clause which overlaps and is erased by the initial object arc of the first clause.

6 Cases like (9.24c) are irrelevantly grammatical on a Right Dislocation reading in which the pronoun is not the extraposition expletive but the resumptive pronoun associated with Right Dislocation. The latter construction sharply contrasts with many extraposition structures in that the right dislocated complement is a strict island:

(i)a. How long ago did Valerie believe that the rodent had died?

b. *How long ago did Valerie believe it, that the rodent had died?

7 The two uses of take also contrast in other ways:

(i)a. *That she was unhappy, I took (it).

b. That she was unhappy, I took for granted.

c. *That she was unhappy was taken.

d. That she was unhappy was taken for granted.

These contrasts also follow from the grammatical distinctions I have drawn. See the discussion at the end of section 4.

8 The nominalizations of prefer do not take of even with regular DPs:

(i) Her preference *of/for classical music was notable.

(ii) *Her preference for it if they called first was clear.

Still, the bad (ii) can reasonably be attributed to the fact that 3 objects do not have direct correspondents in nominalizations.

9 Condition (9.45aii) rightly determines that unlike that clauses, irrealis if complements can never be passivized or be topics:

(i) *If you came early would be appreciated.

(ii) *If you came early, they would appreciate.

10 Verbs having the property in (9.45c) no doubt partially vary from speaker to speaker. For example, Google yields example (i), which I find entirely ungrammatical:

(i) **It would be hated if** it was in English because it has one message delivered in one deadpan way.
www.rottentomatoes.com/vine/showthread.php?t=229213

11 This judgment is evidently dialect variable. Google provides:

(i) he **was phoned that** four foreigners were coming**...**
people.freenet.de/TibetInfoPage/engl_news.htm

(ii) On the day of his death, Immelmann **was phoned that** there was a British two seater plane in the air above the lines.

www.geocities.com/CollegePark/Campus/4152/ww1.htm

Both (i) and (ii) are sharply ungrammatical for me. For dialects that accept them, this verb would be listed in the condition allowing 3 object to 2 advancement.

12 Another verb which works like phone and write and can be seen to take a final 3 object even with that clauses is grant:

(i)a. *It was Mike who$_1$ Martha granted (friends of) that point/that Harriet was a spy.

b. *Martha granted t_1 that point/that Harriet was a spy everyone who would listen.

13 Fraser (1964: 9) reported that some dialects have sentences like (i):

(i)a. She told it to Henry that John was an idiot.

b. The man guaranteed it to me that this machine wouldn't fail.

Assuming that they are not right dislocation cases (with the typical intonation break), these are ungrammatical for me. They do not in any event instantiate the pattern in (9.59) claimed to be impossible. I don't know whether speakers who accept (ia, b) would also accept the equally ungrammatical for me variants from which the expletive is suppressed.

For a dialect which accepts (ia, b), I would speculate that the relevant verbs are like those in (9.26), which for me can (or even must) involve demotion of the complement 2 object to 3. Such a dialect would permit complement clause 2 object to 3 demotion in more cases than I do.

The dialect represented by (i) also differs from mine, evidently, in permitting an extraposed that clause and a presumed 5 object demoted from 3 with the verb tell, indicated to be impossible for me in (9.49). Perhaps such a dialect does not require 3 object to 2 advancement to be obligatory in the presence of a final 9 arc, leaving open the possibility of 3 object to 5 demotion.

14 The ungrammaticality of (9.69a) is not relevant to the present discussion. The property is due, I think, to little understood conditions on the sort of constituents within which that clauses can occur other than at a periphery.

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Chapter 10 Results

The previous nine chapters are too long and complex and deal with too many issues and assumptions to permit even a partial resume of what may have been achieved. But I will sketch some principal conclusions.

Pursuing the goal represented in the remark of Tesnière cited in the Preface, I have sought in this work both to outline a general theoretical framework in which an NL grammar is a nongenerative, model-theoretic system and to support a substantive conception of syntactic structure. The latter is based on on the graph-theoretic concept of multigraph and involves primitive edges, nodes, edge labelling and primitive nonstructural relations between edges. While this framework originated in Johnson and Postal (1980), the current version differs sharply from that initial account in various respects. Many of its fundamentals have been radically simplified and refined. A unique characteristic property of the present work is its appeal to the notion quace. The present study presents a vastly simplified conception of that (compared to its initial inadequate version in Postal (2004: Chapter 1). The newer account appeals to a view of arc labeling involving sequences of atomic labels.

Internal to the abstract grammatical framework, discussion focused on properties of English objects. The central claim was the documentable diversity of objects, yielding a core typology of three distinct types, called 2 objects, 3 objects and 4 objects. The first two correspond roughly to the traditional direct object and indirect object; the third seemingly has no real traditional antecedent. Chapter 2 provided an extensive initial body of evidence for the existence of the three way division. One implication is that much past English grammatical work, including some of the present author's, has mistakenly characterized a variety of non-2 objects as 2 objects. This creates the illusion of anomalies. For instance, by overlooking that the object in <u>Stan wrote that woman</u> is a 3 object while that in <u>Stan wrote that article</u> is a 2 object, the passive contrast shown to be perfectly regular in Chapter 7 is left mysterious: *<u>That woman was written by Stan/That article was written by Stan</u>.

Chapter 3 studied the relation between the three way object typology introduced in Chapter 2 on the basis of single object clauses and the two objects of ditransitive clauses. It concluded that these are a final 3 object and 4 object, a result incompatible with the broadly popular 'Dative Shift' view of alternations

between ditransitive first objects and PPs. I also argued that different ditransitives have partially distinct analyses; with some, the 3 object is more basic; with others, the more basic relation is represented by a PP object in one of the alternations. This difference was shown (in Chapter 7) to be central to understanding passivization contrasts between different ditransitive types, including those observed in Fillmore (1965). Chapter 3 also tried to link the relational analyses of English cases to those in various other NLs including French, German, Georgian, Hausa, Ojibwa and Spanish. A recurrent theme was that a variety of facts are illuminated by appeal to the three distinct object types, which are then plausibly universals.

Particularly relevant was citation of a German alternation between certain ditransitive clause 3 objects and PPs, one unanalyzable in terms traditional in English syntx. It was claimed that this German alternation represents the same structural relations holding between English sell Jane a convertible and sell a convertible to Jane. While commonly treated in Dative Shift terms under the view that Jane in the former is a 2 object, both English evidence and uncontroversial German facts indicate that in this construction type, Jane and its German analog are 3 objects. The alternate PP form was claimed to instantiate, in both NLs, a distinct nontraditional relation defining 5 objects. Chapter 3 appealed to the characteristic relational notion of *advancement/demotion*, which permits assigning phrases to distinct grammatical relations at different 'levels' of the same constituent. It showed inter alia how this combines with the object typology to provide critical insight into seemingly anomalous properties of a dialect in which, uniquely for varieties of Spanish, 3 objects appear to passivize.

Chapter 4 provided central elements of a highly elaborated general universal conception of passive clause structure, distinguishing fundamentally periphrastic from non-periphrastic types. It dealt in detail with issues including the nature of English middle clauses, the proper treatment of certain intransitive clauses which share passive morphology and the nature of certain (French) clause union passives. It also provided a theoretical account of antipassive constructions and introduced certain very nonstandard views of adjectival clauses. A key conclusion involved the proper formulation of an earlier RG principle called here the Final 1 Arc Condition. In connection with this, it was claimed that certain types of clauses, including the inner clauses of periphrastic passives, have no final 1 arcs.

Chapter 5 considered whether English passive clauses can all be taken, as in much past traditional and modern work, including some of mine, to represent exclusively 2 object passivization. This was shown to be an entirely untenable view. The overwhelming conclusion of Chapters 5 and 6 is that English permits passivization of both 2 objects and 3 objects, and, in some dialects including mine, also of some 4 objects.

A key topic of this chapter was an analysis of English pseudopassives (prepositional passives) according to which they represent the passivization of special types of 3 object and perhaps 4 object, a treatment linking the English pseudopassive construction to a unique French construction, which was briefly analyzed. The fact that pseudopassivization is non-2 object passivization provides the explication for the nonexistence of parallel pseudomiddle. Earlier remarks about adjectival clauses were extended and shown to yield an explication of the fact that there is (contrary to the situation in e.g. Welsh) no passive alternation for English pure adjectival clauses. And the ideas were also argued to account for the incompatibility of English adjectival clauses with expletive there and locative inversion.

Chapter 6 extended the investigation of passivization to include cases involving overt expletive there and its covert analog in locative inversion clauses. An overall distributional account of this expletive was attempted in terms of a general view of expletive structures. It was shown how these and some other phenonomena strongly support the basic three way object typology and the conclusion that many passive structures, specifically pseudopassives and ditransitive passives, do not involve 2 object passivization. Significant parallels were documented between pseudopassives and ditransitive passives. Inter alia it was explicated why pseudopassives and ditransitive passives of all types are incompatible with expletive there and locative inversion, as well as with other structures like absolute constructions. Finally, this Chapter briefly considered 3 object-like behavior of preparticle objects in paradigms normally taken to involve 2 objects, highlighting the role of quace in the distribution.

Chapter 7 sought to state precisely conditions controlling the passivizability of English objects, specifically, of 3 objects and 4 objects, shown to be subject to heavy constraints irrelevant to 2 object passivization. A crucial claim was that 3 objects and 4 objects only passivize in ditransitive clauses so that all passivized single objects are 2 objects. This chapter also introduced a typology of ditransitive types. And it offered evidence for the existence of invisible resumptive pronouns in English passive clauses, presenting arguments that these pronouns underlie many limitations on ditransitive second object passivization.

Chapter 8 provided a detailed theoretical explication of Visser's Generalization (VG), a long known principle barring passivization of subject control clause objectsz. It is uncontroversial that VG has hitherto resisted theoretical understanding. The current treatment uncovers the fact that VG subsumezs a richer range of phenomenon than usually assumed. Chapter 8 specifically attempted to expand the discussion beyond standard cases with the verb promise. Often ignored facts were shown to be critical: (i) there are productive verbal classes (e.g. question verbs, the pester class) also manifesting VG; (ii) VG governs English

pseudopassives; and (iii) VG-like constraints are also found in a range of nonpassive constructions. The three way object typology was argued to be central to understanding these facts. Equally fundamental was appeal to quace. Quace provides a mechanism for subdividing fixed grammatical relations into subtypes with links to other relations. For instance, it permits saying that certain 3 objects and other objects share properties of 2 objects, while nonetheless preserving a sharp distinction between 2 objects and the others. By stating conditions in terms of 2 quace, generalizations are achieved which cover 2 objects and just those non 2 objects with 2 quace.

The explorations of this chapter showed that part of the extension of VG represents a special case of a still more general principle governing the relation between English passives and a range of other constructions including object raising and object deletion. The essential step in recognizing this generalization originates in unpublished 1970 era observations by David Perlmutter. The conclusion was that the quace idea (and as far as I know, only that) permits a proper formulation of the overall principle.

Chapter 9 focused on how the concepts of earlier chapters apply to English clauses with <u>that</u> clause complements. After documenting a clear four way typology of such clauses, I proposed several principles to account for their properties, specifically their relation to the extraposition expletive <u>it</u>. The chapter then considered the interaction of <u>that</u> clause complements with 3 objects and treated a documented range of variation. A complex paradigm manifesting the interaction of 2 objects and 3 objects with <u>that</u> clauses was analyzed. The discussion showed how the basic grammatical devices introduced and justified earlier regularize otherwise puzzling and anomalous paradigmatic features. Again a critical step was to properly distinguish 2 objects from non-2 objects, rendered problematic in an NL like English where these are *morphlogically* indistinguishable. This was shown to be crucial even for related paradigms. For instance, it turned out that while a 3 object in <u>Jane taught Tom astronomy</u>, <u>Jane</u> is a 2 object in <u>Jane taught Tom that Mars was only five miles from Earth</u>.

Beyond specification of an abstract grammatical framework, the notable characteristic of previous chapters was to construct several dozen precisely stated factually motivated grammatical principles. While many of these may be parochial English features, others are plausibly hypothesized to be universals. This multitude of descriptive conditions represents an integrated attempt to characterize a substantial (if limited) portion of English syntax. The significant descriptive scope of these principles covers a variety of clausal domains which, to my knowledge, have for the most part previously eluded successful accounts. Since all aspects of

present proposals depend entirely on the theoretical framework, to the extent they are sustained, they must inevitably support the more general views which define it.

To conclude, this work could from another, comparative, point of view be viewed as a challenge to (the many) forms of syntactic description not recognizing its central defining concepts, nonconstructive grammars, primitive edges, primitive relations between them, edge labeling, quace, etc. There arises specifically a challenge to what Chapter 1 called Barrel (A) ideas. Variants of those have been intensively pursued and applied by hundreds of researchers to English for more than half a century. Nonetheless, I suggest that with respect to no area studied in the previous nine chapters has such work provided an account which compares favorably with what is offered here. But, since I am perhaps less than objective on that score, that judgment should ultimately be left to others.

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