Hindi Verb Classes and their Argument Structure Alternations

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by

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SCHOLARS**

P U B L I S H I N G

For my dearest little darling Sasha
& his baba Halim

With regard to our conceptual apparatus, causation is the centre of the centre.

—John Carroll

TABLE OF CONTENTS

PREFACE

This book is a relatively unchanged version of my doctoral thesis. It offers an exploration of the syntax and semantics of verb classes in Hindi and their argument structure alternations. It endeavors to probe into the areas of Hindi syntax which have been rather under-explored in the generative literature.

It builds a Voice based analysis of both transitives and causatives which suggests that transitivisation necessarily feeds causativisation, thereby correctly predicting that verb classes that do not transitivise (internally caused verbs of change of state) do not causativise either. The evidences presented here are the empirically nuanced facts in Hindi.

In the course of the book, I closely examine a variety of unaccusative and unergative diagnostics that reveals a hitherto unnoticed fact about Hindi verb classes: the (in)animacy of arguments determines the behaviour of a particular class of verbs. The bulk of Hindi verb classes turn out to be unaccusative with respect to the major diagnostics, with unergative behaviour being directly predicted if the sole argument of the unaccusative is animate. This suggests that the feature of animacy has argument promotion properties, and is a proposal that merits wider investigation.

Though the Hindi simple passive has been explored in earlier generative accounts, the present work examines the Hindi passives with a minimalist perspective. I have argued that neither the (in)abilitative passive nor the simple passive involves promotion to subject position. For both types of passives, the present account seeks to tie up the phenomenon of passivisation to a feature transfer\inheritance proposal between Voice head and the phasal υ head. In the process of implementing the analysis, the binding facts in Hindi are also investigated.

At the end of the book, I have provided an appendix of Hindi verbs class wise with their roots as well. I hope that it will benefit future researchers.

This work owes the greatest debt to my thesis supervisor Dr. Ayesha Kidwai for her continuous engagement with my work. I also benefited from interactions with Ian Roberts, Tanmoy Bhattacharya, Gillian Ramchand, Anoop Mahajan and Peter Svenonious during various conferences and workshops. My special thanks to my thesis examiners Rajesh Bhatt and Veneeta Dayal for their appreciation and most valuable academic insights.

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I dedicate this work to my teacher Late Ranganath Pandey who constantly had tremendous faith in my abilities. His love, warmth, affection and words of encouragement would always remain the source of inspiration to me. Special thanks to my partner Halim for everything. Above all, I thank my little one, Sasha, for being so 'patience' and for providing me with all the mental energy I needed.

—Richa

ABBREVIATIONS

(Based on Leipzig Glossing Rules)

ACC	Accusative
CAUS	Causative
CONJ	Conjunctive
DAT	Dative
DO	Direct Object
EMP	Emphatic
ERG	Ergative
F	Feminine
FUT	Future
GEN	Genitive
HAB	Habitual
INF	Infinite
INS	Instrumental
IO	Indirect Object
M	Masculine
NEG	Negative
NOM	Nominative
OBL	Oblique
PASS	Passive
PFV	Perfective
PL	Plural
PROG	Progressive
PRS	Present
PST	Past
PTCP	Participle
SG	Singular
SUB	Subject
TR	Transitive

CHAPTER ONE

INTRODUCTION

This book is an attempt to investigate the syntax of Hindi verbs and their argument structure alternations within the minimalist framework. In the course of this exploration it examines unaccusativity, unergativity, transitive, causative alternations and passives in Hindi.

1.1. The Research Problem

In Hindi, a modern Indo-Aryan language, verbs participate in transitive, causative alternations employing regular morphologically related forms:

Unaccusatives

Intransitive	Transitive	Causative
kʰɔlna 'boil'	kʰɔlana	kʰɔlwana
ɟəlna 'burn'	ɟəlana	ɟəlwana
bəʈʰna 'increase'	bəʈʰana	bəʈʰwana
pʰɛlna 'expand'	pʰɛlana	pʰɛlwana
gəlna 'melt'	gəlana	gəlwana
ɟəmna 'freeze'	ɟəmana	ɟəmwana

Table 1-1(i)

Unergatives

Intransitive	Transitive	Causative
uṛna 'fly'	uṛana	uṛwana
ku:ḍna 'jump'	kuḍana	kuḍwana
kʰelna 'play'	kʰelana	kʰelwana
ḍɔṛna 'run'	ḍɔṛana	ḍɔṛana
t̪ɛrna 'swim'	t̪ɛrana	t̪ɛrwana
cəlna 'walk'	cəlana	cəlwana
nacna 'dance'	nəcana	nəcwana

Table 1-1(ii)

Transitives

Transitive	Ditransitive	Causative
kʰana 'eat'	kʰilana	kʰilwana
pi:na 'drink'	pilana	pilwana
cəkʰna 'taste'	cəkʰana	cəkʰwana
pəʈʰna 'read'	pəʈʰana	pəʈʰwana
likʰna 'write'	likʰana	likʰwana
ḍekʰna 'see'	ḍikʰ(l)ana	ḍikʰ(əl)wana
si:kʰna 'learn'	sikʰ(l)ana	sikʰ(əl)wana

Table 1-1(iii)

Traditionally, the -*a* suffix is called the first order (direct) causative morpheme and -*wa* is the second order (indirect) causative morpheme. The two kinds of causatives are said to differ in terms of directness -- the suffix -*a* indicates that the causer acts directly and -*wa* that the causer acts indirectly (acting *indirectly* means involving an intermediary agent).

However, if we examine the formation of these variants in Hindi, we infer that -*a* is a transitivizer that adds a causing event, and -*wa* is a causativizer, which adds a caused event to the causing event. The causee in Hindi causatives usually surfaces as an instrumental/ablative Case-marked. For example:

1. i) somi hə̃sṭa hɛ
       Somi laugh-HAB be-PRS
       'Somi laughs.'

    ii) nili somi ko hə̃saṭi hɛ
        Nili Somi ACC laugh-HAB.F be-PRS
        'Nili makes Somi laugh.'

    iii) nili (runɑ se) somi ko hə̃swaṭi hɛ
         Nili Runa INS Somi ACC laugh-CAUS-HAB.F be-PRS
         'Nili makes Runa make Somi laugh.'

This alternation raises a number of interesting questions. One issue is with regards to the picture of Hindi verbs that emerges on the basis of these facts – most Hindi verbs appear to be unaccusative at the base. However, there are interesting gaps in this apparent regularity – in particular internally caused verbs (in the sense of Levin & Rappaport Hovav 1995) do not have either transitive or causative variants:

INTRANSITIVE	TRANSITIVE	CAUSATIVE
kəɾəkna 'thunder'	-	-
gurrɑna 'roar'	-	-
cəmcəmɑna 'glitter'	-	-
muskurɑna 'smile'	-	-
ʃərmɑna 'blush'	-	-
suːɲna 'swell'	-	-
kã̃pna 'tremble'	-	-

Table 1-2

Another issue is with regards to the instrumental/ablative Case *-se*. Besides the causative, this Case appears on the external argument in the Hindi inabilitative passive construction (which conveys the inability of an agent/initiator to initiate the event denoted by the predicate), on the instrumental adjunct phrases, as well as the source noun phrases:

2.   i) pulis se   bəcce ko mɑrɑ nəhĩ: gəjɑ
            police-INS child ACC kill   not   go-PFV
            'The police was not able to kill the child.'

         ii)somi ne ru:nɑ-se vɑnkɑ-ko mərwɑjɑ
            Somi-ERG Runa-INS Vanka-ACC kill-CAUS-PFV
            'Somi made Runa kill Vanka.'

         iii) rɑm ne   (cɑku se) minɑ ko   mɑrɑ
            Ram-ERG knife-INS   Mina-ACC kill-PFV
            'Ram killed Mina with a knife.'

         iii) wəsi:m ḍilli se ɑjɑ
            Waseem Delhi-ABL come-PFV
            'Waseem came from Delhi.'

The natural question here is whether all these occurrences of *-se* are in any way related. Traditionally, the ablative and the instrumental uses are distinguished from each other as homophonous lexical Cases. The occurrences of the *-se* Case-marker on the external argument in the inabilitative passives and the causee argument in the morphological causatives therefore raises the question as to whether here too *-se* is a lexical Case-marker. Indeed much earlier work has assumed as much, holding the Case in both these instances to be a lexical/inherent instrumental Case. With particular regard to the causative, this has led to an analysis of the causee as an adjunct rather than an argument.

However, a closer look at the empirical facts of Hindi suggests that the issues of structural Case vs. lexical/inherent Case status for *-se* are far from settled, and neither is the analysis of the causee as an adjunct conclusive. Consider the facts of Hindi possessive reflexive binding. As is well known by now (Kidwai 1995, 2000, Richa 2003), possessive reflexives in Hindi can only be bound by a subject/external argument and not by a *-ko* marked internal argument or an instrumental adjunct:

3.   i) ram_i ne $moni_j$ ko $əpni_{i/*j}$ kiṭab lɔṭai
            Ram ERG Moni ACC self's   book return-TR.PFV.F
            'Ram returned Moni his/*her book.'

    ii) ram$_i$ ne moni$_{*j}$ ki c^{h}uri se əpna$_{i/*j}$ gəla kaʈa

       Ram ERG Moni GEN knife INS self's neck cut-TR.PFV

       'Ram cut his/*her neck with Moni's knife.'

Interestingly, the -*se* marked arguments in the inabilitative passives and the causatives can bind the possessive reflexive in Hindi, suggesting that these arguments are in a subject-like position:

4.   i) ram$_i$ se əpni$_i$ mã ko mara nəhĩ: gəja

        Ram-INS self's mother ACC kill-PFV not go-PFV

        'Ram$_i$ was not able to kill his$_i$ mother.'

     ii) ram$_i$ ne moni$_j$ se əpni$_{i/j}$ mã ko mərwaja

        Ram ERG Moni INS self's mother ACC kill-CAUS.PFV

        'Ram made Moni kill his/her mother.'

However, this position is merely subject-like, and not the subject position per se, given that Hindi pronouns show anti-subject orientation (Gurtu 1985, Mohanan 1990, Srivastava-Dayal 1993, Kidwai 1995, 2000):

5.   ram$_i$ ne mili$_j$ ko uske$_{*i/j/k}$ g^{h}ər mẽ mara

       Ram ERG Mili ACC his/her house in kill-PFV

       'Ram$_i$ killed Mili in his$_{*i/k}$/her$_{j/k}$ house.'

The anti-subject orientation does not hold with the -*se* marked arguments, suggesting that it is not really in the subject position:

6.   i) ram$_i$ se uske$_i$ g^{h}ər mẽ g^{h}usa nəhĩ: gəja

        Ram-INS his house in enter-PFV not go-PFV

       'Ram$_i$ was not able to enter into his$_i$ house.'

     ii) sara$_i$ ne moni$_j$ se mili$_k$ ko uske$_{*i/j/k}$ g^{h}ər mẽ mərwaja

        Sara ERG Moni INS Mili ACC her house in kill-CAUS.PFV

       'Sara$_i$ made Moni$_j$ kill Mili$_k$ in her$_{*i/j/k}$ house.'

Furthermore, neither the causee argument nor the external argument of the inabilitative passive construction is optional in the way that adjuncts are. With the causees in particular, -*se* marked arguments are licensed only when the causative morphology is present:

7.   i)*runɑ-ne mili-se gʰənʈi bəɟ-ɑ-i
         Runa-ERG Mili-INS bell   ring-TR-PFV.F
         'Runa made Mili ring the bell.'

         ii) runɑ-ne   mili-se gʰənʈi bəɟ-wɑ-i
         Runa-ERG Mili-INS bell   ring-CAUS-PFV.F
         'Runa made Mili ring the bell.'

This complex of facts indicate that an analysis of Hindi causatives must explain not only the paradigmatic properties of the phenomenon, it must also provide a principled explanation of Case-marking and binding relations in the causative (and inabilitative) constructions. Therefore, an analysis of Hindi causative must first begin with an examination of unaccusatives and unergatives.

1.2. Theoretical Preliminaries

Chomsky (1995) explores the properties of the computational component C_{HL} expressed in terms of output conditions and how closely C_{HL} is to minimalist conditions. The three major economy principles, the natural fallout from the minimalist assumptions, are -- Shortest Move, Greed and Procrastinate. Shortest Move restricts the movement of a constituent to the first position of the 'right kind' up from its source position. The principle Procrastinate prefers derivations to hold off on movement until after spell-out, so that the results of such movements do not affect PF. The principle of Greed states that movement is only to satisfy the needs of the moving constituent.

"Morphological features" are the features associated with tense, case and agreement. V, N, and Adj. are fully inflected in the lexicon. Features are ± interpretable. Categorial features and φ-features of noun are +interpretable and others are –interpretable. –interpretable features have to be eliminated for convergence. Failure to eliminate these features prior to an interface at which they are invisible causes the derivation to crash at this interface. So, the core property of C_{HL} is feature checking. Feature checking is reduced to deletion: a checked feature is marked "invisible" at the interface. Feature strength plays a major role in overt manifestation and language variation.

Operation "Select" selects a lexical item LI from the numeration N. Another operation "Merge" takes a pair of syntactic objects (SO$_i$, SO$_j$) and replaces them by a new combined syntactic object SO$_{ij}$. Operation "Move[1]" selects α and raises it, targeting K, where α and K are categories

constructed for m one or more lexical items. Move α is replaced by Move F, F a feature because if the underlying idea is that the operation Move is morphology-driven and the requirement being the feature checking, the minimal operation should be to raise the feature F.

Chomsky (2000) in *Minimalist Inquiries (MI)* attempts to refine and solve some of the technical problems that existed in Chomsky (1995). The basic assumptions are as follows:

> L (language faculty) is a device that generates expressions EXP and the computation maps Lexical Array LA to < PHON, SEM >, where PHON provides the "instructions" for sensorimotor systems and SEM for systems of thought.[2] It makes a one-time selection of a subset [F] of F. It also includes a one-time operation that assembles elements of [F] in a lexicon Lex, in which lexical items LIs are assembled.

Derivations make a one-time selection of a lexical array LA from Lex, then map LA to Exp, with no recourse to [F] for narrow syntax, simplifying computation far more. LA is selected and at each stage of the derivation, a subset LA_i is extracted, placed in active memory and submitted to the procedure L. When LA_i is exhausted, the computation can either proceed or may return to LA and extract LA_j. The process continues until it terminates.

There are three operations which enter into the component of C_{HL}. The first is Merge, which forms complex syntactic objects by taking two elements, combining them and assigning a label to the newly formed object. It takes two syntactic objects (α, β) and forms K (α, β). There can be two kinds of Merge: Set-Merge and Pair- Merge.

8. i) Set-Merge adjoins α and β to form the set {α, β}
   ii) Pair-Merge α and β to form the ordered pair <α, β>.

Set-Merge is a symmetrical operation that has a selector and it is obligatory. On the other hand, Pair-Merge is an asymmetrical operation which has no selector and is optional. Set-Merge has some properties of Agree, a feature F of one of the merged element must be satisfied for the operation to take place."

The second operation is Agree that Agree occurs overtly, without any kind of movement.

9. Agree establishes a relation (agreement, case-checking) between an LI α and a feature F in its search space (i.e. its domain).[3]

Unlike *MP*, where Agree is analyzed in terms of feature movement (Attract) and the concept of matching is not clear, here matching is taken to be identity and Attract is dispensed with. Checking reduces to deletion under matching with an active goal and then, deletion of the uninterpretable feature that render the goal active. Probe seeks a Goal, 'matching' features that establish agreement.

The third operation is Move, combining Merge and Agree. Pure merge is Merge that is not part of Move.

The core functional categories (CFCs) are C (expressing force/mood), T (tense/event structure) and υ (light verb).

Movement is driven by an EPP-feature. The head of a phase may be assigned an EPP-feature / P(eriphery) feature. Derivation proceeds phase by phase. LA$_i$ determines a natural syntactic object a SO, this is a 'phase'. Phases are propositions, including CP and υP, having full argument structure and φ -feature content. This choice is supported by considerations on the sound side: υPs and CPs, but not TPs can be fronted, extraposed, pseudoclefted, and can serve as response fragments. Phases satisfy a stronger cyclicity condition:

10.   "The head of a phase is 'inert' after the phase is completed, triggering no further operations."

So, a phase cannot trigger Merge or Attract in a later phase.

Chomsky (2001) sharpens the idea that features deleted within the cyclic computation remain until the phase level, at which point the whole phase is 'handed over' to the phonological component. The deleted features disappear from the narrow syntax, allowing convergence at LF. So, until Spell-Out of the full syntactic object, uninterpretable features have to remain, because of their phonetic reflexes. Strengthening the notion of cyclic derivation, Chomsky proposes 'Phase- Impenetrability Condition' (P I C):

11.   "In phase α with head H, the domain of H is not accessible to operations outside α, but only H and its edge."

Under P I C, accessibility of H and its edge is only up to the next strong phase. Strong phases are targets for movement (i.e. CP/ V∗P, having an EPP-feature and full argument structure. Phasal heads that lack an EPP-feature are by definition weak. In unaccusatives, <u>v</u> lacks both an EA and an EPP-feature, hence weak. Local head movement and

successive cyclic A- and A'- movement are allowed, and the phonological component can proceed without checking back to earlier stages. The assumption, here, is that the phonological component spells out elements that undergo no further displacement:

12. $[_{ZP}$ Z……$[_{HP}$ α [H YP]]]

Here, under P I C, H and its edge α belong to ZP for the purpose of Spell-Out. YP is spelled-out at the level of HP. H and α are spelled-out if they remain in-situ. Otherwise, at the next strong phase ZP, their status is determined. Chomsky proposes the guiding principle for phases PH_i :

13. Interpretation/evaluation for PH_1 is at the next relevant phase PH_2.

So, the effects of Spell-Out are determined at the next higher strong phase: CP or v*P. Therefore, a strong HP allows extraction to its outer edge; the domain of H can be assumed to be inaccessible to the extraction under P I C: an element to be extracted can be raised to the edge, the phonological component spells-out the domain at once, without waiting for the next phase. P I C is restated as:

14.   The domain of H, for strong phase HP, is not accessible to operations at ZP, but only H and its edge (where edge is the residue outside of H').

15. $[_{ZP}$ Z……$[_{HP}$ α [H YP]]]

After completion of HP, if computation L moves on to a stage Σ, it can access only the edge α and the head H of HP. But there is a distinction between Σ=ZP and Σ within ZP. If Z=T, the probe T can access an element of the domain YP of HP. But if Z=C, beyond CP, TP cannot be extracted, only the edge of head of TP is accessible for extraction to C.

Chomsky assumes that the operations Agree/Move[4] apply freely. The probe-goal relation is evaluated for the Minimal Link Condition (M L C) at the strong phase level when the outer edge of the phase has become a trace, losing its phonological features.

1.3. Organization

Chapter 2 surveys the existing research on unaccusativity and unergativity. It starts with the early approaches to transitivity, and examines the progression to an articulated VP structure.

Chapter 3 examines notional verb classes in Hindi on the basis of the proposals by Levin & Rappaport Hovav (1995). It examines the behaviour of Hindi intransitives and their transitive and causative uses, and finds that ten verbs classes can be isolated for Hindi - Emission verbs, Verbs of Change of State, Verbs of Motion, Verbs of Spatial Configuration, Verbs of Existence, Appearance & Disappearance, Verbs of Contact/ Attachment, Verbs of Bodily Process, Verbs of Consumption, Verbs of Perception and Verbs of Image Impression.

Chapter 4 explores the diagnostics that identify unaccusative and unergative verb classes crosslinguistically. It then applies these diagnostics to Hindi verb classes. Based on these observations, the chapter concludes that most Hindi verbs are unaccusative at the base.

Chapter 5 begins the process of analysing argument structure alternations in Hindi by first considering the passive. Presenting the empirical facts of Hindi regular passive and inabilitative passive, the chapter argues that the -*se* marked argument in the inabilitative passive must be analysed as a structural Case. In the analysis I present, I extend Collins (2005)'s approach to passives to argue that the light verb *ja 'go'* is the Voice head in Hindi regular passives. In (In)abilitative passives, this light verb itself substitutes into Voice with the -*se* marked argument raising to the specifier of an (In)abP head between TP and Voice.

Chapter 6 initiates the movement towards an analysis of the transitive and causative alternation, by taking stock of the existing research on transitivity and causativisation.

Chapter 7 builds on the insights gained from this survey to present my analysis of Hindi causatives. It argues for an argument analysis of the causee providing evidence for a distinction between **-***se* marked causees and -*se* marked instruments in Hindi. The analysis I present takes the causative to be a Voice, and analyses the -*se* marked causee as an argument of that Voice head. The chapter concludes with a discussion of the main results of the book and its implications for Case and binding in Hindi.

Notes

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[1] Operation Move reflects peculiarities of human language, e.g., morphology driven "last resort" properties.

[2] 'Sensorimotor' is 'articulatory-perceptual' in *MP* (1995). Chomsky (1998:fn2) points out that 'one obvious error is the restriction to the articulation and auditory perception, plainly incorrect, as the study of sign language has shown. 'Systems of thought' is 'conceptual-intentional systems' in *MP* (1995).

[3] Chomsky (2000:14) speculates that as this operation is language-specific, unlike Merge, it relates to the design conditions for human language.

[4] Chomsky also reconstrues operation Move as the operation Agree/ Pied-pipe/ Merge, where Agree holds of Probe H, Goal G and Mark identifies H as the head of an occurrence HP of the pied-pipe category K determined by G.

CHAPTER TWO

A REVIEW OF EXISTING RESEARCH

This chapter reviews a sampler of existing research on transitivity and unaccusativity. Section 2.1 is concerned with early approaches to transitivity. Section 2.2 provides an insight into articulated VP structure in detail. Finally, section 2.3 discusses the paradigm shift in the standard approach to transitivity -- the dissociation of transitivity and case assignment. Section 2.4 presents the conclusion.

2.1. Classification of Verbs

Traditionally, verbs have been considered to be of two types – transitive and intransitive, where a transitive predicate is held to express a relation between two arguments, whereas an intransitive one is considered as a one-place predicate.

In *Aspects*, Chomsky (1965) initiates a more structural approach regarding the traditional classification of verbs, by employing the notion of 'subcategorization' (or 'c-selection' in Pesetsky's 1982 terminology) as a property of individual lexical items. S-selection information is essentially independent of this; however, the lexical entry establishes a mapping between c- and s-selection. Thus, the verb is classified according to the type of VP which the verb heads. For example:

1.   i) *put* V : [+ ___ NP PP]
          ii) *try* V: [+ ___ S]
          iii) *run* V: [+ ___]

(1i) shows that *put* is a verb that is subcategorized for a certain context where it has to occur with both an NP and PP. Similarly, (1iii) shows that *run* is a verb that does not take any complement.

Following these proposals, the notions 'transitive' and 'intransitive' get encoded in distributional frames. In other words transitivity comes to be defined in terms of subcategorization, i.e. by the presence or absence of an object.

Intransitives are further subjected to internal categorization, as we see in the next subsection.

2.1.1. Classification of Intransitive Verbs: Early Approaches

The earliest proposal for the categorization of intransitives is made by Hall (1965) who suggests that there is a subclass of intransitive verbs whose surface subjects are underlying objects.

In Relational Grammar, a distinction is made between verbs that take a final subject originating as an initial direct object and verbs taking a final subject that is also an initial subject. Perlmutter (1978) formulates the Unaccusative Hypothesis (in Relational Grammar) claiming that the class of intransitives consists of two subclasses -- unaccusatives and unergatives.[1] He suggests that the initial stratum of a monadic predicate (P) has either of the following structures:

P   1   P   2
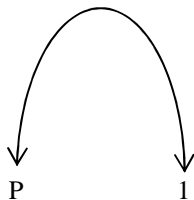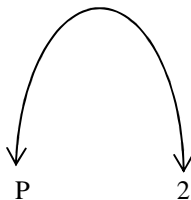
Fig. 2-1(i)   Fig. 2-1(ii)

Defining the initial stratum as the level of representation at which the predicate with its nominal dependents with their initial grammatical relations to this predicate is represented, the stratum in Fig. 2-1(i) is "unergative" and the stratum in Fig. 2-1(ii) is "unaccusative." The former is the stratum with a subject and the latter without a subject. However, this is not possible for all strata. There is a "Final-1-law" which requires that each final stratum must contain a subject.[2]

2.   The Final-1-law
        The final stratum of every basic clause contains a 1-arc.

Perlmutter therefore argues that in order to arrive at the final stratum observing the final-1-law, the initial 2 (direct object) must be advanced to subject. This process is called the "Unaccusative Advancement."

Perlmutter (1978) formulates another law "1-Advancement Exclusiveness Law" which states that only one promotion to subject is allowed within a single clause.

3.   1-Advancement Exclusiveness Law
          In a relational network in which A and B are neighbouring 1-arcs (i.e. 1-archs with the same tail), if A is an advancee arc B is not an advancee arc.

In other words, no clause can involve more than one element becoming a subject. That is, no more than one noun phrase may advance to the subject position.

Both these laws jointly predict that unaccusative verbs will not have a passive. Since analysis of unaccusatives involves the promotion of the initial direct object to subject by the rule of "Unaccusative Advancement" and passive is characterized as a universal rule that promotes the direct object to a subject with the subsequent demotion of the subject to the status of *chomeur*[3] (i.e. the noun phrase that has been demoted from its subject 'job'), passive of an unaccusative will involve two 1-advancements, in violation of the "1-Advancement Exclusiveness Law." Hence, the prediction is correct -- it is not possible for prototypical unaccusatives to have passives. This is true:

4.   *kəl   ʈuːʈa   gəjɑ   ʈʰɑ   Hindi
          yesterday break-PFV PASS-PFV be-PFV
          '*Yesterday(it)was broken.'
                                                  (cf. Balachandran 1973:46.47)

It should be noted here that the analysis of passive in Relational Grammar poses a problem for the impersonal passive construction where there is not a promotable direct object. But Perlmutter (1978) analyzes impersonal passives in Dutch as involving promotion of the dummy direct object *er*. Hence, impersonal passives of unaccusatives will also violate the "1-Advancement Exclusiveness Law." This prediction is proved correct too:

5.   *er   werd   door het water snel ver dampt   Dutch
          there was   by   the water very fast evaporated
                                                  (cf. Perlmutter 1978)

The Unaccusative Hypothesis captures some important generalizations. It has been observed that the participles of unaccusatives and transitives share the same properties. Participles of both unaccusatives and transitives can be used as predicates over nouns only when the noun corresponds to the direct object of the predicate and also when it is the theme of the predicate as (6-7) show:

6.   i) the fallen leaf
           ii) the frozen ice
           iii) the given book
           iv) the eaten apple

7.   i) *the danced girl
           ii) *the slept baby
           iii) *the given man
           iv) *the eaten boy

The Unaccusative Hypothesis accounts for this difference in terms of the notion of 'initial direct object.' The generalization formed is as follows:

8. Participles can be used as predicates over nouns which correspond to their initial direct object.

Now compare (6iii) & (7iii). *book* in (6iii) corresponds to the initial direct object of the verb *give* but in (7iii), *man* is the initial indirect object, hence the participle cannot be used as predicate over noun.

Though the Unaccusative Hypothesis captures a number of generalizations and correctly predicts others (e.g. no passives with unaccusative), serious doubts were cast about the validity of the approach.

Take the "1-Advancement Exclusiveness Law." Perlmutter (1978) does not provide any specific principle that predicts which predicate will select an initial unaccusative stratum, though he does note that the strongest hypothesis would be that "there exist universal principles which predict……….initial unaccusativity. […….]. The basic idea is that initial unaccusativity is predictable from the semantics of the clause." (Perlmutter 1978:161)

Besides this, the status of the laws as well as the status of relational notions remains unclear. How would the notion of unaccusative stratum (i.e. a level of representation that does not contain a subject) be represented in the Phrase Structure grammar? Furthermore, the predictions

made by these laws could very well be derived from structural principles, and this is what was attempted by the GB approach.

2.1.2. The LGB Approach

Although Relational Grammar and the GB approach are similar in being derivational accounts, the crucial difference between the two lies in the fact that the GB framework abandons a construction specific approaches altogether. Consequently, a rule for "passive" does not exist in GB, there existing only a general rule of Move α (α = NP in this case). This rule extends to passivisation in that passive morphology suppresses accusative case, triggering the movement of an internal argument to the subject position. The existence of impersonal passives shows that the Relational Grammar approach to passivisation as involving 'promotion' is not correct.

Moreover, NP movement is not exclusive to passives, extending to raising and unaccusative predicates as well. In GB, the property of the absence of an initial subject is formalized in terms of a θ'-subject (i.e. a subject to which no θ-role is assigned).The Extended Projection Principle (EPP) requires that there must be a subject position that receives nominative case. Therefore, [Spec, IP] serves as the landing site for the categories that must be moved from Caseless argument positions. Thus, the ultimate subject in unaccusatives originates in object position. Now, given Burzio's Generalization (1986), it is therefore predicated that an unaccusative internal argument will not receive accusative Case, and that therefore unaccusative internal arguments must always raise to [Spec, IP].

9.   If the verb does not assign an external θ-role role, it does not assign Object Case.

An alternative definition of unaccusativity, that is sometimes adopted, is that an unaccusative verb is unable to assign a θ-role to its subject. These formulations replaced the traditional classification of verbs where transitivity was regarded as the property of combining with an NP to form a VP. Now transitivity came to be regarded as the property of having an external θ-role.

10. a)   transitive: $[_{V'} \text{ NP } \underline{\quad}]$ intransitive: $[_{V'} \underline{\quad}]$

   b)   transitive: θ-subject   intransitive: θ'-subject

2.2. Arguments and Articulated VP Structure

Following Williams (1981), a distinction came to be made between internal and external arguments of a verb, with Marantz (1984) making further distinction among the internal argument (direct vs. indirect objects). Moreover, as the VP became more articulated with the VP-internal subject hypothesis (Fukui & Speas 1986, Koopman & Sportiche 1991) and later by the introduction of VP-shells (Larson 1988), the earlier formulations of transitives and intransitives could no longer be maintained. Let us look at these developments in more detail.

2.2.1. Marantz (1984)

Distinguishing clearly between internal and external arguments, Marantz (1984) proposes that external arguments are not true arguments of the verb. He notes that objects and verbs may receive non-compositional interpretation, but subjects and verbs never can. This is why there are many verbs that receive idiomatic interpretation depending on the nature of their objects, but no verbs receive an idiomatic interpretation because of the nature of their subjects. Some of his examples are as following:

11.   V+ Obj. (Non-compositional interpretation)
         i) kill a bug = cause the bug to croak
         ii) kill a conversation =cause the conversation to end
         iii) kill an evening = while away the time span of the evening
         iv) kill a bottle = empty a bottle

12.   Subj.+ V (No non-compositional interpretation)
         i) The policeman threw NP
         ii) The bozer threw NP
         iii) The social director threw NP
         iv) Throw NP

For Marantz (1984), the subject is not an argument of the verb, but an argument of the predicate, hence the verb cannot impose selectional restrictions on the subject to the exclusion of the object. He also distinguishes between the two internal arguments of a verb: the direct internal argument, θ-marked directly by the verb and the indirect internal argument, θ-marked by a preposition.