CHAPTER TWO
PASSIVES IN HINDI AND THE PASSIVE PARAMETER

2.0 Introduction

In Hindi, the direct object argument at times surfaces with an accusative Case-marker ko while at times it surfaces without such a Case-marker. The appearance and the non-appearance of ko has been attributed to certain conditions. Since in passives, too, it is held that the direct object can surface with or without the accusative Case-marker ko, this has led some linguists to assume that the appearance or otherwise of ko in passives is dictated by the very same conditions as obtain in the active form. Therefore they claim that the passive morpheme in Hindi does not absorb the verb's Case-assigning property at all (Davison (1988)). An alternative analysis of the passive facts in Hindi claims that the passive morpheme optionally absorbs the Case-assigning property of the verb (Wali (1984), Davison (1985)).

In the sections that follow, we will examine the conditions responsible for the appearance of ko in active sentences and see if the same conditions obtain for the passive counterpart too. We will note that the Case-marker ko does not normally appear with the direct object argument in passives and that its appearance there is judged to be unidiomatic, but (crucially) not ungrammatical. We will
argue that the non-surfacing of the accusative Case morpheme in active and passive in Hindi can be best explained in terms of "incorporation" of the accusative Case. We will also suggest, building upon the characterization of the passive given by Baker (1985), that the passive phenomenon can be accounted for by the interaction of the various principles of UG.

2.1 The Appearance of the Accusative Case

In Hindi too, -- like in other Nominative-Accusative languages -- a transitive verb assigns an accusative Case to its object argument. This accusative Case is morphologically realized as ko.

(1) a. jon ne bil ko pukaaraa
   John erg. Bill acc. called
   "John called Bill"

   b. raam ne cor ko maaraa
   Ram erg. thief acc. beat
   "Ram beat the thief"

But, at times, the accusative Case-marker ko fails to surface on an NP which has been assigned an accusative Case. Very often the object argument surfaces without ko.
(2) a. mai rotii khataa hu
    I bread eat be-pr.1p.sg.
    "I eat bread"

b. shikaarii baagh maarta hai
    hunter tiger kill be-pr.3p.sg.
    "The hunter kills the tiger"

There has been a lot of debate as to what determines the optional surfacing of the overt accusative Case. Kellog (1875), Guru (1920) and Porizka (1963), among others, have suggested the animacy, specificity and genericity (besides other features) of the object NP as conditions for the appearance of $ko$ on it. But it is not hard to find counter-examples to each of these conditions. No one (to our knowledge) has given an in-depth account of the principles which determine the appearance or otherwise of the Case-marker $ko$.

2.1.1 Case Incorporation

Going along with Chomsky (1986b), we can say that inherent, i.e., theta-linked, Case is assigned at D-structure. So, the D-structure of a sentence with a transitive verb will be as shown in (3), in a language like Hindi.
K stands for Case; we are assuming that ko is present on the direct object at D-structure. (Alternatively, we could assume that Case is present as a feature at D-structure, and is morphologically realized, given appropriate conditions, at S-structure. This makes no material difference to our argument; so we shall henceforth ignore this possibility.)

The question is: why does ko delete (or disappear) sometimes, before surface structure?

We claim that most transitive verbs have a lexical property which enables them to incorporate the Case of their direct objects. And yet, sometimes the NP must surface with
the ko Case-marker. This naturally raises the question whether the verb has failed to incorporate the Case due to its own "weakness" or the NP has somehow resisted its Case being incorporated. We suggest that there is a sort of tension between the Verb and its direct object regarding the accusative Case ko -- the verb trying to incorporate it and the NP trying to retain it.

There are some verbs which are too weak to incorporate the accusative Case. There are some NPs which are strong enough to resist incorporation of their Case by the verb. The weakness of the verb may be due to its semantics, and the strength of the NP may be due to its reference feature. I have taken three reference features of NPs which are relevant to incorporation --

(4)  a. [+Generic]
    b. [+Specific]
    c. [+Definite]

The features in (4) have been arranged in an implicational hierarchy with regard to the reach of the verb. That is, if a V's influence (its "incorporating strength") can reach only the [+Generic], the other two, i.e., [+Specific] and [+Definite], are out of its reach. In such circumstances
the Case on [+Generic] will be incorporated in the verb (and subsequently deleted) to form an idiomatic expression of the form \([v_F \ NP \ V]\) and the surfacing of a ko will amount to "unidiomaticity" and will be much less preferred. [+Specific] and [+Definite] NPs in such circumstances must surface with a ko, or else the sentence will be ungrammatical. If a V's influence reaches to [+Specific], the appearance of ko with it is unidiomatic, while with [+Generic] it is nearly ungrammatical and with [+Definite] ko must appear. If a V can reach to [+Definite], the appearance of ko with it becomes unidiomatic while with the preceding two features it is nearly ungrammatical. The "incorporating strength" of the verb is a lexical property. If the "incorporating strength" of the verb reaches up to one of the features shown in (4), then this feature as well as the feature or features that precede it must automatically give up their Case for incorporation while the feature or features that follow it must withhold their Case from incorporation. We can represent this relationship between the features in terms of set inclusion, as shown in (5).

(5)
A verb's "incorporating strength" may be specified as set $a$, or set $b$, or set $c$. What (5), however, does not show clearly is that there are verbs whose influence does not reach even [+Generic], i.e., whose "incorporating strength" is $\emptyset$. An incorporation configuration is shown in (6).

(6) $[\text{VP} [\text{NP} \text{NP} t_1 ] [\text{V} \text{K}_1 \text{V}]]$

The "Case incorporation" rule is essentially a rule of "idiomatization" with regard to Hindi. It is a preference rule, i.e., if it can apply then it must apply. Non-application of this rule, in cases where it can apply, will result in a highly unacceptable, though not totally ungrammatical, sentence. Incorporation is a movement rule (see section 2.1.2 for the theoretical status of incorporation), and it must apply in the syntax. However, with regard to every transitive verb, it needs to be made explicit in the lexicon what its incorporating strength is. This seems to be an idiosyncratic property of the verb and needs to be learnt by a language learner.

2.1.2 Incorporation: the Notion and its Theoretical Status

The idea of "Incorporation" has been dealt with in great detail by Baker (1985). "Incorporation" essentially
means syntactic movement of an X° category. Some examples of incorporation phenomena are given below.

Noun Incorporation (Lg. Mohawk)

(7) a. ka - rakv ne sawatis hrao - nuhs - a?
   3N - be-white John 3M - house - Suf²
   "John's house is white"

b. hrao - nuhs - rakv ne sawatis
   3M - house-be-white John
   "John's house is white"

(Baker (1985:38))

In (7a) the verb root -- rakv 'be white' and noun root -- nuhs 'house' occur independently. But in (7b) the two come together. Baker argues that this is achieved by the syntactic movement of the head noun to adjoin to the verb. The S-structures of (7a) and (7b) are shown (using only the glosses, for perspicuity) in (8a) and (8b) respectively.

(8) a. b.
Verb Incorporation (Lg. Chichewa)

(9) a. mtsikana a-na-chit-its-a kuti mtsuko u-na-gw-e
   girl do-cause that waterpot fall
   "The girl made the waterpot fall"

b. mtsikana a-na-gw-ets-a mtsuko
   girl fall-cause waterpot
   "The girl made the waterpot fall"

(9a) combine in (9b). This again is the result of movement of -gw- to -its-. The S-structures of (9a) and (9b) are shown in (10a) and (10b) respectively.

(10) a. IP
    NP  VP
   girl V
   make NP VP
   pot V
   fall

b. IP
   NP  VP
   girl V
   make NP VP
   pot V
   fall_i
   make pot t_i
   fall
Preposition Incorporation (Lg. Kinyarwanda)

(11) a. umwaana y - a - taa - ye igitabo mu maazi
child SP-past-throw-asp. book in water
“The child has thrown the book into the water”

b. umwaana y - a - taa - ye - mo amaazi igitabo
child sp-past-throw-asp- in water book
“The child has thrown the book into the water”

(Baker (1985:40))

(11b) is derived from (11a) by moving the preposition mu to
adjoin to the verb taa.

Baker suggests that all GF-changing processes are the
result of movement of a lexical (i.e., X₀) category. Thus,
causatives are in fact a case of verb incorporation and
applicatives can be analysed in terms of preposition incorpo-
ration. Passives, antipassives and possessor raising, he
claims, are subcases of noun incorporation.

2.1.2.1 Incorporation and "Move-ød"

In the preceding section incorporation has been defined
as the syntactic movement of an X₀ category. In other words,
this is one of the instantiations of Move-ød. If so, then
it must satisfy all the conditions on movement, viz. ECP (the
trace must be properly governed), the theta-criterion (movement must be to a non-theta position) and Subjacency, as given in Chomsky (1981). Following Koopman (1983), Baker revises the notion of theta-position to mean both "a position to which a theta-role is assigned" and "a position from which a theta-role is assigned." Thus, N, V, and P all occur in theta-positions at D-structure. But all adjunction positions are non-theta positions, given the X-bar theory (Jackendoff (1977), Stowell (1981)). Therefore, if N, V and P are adjoined to an X\textsuperscript{0} category, they will not be able to assign or receive a theta-role from that position. Thus, in (7b), (9b) and (11b) movement is of an X\textsuperscript{0} category to a non-theta position.

In a movement configuration, the trace of X\textsuperscript{0} must be properly governed. Now, proper government implies theta-government (i.e., government by the head) or antecedent government. In the case of an X\textsuperscript{0} category, its trace cannot be theta-governed because an X\textsuperscript{0} category is never theta-marked. It is only an XP which is theta-marked, as the X-bar theory predicts. Hence, the trace of an X\textsuperscript{0} category must be antecedent governed, i.e., governed by the X\textsuperscript{0} category itself. That is, in the incorporation structure (12)

(12)
X must antecedent govern its trace \( t_i \). To achieve this Baker assumes the following convention.

(13) The indexes of the parts of an \( X^0 \) category count as the indexes of the \( X^0 \) category itself.

(Baker (1985:69)).

(This convention, Baker points out, has been assumed by Borer (1983) to explain clitics.)

Thus, in (12), \( Y^* \) will have the index of \( X \) as well as the index of \( Y \). Suppose \( Y \) has the index \( j \). Then \( Y^* \) gets the index \( i+j \). Thus, it should be \( Y^* = X+Y \) which should govern the trace \( t_i \) in (12). Now, \( Y^* \) does govern the trace \( t_i \) as it c-(or m-)commands the trace and XP is not a barrier between \( y^* \) and \( t_i \) as it is L-marked by \( Y \) or the complex category \( y^* \) Chomsky (1986a). We can now see that with incorporation the ECP is satisfied.

Incorporation also satisfies the last condition on Move-\( \infty \), namely subjacency. In fact subjacency is vacuously satisfied in case ECP is satisfied. Subjacency requires that a moved element cannot cross more than one barrier (Chomsky (1986a)). But ECP is a stronger condition which requires that there should not be even one barrier between the moved element and its trace. Thus, Baker holds that subjacency, too, is obeyed
by incorporation, though this condition is redundant because of ECP.

In view of the above considerations Baker concludes that incorporation is an instantiation of Move-∞.

2.1.2.2 The Government Transparency Corollary

Let us have a look at the abstract examples (14a-b) where theta-indexing has been shown by arrows. (14b) is an example of incorporation while (14a) shows non-incorporation.

(14) a.

In (14a), $Y_j$ governs the head of $X_P$ as $X_P$ is theta-indexed with $Y$. But $Y$ does not govern $Z_P$ since $Z_P$ and $Y$ bear two different theta indices. However, in (14b) the situation changes. The complex category $Y^*$ will have the indices $i+j$, that is, this will be indexed both with $X_{P_j}$ and $Z_{P_i}$ by virtue of (13). Thus in (14b) which is an incorporation structure, $Z_P$ will be governed by $Y^*$. This can be stated as follows:
(15) **The Government Transparency Corollary (GTC)**

A lexical category which has an item incorporated into it governs everything which the incorporated item governed in its original structural position.

(Baker (1985:79))

(15) shows how government relationship changes due to incorporation of an $X^0$ category into another $X^0$ category that governs the former.

2.1.2.3 Incorporation and Morphology

Baker puts a condition on incorporation. He suggests that incorporation is licit only when licensed by the theory of Morphology. That is, the Morphology of a language must admit the complex $X^0$ category formed after incorporation as well-formed or it must assign a phonological shape to the complex $X^0$ category. Otherwise the structure will be ungrammatical. (We shall dispute, and modify, this claim presently.)

2.1.3 Case Incorporation and the Accusative Case

In Section 2.1 we discussed how the accusative Case assigned by a transitive verb sometimes fails to surface with the NP. We also suggested (see 2.1.1) that the appearance and non-appearance of the accusative Case-marker is determined by
the reference feature of the NP as well as the lexical property of the transitive verb. The non-appearance of an accusative Case-marker, we said, is the result of "Case incorporation". In this section we will examine the mechanism of Case incorporation and check whether this kind of incorporation falls within the theoretical framework outlined in the preceding section.

Let us begin with the following sentences:

(16) a. mai [NP kitaab] paDhtaa hūū
   I book read be-pr.1p.sg.
   "I read a book"

   b. mai [NP roTii] khāataa hūū
   I bread eat be-pr.1p.sg.
   "I eat bread"

   c. mai [NP kapDe] pahantaa hūū
   I clothes wear be-pr.1p.sg.
   "I wear clothes"

In each sentence in (16), the NP is supposed to have been assigned an accusative Case by the verb. But the reference feature of the NP and the lexical property of the verb combine to get rid of the accusative Case-marker ko. How does it happen?
The D-structure of (16b) will be as shown below (cf. (3) above):

(17)

That is, the Case is assigned to the NP [roTii] at D-structure itself. Since [roTii] is [+Generic] and khaanaa is a verb whose influence can reach all the three features of an NP listed in (4), the Case is incorporated by it. That is "Move-ω" applies to move the X^0 category K and adjoin it to the X^0 category V. Thus, the S-structure that we get is (18).
We can see that the movement of $K$ as shown in (18) obeys all the conditions on such movement. The movement obeys the Head Movement Constraint (HMC), since $K$ is adjoined to $V$ which properly governs it (i.e. the movement does not skip any intervening head). It also obeys ECP; note that the intervening NP is not a barrier between $V$ and $t_i$, and therefore the trace of $K$ is properly governed by its antecedent via $V$. This is the structure which goes into LF and the NP $[\text{rotii}]$ is correctly interpreted as the direct object of the verb $khaataa$. Now, the Case $K$ does not get any phonetic realization, for reasons that we discuss immediately below. In the PF component, the Case $K$ as well as its trace is deleted and we get $[\text{mai rotii khaataa huu}]$. The other two sentences in (15) are
The immediate question that arises is: why does the Case-marker ko never get surface realization when it is incorporated into V? In other words, in the incorporated structure, why must ko always delete? Why do we never get a sentence like (19)? (In (19) we have inserted a Neg between the direct object and V in order to make clear that we are looking at the postulated incorporated structure.)

(19) *maī kitaab nahi ko paDhtaa hūū
terminal
do not acc. read be-pr.1p.sg.
"I do not read a book"

While data like (19) would have provided us "surface" evidence for ko-incorporation, their systematic absence may seem prima facie to weaken our incorporation analysis.

At this juncture, one might also wonder whether Baker's condition of "morphological licensing" of incorporation also potentially weakens our analysis. Is "postposition + V" (or for that matter, "V + postposition") a well-formed morphological form in Hindi? In answer to this, however, we must point out that the condition of morphological well-formedness on incorporation is an incoherent suggestion within Baker's theory as it stands. Recall that for Baker, incorporation is
the adjunction of an $X^0$ category to another $X^0$ category. Adjunction (by definition) is not "structure-preserving", i.e., in adjunction, the movement is not to a slot which is already present there. While certain adjunctions may be disallowed, and others admitted, by independent principles, it is not possible for the theory to insist that adjunction should conform to a pre-existing morphological "template". What we can perhaps have (instead) is a filter of the PF-component, like the "Doubly-Filled COMP" filter which is not a morphological filter, and which can be got around by deletion. We shall come back to this possibility.

Before we proceed, let us note that, while (19) is clearly impossible, (20) is also quite bad; the only perfectly acceptable version of this sentence is the one without $ko$, i.e., (21).

(20) ?? *māi kitaab ko nahīi paDhtaa hūū
  I book acc. not read be-pr.1p.sg.
  "I do not read a book"

(21) māi kitaab nahīi paDhtaa hūū
  I book not read be-pr.1p.sg.
  "I do not read a book"

Therefore, if we assume (in the interests of full generality) that $ko$ is generated in the D-structure with every direct
object, the only options before us are: (i) deleting ko in situ; and (ii) deleting ko after incorporation. We must now show that there is some advantage in choosing (ii).

Let us take a look at the data illustrating the "Doubly-Filled COMP" filter:

(22) a. *... the man [who that [I saw t]]
   b. ... the man [who [I saw t]]
   c. ... the man [that [I saw t]]

In Chomsky and Lasnik (1977), (22a) was disallowed by a filter which said (essentially) that both a wh-phrase and a complementizer could not be accommodated in the "same" COMP node in surface structure. Later research (however) has more or less proved that the two elements are not in the same node: the wh-phrase is in SPEC, CP, whereas the complementizer is the head of CP.

(23)

Given this configuration, we can explain the data of (22) as follows. Let us assume (as seems reasonable) that at LF, the
relative pronoun who must be the head of the relative clause in order to be co-indexed with the NP which the relative clause modifies. If that is present, it occupies the head position of CP (as shown in (23)); therefore, who cannot be the head, and hence (22a) is out. But if that is not present, who can move into the head position (or give its index to the head position), and hence (22b) is allowed. To explain (22c), Chomsky (1981) suggests that a "null operator" (i.e., a wh-element which has no phonetic realization) in SPEC, CP can give its index to the complementizer; so that the that in (22c) is in effect a relative pronoun (as was indeed claimed by traditional grammar). We can speculate that the null operator does this index-sharing by adjoining to that, an option which is not given to a phonetically realized wh-element.

It is interesting (and relevant), however, that there was an earlier stage in the history of English wherein a sentence like (22a) was grammatical. (This has been pointed out by Chomsky and Lasnik (1977).) Since a basic LF-level well-formedness requirement could not have been relaxed for this earlier stage of the language, we can interpret the fact as follows: in this earlier stage, a phonetically realized wh-element also was allowed to give its index to the complementizer; i.e., it too was allowed to adjoin to that.
What we are suggesting is that there is possibly a parametric choice here: a language may restrict adjunction to certain $X^0$ categories (such as the head of CP) to phonetically null elements; or it may not restrict it in this fashion. The early stage of English that we spoke of and Modern English have different values for the parameter.

Coming back to Incorporation, recall a convention adopted by Baker, namely (13) above, which says that the index of a complex $X^0$ category (created by incorporation) is the sum of the indexes of its constituent elements. Plausibly, the same convention would suffice to explain how a null operator gives its index to a complementizer; the complex C category that results from the adjunction of the null operator to the complementizer would bear the index of the null operator (as well as the index of the complementizer, if it has one).

Now, in all the cases of incorporation that Baker studies, the incorporated element is a non-null (i.e., phonetically realized) element. This of course would be the more obvious type of incorporation. But in view of the discussion above, it is plausible that there are instances of null elements being incorporated. In fact, in a theory of grammar which allows null elements, an argument from generality should lead us to predict that there are such cases. Also, it is possible that in particular cases, a
language may restrict incorporation (and the resultant sharing of indexes) to a null element. The study of the "Doubly-Filled COMP" data suggests that, in fact, the incorporation of a null element is the less marked case. We wish to suggest that the incorporation of Case into V in Hindi is restricted to a null (phonetically empty) K. Slightly revising our earlier account, we can now say that either ko or a phonetically empty K is assigned to the direct object at D-structure. Alternatively, we can say that Case is assigned to the direct object at D-structure, but that it is phonetically realized only at S-structure, and that if it is incorporated, it will not be phonetically realized.

The advantage of our analysis of the non-surfacing ko in terms of incorporation-into-V of a null K is the following: it assimilates the phenomenon to other phenomena, such as the data relating to (the history of) the Doubly-Filled COMP filter in English, and incorporation phenomena in general. Whereas the other option that we spoke of, namely deletion (or non-realization) of the Case-marker in situ, does not lead us (to the best of our knowledge) to any deeper explanation.
2.1.4 Class of NPs and Vs and the Application of Case Incorporation

As already discussed in Section 2.1.1 the incorporation of the accusative Case depends on two factors -- (i) the reference features of the NP and (ii) the incorporating strength of a transitive verb, which is lexically specified. In the following subsections we will see which verbs permit incorporation, in the presence of which features of the NP.

In fact, barring a very small number, almost all the transitive verbs in Hindi incorporate the accusative Case, so that one cannot very well speak of a class of "incorporating verbs". In such a situation, it is the reference feature of the NP which will have a say with regard to the incorporation of its accusative Case by the transitive verb.

2.1.4.1 Transitive Verbs and [+Definite] NPs

The set \( c \) in (5) shows that there is a class of verbs which can incorporate the Case from an NP with the strongest reference feature [+Definite]. By implication, this class of verbs will never allow a [+Generic] NP or a [+Specific] NP to surface with ko. It will allow only a [+Definite] NP the option of having a ko, though the non-appearance of ko will be preferred. (As already said, Case incorporation in Hindi is a preference rule. Since this class of verbs can incorporate
the Case on a [+Definite] NP, it must do so. Failure to do so will result in an unidiomatic sentence.) Some verbs which belong to this class are paDhnaa 'read', likhnaa 'write', dhonaa 'wash' etc.

(24) a. mai kitaab paDhtaa huu
    I book read be-pr.1p.sg. [+Generic]
    "I read a book"

b. *?? mai kitaab ko paDhtaa huu acc.

c. mai ne ek kitaab paDhii hai
    I erg. a book read be-pr.3p.sg. perf. [+Specific]
    "I have read a book"

d. *?? mai ne ek kitaab ko paDhaa hai acc

e. mai ne yah kitaab paDhii hai
    I erg. this book read-perf. be-pr.3p.sg. [+Definite]
    "I have read this book"

f. ? mai ne is kitaab ko paDhaa hai this acc.
One can raise the objection here that paDhnaa, likhnaa, dhonaa etc. are verbs which generally take inanimate NPs and that this is the crucial factor determining the non-surfacing of ko. But even with animate NPs these verbs should observe the same restriction, if at all animate NPs could occur as the direct object of these verbs.

2.1.4.2 Transitive Verbs and [+Specific] NPs

The second set b in (5) covers the [+Generic] and the [+Specific] features of an NP. That is, a verb which belongs to this class reaches up to the [+Specific] feature of an NP. This implies that a verb of this class cannot incorporate the Case on a [+Definite] NP, which must, therefore, surface with a ko. The second implication is that the verb of this class will completely incorporate the Case on a [+Generic] NP and ko with such an NP will be ruled out. Lastly, the verb of this class will incorporate the Case on a [+Specific] NP and non-application of the incorporation rule in this case will result in an unidiomatic expression. All these come out true without drawing a distinction between animate and inanimate or human and non-human NPs. Some verbs which belong to this class are dekhnaa 'see', puujnaa 'worship'.

(25) a. māī ne jangal mē aadmī/patthar/sher dekhe
I erg forest in men stones lions saw

"I saw men/stones/lions in the forest"
b. *? mai ne jangal me aadmii/patthar/sher ko dekhaa
acc.

c. mai ne jangal me ek aadmii/patthar/sher dekhaa
I erg. forest in a man stone lion saw
[+Specific]
"I saw a man/stone/lion in the forest"

d. ? mai ne jangal me ek aadmii/patthar/sher ko dekhaa
acc.

e. mai ne jangal me us aadmii/patthar/sher ko dekhaa
I erg. forest in that man stone lion acc. saw
[+Definite]
"I saw that man/stone/lion in the forest"

f. *mai ne jangal me wah aadmii/patthar/sher dekhaa
that

An apparent counterexample to this is (26).

(26) a. mai T.V. dekhtaa huu
I see be-pr.ip.sg.

b. mai T.V. ko dekhtaa huu
I acc. sae be-pr.ip.sg.

It seems that T.V. in (26a) is [+Generic] and in (26b) it is
[+Definite]. This distinction between the two occurrences of
T.V. corresponds to the distinction in meaning of (26a) and (26b).
(26a) means "I watch the pictures on the T.V." and (26b) means "I see the T.V. (the box itself)."

2.1.4.3 Transitive Verbs and [+Generic] NPs

The set a in (5) covers only the [+Generic] feature of an NP. The implication, by now, is clear. [+Specific] NPs and [+Definite] NPs will not allow their accusative Case to be incorporated by the verb of this class. But the Case on a [+Generic] NP must be incorporated. Non-application of incorporation will result in unidiomatic sentences. A verb of this class is pahcaananaa "to recognize".

(27) a. mai aadmii/patthar/sher pahcaanataa huu
    I man stone lion recognize be-pr.1p.sg. [+Generic]
    "I recognize man/stone/lion"

    b. ? mai aadmii/patthar/sher ko pahcaanataa huu
        acc.

    c. mai ek aadmii/patthar/sher ko pahcaanataa huu
        I a man stone lion acc. recognize be-pr.1p.sg. [+Specific]
        "I recognize a man/stone/lion"

    d. *? mai ek aadmii/patthar/sher pahcaanataa huu
2.1.4.4 Transitive Verbs which do not Incorporate Case

As pointed out in Section 2.1.4, there are some transitive verbs which do not allow the Case of an NP to be incorporated into them, irrespective of the three features of the NPs that we have mentioned, or the [+human] and [+animate] distinction. Two examples of this class of verbs are jaananaa "to know" and samajhanaa "to understand". ³

(28) a. mai aadmii/patthar/sher ko jaanataa/samajhataa
I man stone lion acc. know understand

[+Generic]

huu

be-pr.1p.sg.

"I know/understand men/stones/lions"

b. *mai aadmii/patthar/sher jaanataa/samajhataa huu
c. mai ek aadmii/patthar/sher ko jaanataa/samajhataa
I a man stone lion acc. know understand
[+Specific]

huu
be-pr.1p.sg.
"I know/understand a man/stone/lion"

d. *mai ek aadmii/patthar/sher jaanataa/samajhataa huu

e. mai us aadmii/patthar/sher ko jaanataa/
I that man stone lion acc. know
[+Definite]
samajhataa huu
understand be-pr.1p.sg.
"I know/understand that man/stone/lion"

f. *mai wah aadmii/patthar/sher jaanataa/samajhataa huu

Note that aadmii 'man' and sher 'lion' are [+human] and
[-human] respectively, and that patthar 'stone' is [-animate],
but this makes no difference for incorporation of Case.

2.1.4.5 Abstract NPs and Case Incorporation

In the preceding subsection we saw that there is a class
of transitive verbs which does not allow incorporation of Case,
whatever feature the NP may have. There is a counterpart to
this. All abstract NPs with any feature whatever allow their
Case to be incorporated, irrespective of which class the transitive verb belongs to.

(29) a. gaggaa paap dhotii hai
   river Ganga sin wash be-pr.3p.sg.
   [+Generic]
   "The river Ganga washes the sin"

b. gaggaa uskii ek paap nahii dho sakekgii
   river Ganga his a sin not wash can will
   [+Specific]
   "The river Ganga will not be able to wash one of his sins"

c. gaggaa merii yah paap bhii dho degii
   river Ganga my this sin emph. wash will
   [+Definite]
   "The river Ganga will wash this sin of mine"

(30) a. mai sapne dekhtaa huu
   I dreams see be-pr.1p.sg.
   [+Generic]
   "I see dreams"

b. mai ne aaj ek sapnaa dekhaa hai
   I erg. today a dream see perf. be-pr.3p.sg.
   [+Specific]
   "I have seen a dream today"
c. mai ne aaj phir wahi sapnaa dekhaa
I erg. today again same dream see perf. [+Definite]
"I saw the same dream today"

(31) a. mai caalaakii pahcaantaa huu
I cleverness recognize be-pr.1p.sg. [+Generic]
"I recognize cleverness"

b. mai uskii ek caalaaki nahii pahcaan paayaa
I his a cleverness not recognize can perf. [+Specific]
"I could not recognize a cleverness of his"

c. mai uskii yah caalaakii bhii (acchii tarah)
I his this cleverness emph. well [+Definite]
pahcaantaa huu
recognize be-pr.1p.sg.
"I recognize this cleverness of his well"

(32) a. mai bhaashaaE jaantaa huu
I languages know be-pr.1p.sg. [+Generic]
"I know languages"
b. māi ek bhaashaa jaantaa hūū
   I a language know be-pr.1p.sg.
   [+Specific]
   "I know a language"

c. māi yah bhaashaa jaantaa hūū
   I this language know be-pr.1p.sg.
   [+Definite]
   "I know this language"

(33) a. māi kasme khaataa hūū
   I oaths eat be-pr.1p.sg.
   [+Generic]
   "I take oaths"

b. māi ne aaj ek kasam khaayii hai
   I erg. today a oath eat perf. be-pr.3p.sg.
   [+Specific]
   "I have taken an oath today"

c. māi ne aaj yah kasam khaayii hai
   I erg. today this oath eat perf. be-pr.3p.sg.
   [+Definite]
   "I have taken this oath today"
All the examples in (29-33) will be unidiomatic and may be ungrammatical too if ko surfaces with the direct object NPs. With regard to abstract NPs it is not the lexical property of a verb nor the features of the NP which determines the incorporation of Case but the abstractness of the NP itself.

2.1.4.6 Names and Pronominals

As contrasted with abstract nouns which always give up their Case, pronominals and names never allow their Case to be incorporated. We can illustrate this with the "strongest" class of verbs, namely the ones which can incorporate accusative Case from a [+Definite] NP (see 2.1.4.1). Some such verbs are padhnaa 'read', likhnaa 'write', and dhonaa 'wash'.

(34) a. wah mujhko/jon ko dhotaa hai
   he me acc. John acc wash be-pr.3p.sg.
   "He washes me/John"

   b. wah isko dhotaa hai
      he this acc wash be-pr.3p.sg.

   c. *wah mai/jon dhotaa hai
      he I John wash be-pr.3p.sg.
      "He washes me/John"

(34a) is doubtful because verbs like dhonaa, likhnaa etc. do not normally take animate NPs as their direct object. (34b) is acceptable because isko is interpreted as an inanimate NP.
But (34c) is just out, whereas it should not have been so because a verb of this class can incorporate the Case from a [+Definite] NP. The verb padhnaa 'read' can take an animate direct object (name or pronoun) in a metaphorical sense; in these instances, ko must surface.

(35) mai ne premchand ko / tumko padhaa hai
    I erg. Premchand acc. you acc. read perf. be-pr.3p.sg.
    "I have read Premchand/you (i.e., Premchand's/your books)"

2.1.5 Inherent Case vs. Structural Case

In Section 2.1.1 it was assumed that a verb which theta-marks its direct object may assign to it an inherent Case at D-structure (see fn.1). The Case assigned at D-structure may or may not be realized at S-structure, depending on whether Case incorporation takes place in the syntax or not. Evidence that a verb which theta-marks its object may assign an inherent Case to it comes from Exceptional Case-marking in Hindi. Let us have a look at (36).

(36) a. mai pyaar samajhataa huu
    I love understand be-pr.1p.sg.
    "I understand love"

b. ?mai pyaar ko samajhataa huu
    acc.
(36a) is preferable to (36b) and can be derived by Case incorporation. (Recall that samajhnaa 'understand' belongs to the class of verbs which do not incorporate the Case of their direct objects, but that pyaar 'love' is an abstract NP which always gives up its Case irrespective of the class the verb belongs to.) The point is that while (36b) is a possible sentence it is much less idiomatic. Now, let us have a look at (37a) and (37b), and observe the difference.

(37) a. māi pyaar ko acchaa maanataa/samajhataa hūū
   "I consider/understand love to be good"

           I love acc. good consider/understand be-pr.1p.sg

b. ??* māi pyaar acchaa maanataa/samajhataa hūū

While Case incorporation is optional, and preferred, in (36), Case incorporation is not possible in (37). That is, ko must surface in this sentence. This contrast can be explained by drawing a contrast between inherent Case assignment and Structural Case assignment. In (36), the verb samajhnaa 'to understand' subcategorizes and theta-marks the object NP pyaar. Hence it assigns an inherent Case to pyaar. Thus, the D-structure of (36a) and (36b) will be (38).

(38) māi [VP [NP pyaar K] samajhataa] hūū
Now, if K is incorporated in the syntax then we derive (36a). If K is not incorporated we derive (36b). This is not so in (37). The verb samajhanna does not subcategorize pyaar in (37). Instead, it subcategorizes a small clause with pyaar in the subject position of the small clause. Thus, the D-structure of (37a) is (39).

(39) mai \([_{VP} [_{SC} pyaar acchaa] samajhataa] huu\)

In this configuration, the verb samajhanna cannot assign an inherent Case to pyaar. Since no Case is assigned at D-structure, Case incorporation will not take place. At S-structure, however, the verb samajhanna will assign a structural Case to pyaar under government. And the accusative Case that is assigned at S-structure under government must be realized because it cannot be incorporated as Case incorporation is not available at S-structure. Hence, we get (37a) but we cannot derive (37b) from the D-structure representation of (39).

2.1.6 Summary

Summarizing the facts presented in section 2.1, we see that the appearance of the Case-marker ko on the direct object depends on the interaction between the "incorporating strength" of verb classes and the definiteness, specificity and genericity of NPs. But abstract NPs tend to give up their
Case, irrespective of these features and the class of the verb. On the other hand, proper names and pronouns never give up their Case.

2.2 Passive in Hindi

In this section we will examine if the same conditions hold for the appearance of ko in passives as in actives. But before we take up this investigation we will review the parameters usually appealed to for explaining the passives in Hindi and show that those parameters have certain shortcomings. We will then suggest that passives in Hindi can be explained in terms of Case incorporation of the accusative Case. We will also note that while in active ko appears only at times, in passive it does not normally appear and that its appearance there is judged to be unidiomatic, but not ungrammatical.

2.2.1 Hindi Passives and the Passive Parameters

It has been argued for Hindi that the passive morphology optionally absorbs Case (Wali (1984), Davison (1985)). Hence, the object NP may stay in its D-structure position or move out to the subject position. This proposal is based on examples such as (40).

(40) a. ? baccō ko puujaa jaataa hai

children acc worshipped pass be-pr.3p.sg.

"Children are worshipped"
b. bacce puuje jaate hai
   children worshipped Pass. be-pr.3p.pl.
   "Children are worshipped"

On the basis of (40) it has been suggested that the absorption
of the Case-assigning property of the verb by the passive
morphology is subject to a parametric choice, as indicated in
(41).

(41) obligatory absorbs Case
    (e.g. English)

  PASS

  optionally absorbs Case
    (e.g. Hindi)

But such a parametric choice is dubious because the claim
that Case is absorbed optionally is theoretically a weak claim.

This objection to optional Case-absorption does not apply
to a proposal that passive morphology does not absorb Case in
Hindi at all. Such an assumption has been made by Davison (1988):
According to this proposal the parametric choice given to
passive morphology is as shown in (42).

(42) absorbs Case
    (e.g. English)

  PASS

  does not absorb Case
    (e.g. Hindi)
If we say that Hindi passive morphology does not ever absorb Case, this predicts that the object NP will always surface with an accusative Case. This will readily give us (40a). But now we need to say something about (40b).

A second (possible) problem is posed by Burzio's generalization. If the verb assigns Case to its object argument, then it should also assign an external theta-role. In such a case there must be an argument in the subject position of IP at D-structure, to satisfy the theta-criterion. But in (40a) the subject position of IP is empty. Davison (1988) tries to get round this problem by assuming that the passive verb, though it assigns Case to its object, does not assign an external theta-role to the subject position. But such an assumption is ad hoc unless something more is said about the external theta-role.

Regarding (40b) in which the object argument surfaces without ko, it is assumed by Davison (1988) that the object argument bacce has direct case with no postposition. Davison obviously considers ko a postposition; her assumption seems to be that accusative Case in Hindi can be realized either as an abstract Case or as a postposition. But surely, taking this position does not solve the problem of (40); any more than it solves the problem of all the active data involving the presence or absence of ko that we have been looking at.
in section 2.1. The question can simply be rephrased (now as follows: why is the abstract Case preferred, and why is the postpositional Case so unidiomatic, in (40)? For the fact is that a passive sentence with ko is unidiomatic (see, again, fn. 7). This latter fact does not receive an explanation in Davison's account.

We have already suggested that the appearance and non-appearance of ko with the direct object argument in active sentences is due to Case-incorporation. We will suggest that in passives, too, Case incorporation as a preference rule will explain the absence of the accusative Case-marker on the object NP. In spite of an apparent problem with Burzio's generalization, we will, for the time being, adopt the parameter given in (42). That is, we shall assume that the object NP is assigned an accusative Case at D-structure in spite of the passive morphology (as a choice given in (42). But the Case is incorporated by the verb in syntax.

2.2.2 Application of "Case incorporation" and Passive

In section 2.1 we discussed the various conditions under which the rule of "Case incorporation" should or should not apply, thus accounting for the appearance or otherwise of ko. In the sections that follow, we will show that while in actives "Case incorporation" applies at times,
in passives its application is preferred always. In the
sections that follow it will become clear that the
reference feature of the NP and the lexical property of the
verb have hardly any say with regard to "Case incorporation"
in passives.

2.2.2.1 Abstract NPs and Case Incorporation

It was said in 2.1.4.5 that all abstract NPs allow
their accusative Case to be incorporated, whatever be the
class of the verb. We find that this is true in passives
also. In the following examples I have taken only
[+Generic] abstract NPs but they can be freely replaced by
a [+Specific] or [+Definite] abstract NP.

(43) a. gangaa paap dhotii hai
   river Ganga sin wash be-pr.3p.sg.
   "The river Ganga washes sin"

b. ?? gangaa paap ko dhotii hai

c. (gangaa ke dwaaraa) paap dhoyii
   river Ganga by sin wash perf.
   jaatii hai
   pass. be-pr.3p.sg.
   "Sin is washed by the river Ganga"
d. ?? (gagga ke dwaaraa) paap ko dhoyaa jaataa hai

(44) a. mai sapne dekhtaa huu
I dreams see be-pr.1p.sg.
"I see dreams"

b. ?? mai sapnoo ko dekhtaa huu

c. (mere dwaaraa) sapne dekhee jaate hai
me by dreams see perf. pass. be-pr.3p.sg
"Dreams are seen by me"

d. ?? (mere dwaaraa) sapnoo ko dekhaa jaataa hai

(45) a. mai caalaakii pahcaantaa huu
I cleverness recognize be-pr.1p.sg.
"I recognize cleverness"

b. ?? mai caalaakii ko pahcaantaa huu

c. (mere dwaaraa) caalaakii pahcaanii jaatii hai
me by cleverness recognize pass. be-pr.3p.sg. perf.
"Cleverness is recognized by me"

d. ?? (mere dwaaraa) caalaakii ko pahcaanaa jaataa hai

(46) a. mai bhaashae jaantaa huu
I languages know be-pr.1p.sg.
"I know languages"
b. ?? mai bhaashaa ko jaantaa huu

c. (mere dwaaraa) bhaashaa jaanii jaatii hai
   me by languages know perf. pass be-pr.3p.s
   "Languages are known by me"

d. ?? (mere dwaaraa) bhaashaa ko jaanaa jaataa hai

2.2.2.2 Transitive verbs and [+Definite] NPs

padhnaa 'read', likhnaa 'write', dhonaa 'wash' etc. are verbs which belong to the class which incorporates the accusative Case from [+Definite] NPs and, therefore, from [+Generic] NPs and [+Specific] NPs too. We find the same thing happening in the passives too.

(47) a. mai kitaab padhtaa huu
   I book read be-pr.1p.sg.
   [+Generic]
   "I read a book"

b. *?? mai kitaab ko padhtaa huu

c. kitaab padhii jaatii hai
   book read perf. pass. be-pr.3p.sg.
   "Book is read"

d. *?? kitaab ko padhaa jaataa hai
(48) a. maí ne ek kitaab paDhii (hai)
   I erg. a book read be-pr.3p.sg.
   [+Specific]
   "I have read a book"

   b. *? ? maí ne ek kitaab ko paDhaa (hai)

   c. ek kitaab paDhii gayii
      a book read perf. pass.
      "A book was read"

   d. *?? ek kitaab ko paDhaa gayaa

(49) a. maí ne yah kitaab paDhii hai
   I erg. this book read perf. be-pr.3p.sg.
   [+Definite]
   "I have read this book"

   b. ? maí ne is kitaab ko paDhaa hai

   c. yah kitaab paDhii gayii hai
      this book read perf. pass. be-pr.3p.sg.
      "This book has been read"

   d. ?? is kitaab ko paDhaa gayaa hai
2.2.2.3 Transitive Verbs and [+Specific] NPs

Verbs like dekhnaa 'see' and puujnaa 'worship' belong to the class which allows kO to surface only with [+Definite] NPs. With [+Specific] NPs and, therefore, with [+Generic] NPs the accusative Case must preferably be incorporated. But in passives, the accusative Case marker is incorporated from NPs with all three features:

(50) a. mai ne jaqgal mē aadmii/patthar/sher dekhe
I erg. forest in men stones lions saw

[+Generic]

"I saw men/stones/lions in the forest"

b. *? mai ne jaqgal mē aadmii/patthar/sher ko dekhaa

c. jaqgal mē aadmii/patthar/sher dekhe gaye
forest in men stones lions see perf. pass

"In the forest men/stones/lions were seen"

d. *? jaqgal mē aadmii/patthar/sher ko dekhaa gayaa

(51) a. mai ne jaqgal mē ek aadmii/patthar/sher dekhaa
I erg. forest in a man stone lion saw

[+Specific]

"I saw a man/stone/lion in the forest"

b. ? mai ne jaqgal mē ek aadmii/patthar/sher ko dekhaa
2.2.2.4 Transitive Verbs and [+Generic] NPs

The verb pahcaananaa 'to recognize' belongs to the class which incorporates the accusative Case of a [+Generic] NP. In active sentences, the verbs of this class do not incorporate the Case on [+Specific] NPs and [+Definite] NPs. However, with passive morphology, they do the same as with [+Generic] NPs.
(53) a. māi aadmī/patthar/sher pahcaanatā hūū
c. aadmī/patthar/sher pahcaanā jaātaa hai
   I man stone lion recognize be-pr.1p.sg. [Generic]
   "I recognize man/stone/lion"

b. ? māi aadmī/patthar/sher ko pahcaanatā hūū
c. aadmī/patthar/sher pahcaanā jaātaa hai
   I man stone lion recognize perf. pass be-pr. 3p.sg.
   "Man/stone/lion is recognized"

d. ? aadmī/patthar/sher ko pahcaanāa jaātaa hai

(54) a. māi ek aadmī/patthar/sher ko pahcaanatā hūū
c. ek aadmī/patthar/sher pahcaanāa jaātaa hai
   I a man stone lion acc. recognize be-pr. 1p.sg. [Specific]
   "I recognize a man/stone/lion"

b. *? māi ek aadmī/patthar/sher pahcaanatā hūū
c. ek aadmī/patthar/sher pahcaanāa jaātaa hai
   I a man stone lion recognize perf. pass be-pr. 3p.sg.
   "A man/stone/lion is recognized"

d. ? ek aadmī/patthar/sher ko pahcaanāa jaātaa hai
2.2.2.5 Transitive Verbs and Non-incorporation of Case

Consider the following examples:

(56) a. māi aadmī/patthar/sher ko jaantā ā huū
data man stone lion acc. know be-pr.1p.sg.
[+Generic] 
"I know man/stone/lion"

b. *māi aadmī/patthar/sher jaantā huū
d. ? aadmī/patthar/sher ko jaanā jaataa hai
(57) a. मैं एक आदमी/पत्थर/शेर को जाँता हूँ
I know a man/a lion/a stone

[+Specific]
"I know a man/a lion/a stone"

b. *मैं एक आदमी/पत्थर/शेर जाँता हूँ

c. एक आदमी/पत्थर/शेर जाना जाता है
A man/a lion/a stone is known

(58) a. मुझे एक आदमी/पत्थर/शेर को जाँता हूँ
I know that man/a lion/a stone

[+Definite]
"I know that man/a lion/a stone"

b. *मुझे वह आदमी/पत्थर/शेर जाँता हूँ

c. वह आदमी/पत्थर/शेर जाना जाता है
That man/a lion/a stone is known

d. उस आदमी/पत्थर/शेर को जाना जाता है
It will be recalled that jaananaa is a verb which cannot incorporate the accusative Case from its object NP, whatever be the features of the NP. (56a-b), (57a-b) and (58a-b) illustrate this fact. But the same verb, when it gets passive morphology, can incorporate the accusative Case from [+Generic], [+Specific], and [+Definite] NPs indifferently (56c), (57c) and (58c) are examples of this. (56d), (57d) and (58d) are unidiomatic because "Case incorporation" should have applied but has not applied there.

2.2.2.6 Names, Pronominals and Passive Morphology

In Section 2.1.4.6 we noted that names and pronominals never allow their accusative Case to be incorporated into the verb. Even the strongest class of verbs (i.e., those which can incorporate the accusative Case from an NP with the [+Definite] feature) cannot incorporate Case from a name or a pronoun. paDhnaa 'read', likhnnaa 'write' and dhonaa 'wash' are examples of such verbs. Although these three verbs do not normally take a name or a personal pronoun as their direct object, they may do so in a metaphorical sense. Thus, we may get the following examples:
(59) a. māi jon ko dhotaa hūū
   I John acc. wash be-pr.1p.sg.
   Literally: "I wash John"
   Metaphorically: "I beat John"

b. wah tumko padhtaa hai
   he you acc. read be-pr.3p.sg.
   Literally: "He reads you"
   Metaphorically: "He reads your writings"

When these sentences are converted into passives, the name John and the pronominal tumko surface without the accusative Case-marker.

(60) a. jon dhoyaa jaataa hai
   John wash perf. pass. be-pr.3p.sg.
   "John is washed/beaten"

b. tum padhe jaate ho
   you read perf. pass. be-pr.2p.sg.
   "You are read/your writings are read"

What is more, names and pronominals give up their Case even to the weakest verbs when these verbs are passivized. Thus jaananaa 'know' belongs to the class of verbs which cannot incorporate the Case of even a [+Generic] NP; but the passivized form of the verb can incorporate the Case even of a name or pronominal.
These sentences give us an idea of the extent to which the passive morphology increases the 'incorporating strength' of the verb.
2.2.3 Passive Morphology and the Verb

The data presented in the last section show that any verb can (and preferably does) incorporate the Case of any NP in the direct object position, when it (the verb) is passivized. This immediately shows up as untrue any claim that the non-surfacing of ko in passives occurs under the same contextual conditions as in actives. The contextual conditions, indeed, are different; in passives, the features of the NP and the class of the verb appear not to count at all. The passive morphology seems to override all these distinctions. But our claim -- which is also that of Davison (1988) -- that the non-surfacing of ko in actives and passives is brought about by the same process, still holds. This process, we claimed, is "Case incorporation" into the verb.

But at this point, the reader may wish to ask the following question: since the Case of the direct object can be suppressed in Hindi in all passives, why don't we simply adopt Chomsky's original proposal that passive morphology "absorbs" the direct object's Case? In fact, what is the empirical difference between Chomsky's claim and ours? For the present, let us simply note a superficial difference: while in English the direct object's Case must
be suppressed in Hindi the surfacing of ko with the direct object is only unidiomatic. And this unidiomaticity is intuitively akin to that of active sentences in which the direct object's ko must be suppressed and isn't.

We now wish to present a formal account of Case incorporation in the Hindi passive, and of the role played by passive morphology in this process. But before we proceed to do this, we shall briefly present two analyses of the passive presented in recent literature, namely that of Jaeggli (1984, 1986) and Baker (1985), since we shall be adopting (with some changes) some of the ideas contained in these accounts.

2.2.4 Jaeggli's Analysis of the Passive Construction

Jaeggli (1984, 1986) attempts an explanation of why the external theta-role is absorbed in passives and why the passive verb does not assign Case to the object NP. The external theta-role, he suggests, is assigned to the passive morpheme. This results in the subject position becoming a non-theta position. He also assumes that the passive suffix (-en) requires objective Case which the verb assigns to it. Hence, the object NP does not get Case from the verb. He then goes on to account for variations among different languages with respect to
passives. His account is based on several assumptions. He assumes that nominative Case is assigned in the VP in Italian and Spanish but not in English. This assumption is made in order to explain the following passives of Spanish and Italian.

Spanish

(63) a. Le fue entregado un libro a María
to+her was handed a b+o+ok to Maria
por Pedro
by Pedro

"A book was handed to Maria by Pedro"

Italian

b. Ne furono riconosciuti molti
of+them were recognized many

"Many of them were recognized"

(Jaeggli (1986:593))

The objective Case is assigned to the passive morpheme. Still the object NPs in (64) stay in the VP. The reason is that nominative Case can be assigned to an NP in VP in these two languages. Since this is not possible in English, the object NP must move to the subject position in order to get Case there.
The next assumption made is that in German and Dutch, but not in English, an intransitive verb assigns a structural (i.e., objective) Case. This will explain the passives of intransitive verbs in German and Dutch.

**German**

(64) a. Es wurde getanzt
   it was danced
   "There was dancing"

b. Es wurde bis spät in die Nacht getrunken
   it was till late in the night drunk
   "Drinking went on till late at night"

**Dutch**

(65) Er wordt gefloten
   it was whistled
   "There was whistling"

(Jaeggli (1986:595))

Since the passive morpheme requires an objective Case, this Case will be assigned by the intransitive verbs in German and Dutch. In English an intransitive verb does not assign Case. Hence, there is no passive of intransitive verbs in the language.
Jaeggli further makes the assumption that in Scandinavian languages (as also in Kinyarwanda (Siewierska (1984))) a verb can assign two structural Cases. He seeks to explain passives of double object construction by making this assumption. He also claims that in these languages in a double object construction, the verb assigns structural Case, not inherent Case.

(66) a. Jens ble gitt en bok
   Jens was given a book
   "Jens was given a book"

   b. En bok ble gitt Jens
      a book was given Jens
      "A book was given Jens"

One of the structural Cases will go to the passive morpheme. The left over Case will go either to the direct object or the indirect object. The NP which does not get Case in the VP moves to the subject position to get nominative Case.

But in English, as also in German and Dutch, a verb uniformly assigns only one structural Case. This Case will be assigned to the passive morpheme. The object NP is left without Case. Hence, it must move to the subject.
position. This is the reason why German does not allow a passive in which the object NP remains in the VP.

(67) *Es wird diesen Roman von vielen
    it is this obj. novel obj. by many
    studenten gelesen
    students read

A similar passive in English is prohibited for the same reason.

The biggest problem with Jaeggli's analysis of passives across languages is that it is based on purely ad hoc assumptions. For each language he has one assumption. Thus, the intransitive verb assigns Case in German and Dutch, but not in English; the nominative Case is assigned in the VP in Italian and Spanish, but not in English; a transitive verb assigns two structural Cases in Scandinavian languages but only one Case in English, German and Dutch.

The only contribution of Jaeggli is his insight that the passive morpheme is assigned the external theta role. However, in this case also he does not explain why. It was left to Baker (1985) to attempt to provide an answer to this question. Baker points out that the external theta role
is always present in the passive construction irrespective of whether the by-phrase is present or absent. He agrees with Jaeggli that this external theta role is assigned to the passive morpheme. He further extends this analysis to explain why the passive morpheme requires a theta-role, by suggesting that the passive morpheme is an argument. He also suggests that the passive morpheme is of the category INFL; therefore, it can get only the external theta role. We now turn to a fuller account of Baker's analysis.

2.2.5 Passive Incorporation

Baker (1985) proposes an analysis of Passives in terms of incorporation. He holds that the Passive morpheme is in fact an argument which is of the category INFL in most of the languages and of the Category Noun in some. Being an argument it requires a theta-role. The transitive verb has at least two theta-roles to assign -- one (the internal theta-role) which it assigns to its direct object and the other (the external theta-role) which it assigns through its maximal projection i.e., VP. This external theta-role is assigned to the argumental passive in the INFL under sisterhood between the VP and the INFL. The verb then moves to incorporate with the INFL. Under this account a passive is derived from a D-structure like (68).
In (68) the internal theta-role is assigned to \textit{my hand} and the external theta-role to the argumental passive in the INFL. The verb then incorporates into the INFL to combine with passive and other elements in INFL, as shown in (69).

Why should the verb incorporate into INFL instead of the other way round? Baker has two arguments for this. If the INFL lowers to combine with the verb, then the trace
left behind will not be properly governed by its antecedent. Whereas if the verb incorporates into INFL, the trace of the verb will be properly governed by its antecedent by virtue of the Government Transparency Corollary (see section 2.1.2.2). The two movements are shown in (70a) and (70b) respectively, and Baker prefers the movement shown in (70b).

(70) a. IP
   /   \
  /     \
 NP     I' \
  |     /   \ 
  e   t1    VP
       |     |    |
      V     NP  V
          |     I1 \\
          |      |
          |      |
          |      |
          |      |
          |      |
          |

His other argument is that in such languages where the INFL node and the verb do not appear contiguously, the verb and the INFL after coming together occur in the INFL position instead of the verb position (Cf. Koopman (1983) where she shows this happening in the Kru languages of Vata and Gbadi). Thus incorporation of verb into INFL "can be taken to be the theoretically unmarked Case" (Baker (1985:586)).

Baker has an interesting proposal for how Case theory is satisfied once the passive morpheme is taken to be an
argument. In the preceding discussion it has already been shown how theta-theory is satisfied. Regarding Case theory, the passive morpheme behaves like an incorporated Noun. An incorporated Noun does not require any Case for its "morphological identification." The passive morpheme, in spite of being an argument, will not require a Case after the verb incorporates into it. However (says Baker), there is no "theoretically motivated" reason why an incorporated Noun (and by analogy, the passive morphology) may not be assigned Case. There are some languages like Mohawk and Southern Tiwa in which the incorporated Noun does not need Case at all. There are some languages like Niuean in which the incorporated Noun obligatorily needs Case if the Verb has a Case to assign; otherwise, it is identified by just being incorporated into the verb. There are still some other languages like Eskimo in which the incorporated Noun must have Case as a special (not "theoretically necessary") property; otherwise it would be ungrammatical. Passive morphemes, across languages, behave exactly like incorporated Nouns with regard to Case theory, claims Baker.

Summing up, the passive morpheme is an argument of the category INFL (in many languages) or the category Noun (in other languages). The external theta role of the verb is assigned to the passive morpheme. With regard to Case
theory, it behaves like an incorporated Noun. It may or may not need Case and at times it must have Case. Based on this assumption, Baker shows that languages may vary with regard to passive along the following lines:

(71) I. Passive is of the category INFL, and
   (i) needs Case (e.g. English, Chichewa)
   (ii) takes Case if it is there (e.g. the Germanic languages including German, Dutch and Icelandic)
   (iii) never needs Case (e.g. the Celtic languages Welsh and Irish).

II. Passive is of the Category Noun and incorporates into INFL (e.g. Lithuanian, North Russian)

Baker goes on to show that the classification of the passive morpheme as in (71) with regard to its category and Case is responsible for why we find passives of intransitives in some languages but not in others, why there are impersonal passives of both intransitive and transitive verbs in some languages but not in others, and so on. (For a detailed discussion of these facts, see Baker (1985), chapter 5, pp.530-657. See also Baker, Johnson and Roberts (1989) for a condensed version.)
The theory of passive as outlined above neatly explains the Case absorption and external theta role absorption by the passive morpheme in English. Since the passive morpheme is an argument of the category INFL in English, the external theta role is assigned to it. As a result, the spec of IP becomes a non-theta position. Since in English the passive morpheme must have Case, the only Case available, i.e., the accusative Case, is assigned to it. This consequently leads the object argument to move out in search of Case, which it finds in the spec of IP.

In the following sections we will first attempt an analysis of passive in Hindi along the lines proposed by Baker; and later we will revise Baker's analysis of Passive by showing that the (cross-linguistic) properties of the passive fall out (without any need for stipulation) from the interaction of the various sub-theories of UG with a minimal and simple assumption -- namely that the passive morpheme is an argument.

2.2.6 Passive Morphology in Hindi

In this section we will first give a brief discussion of what passive morphology is in Hindi and then provide a formal account of how the passive morphology plays a role in incorporating Case into the verb in Hindi.
2.2.6.1 The Passive Morphology

Let us have a look at the following sets of sentences.

(72) a. mañi rotii khaataa hūū
    I bread eat be-pr.1p.sg.
    "I eat bread"

    b. rotii khaayii jaatīi hai
    bread eat perf. pass. be-pr.3p.sg.
    "Bread is eaten"

(73) a. bil jon ko pukaartaa hai
    Bill John acc. call be-pr.3p.sg.
    "Bill calls John"

    b. jon pukaaraa jaataa hai
    John call perf. pass. be-pr.3p.sg.
    "John is called"

(74) a. mañi nahiī doD paataa hūū
    I not run able be-pr.1p.sg.
    "I am not able to run"

    b. mujhse nahiī doDaa jaataa hai
    me by not run perf. pass. be-pr.3 p.sg.
    "I am unable to run"
In the examples (72-74), (a) is in the active form and (b) is the passive counterpart. As should be clear, the passive in Hindi is formed by adding a perfective marker on the verb and the morpheme jaa. The standard assumption is that the perfective marker in Hindi is -vaa. Thus, vaa + jaa together form the passive morpheme in Hindi. Aspect, agreement etc., interact to give the passive morpheme different forms. For a detailed discussion of Hindi passive morphology, see Kachru (1966, 1980), Pandharipande (1978), Sinha (1980), Davison (1988) among others.

2.2.6.2 Passive Morphology in Hindi and Incorporation of Case

Let us now try to explain how the passive morphology increases the "incorporating strength" of the verb in Hindi. Let us assume that the passive morpheme in Hindi is of the category INFL. Regarding whether it needs Case or not, we can say that the passive morpheme does not need Case on the basis of the following examples:

(75) a. ? is kahaani ko likhaa gayaa
   
   this story acc, write perf. pass.

   "This story was written"

b. yah kahaani likhii gayii
   
   this story write perf. pass.

   "This story was written"
The very fact that (75a) is acceptable, though unidiomatic, argues that the passive morphology does not need Case in Hindi. If it had needed Case, then kahaanii in (75a) could not have appeared with the accusative Case-marker ko. The non-appearance of ko with kahaanii in (75b) (we claim) is not because the accusative Case is assigned to the passive morpheme but because this Case is incorporated by the verb likhii. The S-structures corresponding to (75a) and (75b) (we claim) are as in (76a) and (76b) respectively.

(76) a. 

```
(76) a. IP
    pro I'
    VP
      NP
      t_i
      V_i
      I
      NP K Pass Tense AGR
```
In (76b), K is first "incorporated" and adjoined to V. Note here that likhnaa 'write' is a verb which can incorporate the accusative Case from a [+Definite] NP (See section 2.1.4.1.). The complex Xo category Vj thus formed (as also Vj in (76a)) then raises to INFL as proposed by Baker (1985) for all languages.

Let us now go on to our problem of how the passive morpheme apparently increases the "incorporating strength" of the verb. The crucial examples are (52) and (61) (repeated here).

(52) a. mai ne jangal me us aadmii ko dekhaa
    [+Definite]
    b. *mai ne jangal me wah aadmii dekhaa
    c. jangal me wah aadmii dekhaa gayaa
    d. ?jangal me us aadmii ko dekhaa gayaa

(61) a. maaijon ko jaantaa huu
    b. *maaijon jaantaa huu
    [+human]
    c. jon jaanaa jaataa hai
    d. ?jon ko jaanaa jaataa hai
As already noted, dekhnaa is a verb which can, at the most, incorporate the Case-marker from an NP which has a [+Specific] feature. But in (52b) it has incorporated the Case-marker from a [+Definite] NP. (52a) is grammatical as the verb does not incorporate the Case-marker. But (52c) shows that with the help of the passive morphology the same verb dekhnaa can incorporate the Case-marker from a [+Definite] NP. And the non-application of "Case incorporation" results in an unidiomatic expression, (cf. (52d)). The same fact is illustrated by (61) in which the verb jaananaa does not incorporate the accusative Case in the active form (cf. (61a-b)) but it does this with the help of a passive morpheme (cf. (61c-d)). Note also that names never give away their Case for incorporation in the active. The S-structures relevant to (52a-b) and (61a-b) are shown below:

(77) a.
(77a) shows non-incorporation of Case and is an abstract representation of (52a) and (61a). (77b) shows "Case incorporation" (and subsequent V-movement) and is an abstract representation of (52b) and (61b).

Now, to explain (52c) and (61c), we can say that the accusative Case is, in fact, not incorporated by the verb but by the passive morphology. That is, the Case K does not move and adjoin to V (as it is barred from doing so, for reasons explained earlier) but moves directly to INFL and gets adjoined there. The following representation shows the movement of K to INFL.

(78)
Such a movement is not barred by the ECP as the complex \((X^0)\) structure I will properly govern the trace \(t_i\). VP will not be a barrier between the governor and the governee as it bears the same theta index as the INFL by the Government Transparency Corollary (see section 2.1.2.2).

So, what we felt intuitively (namely, that the passive morphology increases the "incorporating strength" of the verb) gets formal expression in (78). Now, we have two kinds of facts with respect to passive and Case incorporation —

(i) Case can be incorporated by the verb (in certain cases); and
(ii) Case can be directly incorporated by the passive (i.e., INFL) in situations where the verb fails to incorporate the Case. (ii) is represented in (78). And (i) is represented below in (79):

(79)

```
 IP
  /   \
 NP  I'
    /   \
   VP  I
    /   \
   NP  V
    /   \
   t_i K_i V
```

But note that after "incorporating" Case (if it can), the verb \([K_i-V]\) must itself raise to INFL to give the S-structure shown below.
With the help of (78) and (80) we can generate all the passive sentences in Hindi and the non-appearance of ko in passive sentences will be either due to the movement shown in (78) where the accusative Case moves directly to the INFL, or to the movements shown in (79)-(80), where the accusative Case is first incorporated by the verb, which subsequently raises to the INFL.

In fact, we can go a step further and collapse (78) and (79). We have seen that the Case-marker ko is incorporated by the passive in INFL irrespective of the strongest feature of the NP and the weakest lexical property of the verb. That is, where a verb fails to incorporate ko in the active form, the passive incorporates it. Generalizing, we can say that Passive (in INFL) incorporates the accusative Case in Hindi.
2.3 Passives and the Intransitive Verbs

In Hindi, an intransitive verb can also be passivized. This way it patterns differently from English, and like German or Dutch. In the sub-sections that follow we will try to explain why it is possible to have passives of intransitives in Hindi. The discussion is based on Baker's characterization of passives as outlined in section 2.2.5 and particularly in (71).

2.3.1 The Unaccusative Hypothesis

Perlmutter (1978) (see also Burzio (1981)) has suggested that in many languages of the world the intransitive verbs can be classified into two distinct groups. One group can be called the unergative and the second the unaccusative. The semantic distinction between the two classes is that the single argument of the unergative verb tends to have the agent theta-role while that of the unaccusative tends to have a non-agent theta role. Assuming that a verb's external Q-role is agentive, unaccusative verbs are precisely those which do not assign an external Q-role, while unergative verbs assign an external Q-role. This gives us a syntactic distinction: for unergative verbs, an NP appears in the subject position of IP at D-structure itself, i.e., the
unergative class of verbs are those which appear in the structure $\left[ IP \right.$ $NP \left[ I, \left[ VP V \right] \right]$] and the unaccusative class of verbs are those which appear in the structure $\left[ IP e[I, I, [VP V NP]] \right]$ at the level of D-structure. The NP in the unaccusative-verb construction later moves to the subject position of the IP and is assigned nominative Case. There is, however, no movement required in the unergative type. The following examples of the two types are from Italian:

(81) a. Gianni ha telefonato (unergative)
Gianni has telephoned

b. Gianni e' arrivato (unaccusative)
Gianni is arrived

In English, verbs like run, talk, walk and laugh are unergative, while verbs like exist, disappear and boil are unaccusative. In some languages, as in Dutch, Welsh and Irish, the unergative verbs can be passivized while in other languages, such as English, the unergative verbs do not passivize (Perlmutter (1978), Comrie (1977), Perlmutter and Postal (1984)). The unaccusative verbs, however, do not passivize in any language. Perlmutter (1978) gives the following examples from Dutch with regard to passives of unergative and unaccusative verbs.
The reason why English has no passives of intransitives is provided by the characterization of the passive given in (71). In English, the passive morpheme argument must have Case. But the unergative verb being an intransitive verb cannot fulfill this requirement. Note that the passive morpheme cannot get nominative Case either, as it is of the category 1NFL and no category assigns Case to itself. Therefore, an unergative verb does not passivize in English. In German, Dutch and Icelandic the situation is different. Here, the passive morpheme argument "takes Case if it is there" (see (71)). That is, in the case of transitive verbs the passive morpheme argument takes Case because a transitive verb assigns an accusative Case. In the case of an unergative verb there is no Case available for the passive morpheme; however, there is no violation of the
theory (as stated in (71)), because the passive morpheme in these languages takes Case only when there is a Case available for it. It is because of this optionality with regard to Case that we get the passive of both transitive and intransitive in German, Dutch and Icelandic.

In both groups of languages, i.e., English on one hand and German, Dutch and Icelandic on the other, the unaccusative verb does not passivize. The reason is that the theta criterion is violated. The passive morpheme, being an argument, requires a theta-role universally. Being of the category INFL, it can receive only an external theta-role from the verb. But an unaccusative verb is assumed to assign no external theta role in any language. Because of this we do not get passive of unaccusative verb either in English or in German, Dutch and Icelandic.

In the following subsections, we will examine data from Hindi and see if the 'unaccusative hypothesis' as outlined above is supported by the facts of Hindi.

2.3.2 Intransitive Verbs in Hindi

Some examples of unergative verbs in Hindi are given in (84).
(84) a. māi doDtaa hūṃ
    I run be-pr.1p.sg.
    "I run"

b. jon caltaa hai
    John move be-pr.3p.sg.
    "John moves"

c. harii Tahaltaa hai
    Hari walk be-pr.3p.sg.
    "Hari walks"

d. wah hastaa hai
    he laugh be-pr.3p.sg.
    "He laughs"

muskuraanaa 'to smile', sonaa 'to sleep', khāasnaa 'to cough', chiiknaa 'to sneeze' are some more examples of the unergative class of intransitive verbs in Hindi. The single NP in each of the examples in (84) has the agent theta-role and (if the unaccusative hypothesis is correct) appears in the subject position of IP at D-structure and is assigned an external theta-role by the V. The S-structure representation of (84a) may be taken to be (85).
Some examples of unaccusative verbs in Hindi are TuuTnaa "to break", biknaa "to get sold", khulnaa "to get opened" and so on. An interesting fact is that each transitive verb in Hindi seems to have an unaccusative counterpart. Thus we have

(86) a. tooDnaa ~ TuuTnaa
    'to break' ~ 'to get broken'

    (i) mai glass tooDtaa hūū
        I glass break be-pr.3p.sg.
        "I break glasses"

    (ii) glass TuuTtaa hai
        glass break be-pr.3p.sg.
        "Glasses break"
b. becnnaa - biknaa
'to sell'    'to get sold'

(i) raam kitaab becnnaa hai
Ram book sell be-pr.3p.sg.
"Ram sells books"

(ii) kitaab bikti hai
book sell be-pr.3p.sg.
"The book sells"

c. khooolnaa - khulnaa
'to open'    'to get opened'

(i) raaj kiwaada khoooltaa hai
Raj door open be-pr.3p.sg.
"Raj opens the door"

(ii) kiwaada khultii hai
door open be-pr.3p.sg.
"The door opens"

d. phaadnaa - phatnaa
'to tear'    'to get torn'

(i) mai kapDe phaadtaa huu
I clothes tear be-pr.1p.sg.
"I tear clothes"
(ii) kapDe phattee hai
clothes tear be-pr.3p.pl.
"Clothes get torn"

e. jalaanaa – jalnaa
‘to burn’ ‘to get burnt’

(i) saas bahuee jalaatii hai
mothers-in-law daughters-in-law burn be-pr.3p.pl.
"Mothers-in-law burn daughters-in-law"

(ii) bahuee jaltii hai
daughters-in-law burn be-pr.3p.pl.
"Daughters-in-law burn"

Hindi has unaccusative counterparts to such transitive verbs as band karnaa "to close", pyaar karnaa "to love." etc.

(87) a. band karnaa – band hoonaa
‘to close’ ‘to get closed’

(i) mai darwaazaa band kartaa hun
I door close do be-pr.1p.sg.
"I close the door"

(ii) darwaazaa band hotaa hai
doors close happen be-pr.3p.sg.
"The door closes"
b. pyaar karna - pyaar hoonaa
'to love'        'to get into love'

(i) aniil pyaar kartaa hai
Anil love do be-pr.3p.sg.
"Anil loves"

(ii) aniil ko pyaar hotaa hai
Anil to love happen be-pr.3p.sg.
"Anil falls in love"
(Literally: "to Anil love happens")

c. dhookhaa karna - dhookhaa hoonaa
'to deceive'      'to get deceived'

(i) shyam ne raaj se dhookhaa kiyaa hai
Shyam erg. Raj to deception done be-pr.3p.sg.
"Shyam has deceived Raj"

(ii) raaj ko dhookhaa hotaa hai
Raj to deception happen be-pr.3p.sg.
"Raj gets deceived"
(Literally: "to Raj deception happens")

In Hindi spoken under the influence of Magahi, there is an interesting way of forming an unaccusative counterpart of a transitive verb. The device employed is that of vocalic
ablaut. The examples below will illustrate the point.

(88) a. pheknaa - phekaanaa
'to throw' 'to get thrown'

(i) māi khaanaa phektaa huun
I food throw be-pr.1p.sg.
"I throw food"

(ii) khaanaa phekaataa hai
food get thrown be-pr.3p.sg.
"The food gets thrown"

b. paDhnaa - paDhaanaa
'to read' 'to get read'

(i) wah kitaab paDhtaai hai
he book read be-pr.3p.sg.
"He reads a book"

(ii) is kitaab kaa print itnaa kharaab
this book of print so bad
hai ki ii to paDhaataa hii
be-pr. that this emph. get read emph. 3p.sg.

nahīī hai
not be-pr.3p.sg.
"The print of this book is so bad that it does not get read."
2.3.3 Unaccusative Verbs and the Movement Analysis

In English, the D-structure of a sentence with an unaccusative verb is as follows according to the "unaccusative hypothesis" (Perlmutter (1978)).

(89) a. [IP Np INFL [vP breaks the glass]]

Burzio (1981), adapting this hypothesis to the assumptions of GB, has argued that since the unaccusative verb break cannot assign an accusative Case to its object, the glass is forced to move from its D-structure position to the subject position of the IP, where it gets the nominative Case. The subject position is a valid landing site for the glass as it is a non-theta position. The S-structure of (89a) will be (89b).
Adopting this analysis for Hindi too, we can say that the D-structure of (86a ii) will be as shown in (90), where the single argument of the verb TuuTnaa is generated in the VP.

Before we go on to derive the S-structure of (90) (in terms of movement or otherwise) let us take note of some further facts.

In English, the single argument of an unaccusative verb can, under certain conditions, appear in the VP at S-structure with the subject position of IP occupied by the existential element there.

In Hindi, it is typically this class of verbs which can enter into a "Dative-subject" construction. Thus, contrast (92a) and (92b), which have unaccusative verbs, with (92c) and (92d), which have unergative verbs.

(92) a. mujhko kitaab milii
to me a book got
"I got a book"
b. tumko bhuukh lagti hai
   to you hunger occur be-pr.3p.sg.
   "You get hungry"

c. *mujhko doDtaa huu/hei
   to me run be-pr.1p.sg.
   "I run"

d. *tumko kitaab phaadte ho/hei
   to you a book tear be-pr.2p.sg.
   "You tear a book"

Regarding the "dative Subject" construction, Jayaseelan (1989) has argued that the dative NP is generated, not as the subject but as an oblique argument in the VP; and that the subject position is occupied by a pro:

(93) \[ [IP \text{pro} [VP NP\text{-dat.} \text{NP} V] \text{INFL}] \]

If this analysis is correct, there is no need for any movement to generate the S-structure of (at least) (92a) and (92b).

Now, the unaccusative verbs which are enumerated in (86) take an instrumental argument (with a postposition se 'from/by') instead of an argument with a dative Case.

(94) a. mujhse glaas TuuTtaa hai
    me from glass break be-pr.3p.sg.
    "The glass is broken by me"
The appearance of ko or se on the indirect object arguments in (92) and (94) depends on the kind of theta-role that the verb assigns to them. Besides, in the variety of Hindi under the heavy influence of Magahi, the unaccusative verbs like TuuTnaa 'to get broken' and phaTnaa 'to get torn' (which normally take an indirect object with an instrumental Case) can take a dative argument too, with the thematic role of a recipient.

(95) a. tumko bahut glass TuuTtaa hai
    to you/by you very glass break be-pr.3p.sg.
    "You break too many glasses"

    b. hamko bahut kapDaad phaTtaa hai
    to me/by me very clothes tear be-pr.3p.sg.
    "I tear too many clothes"

For all these instances of unaccusative verbs, irrespective of whether they take an indirect object with a dative Case or an instrumental Case we can take the D-structure to be (93) or rather (96).
Note that in the subject position of IP, there is an existential pro. This fact relates to the occurrence of the existential there in the subject position of IP in the English examples (91) and also to the fact that Hindi is a pro-drop language. In the "subject inversion" sentences of Italian which have unaccusative verbs, it has been argued that the verb's single argument is generated in the object position of the VP and is co-superscripted with a pleonastic pro in the subject position; and that the argument inherits the nominative Case from pro (Chomsky (1981)). We can assume that the same thing happens in a Hindi sentence like (97a), which we can assume has the D-structure and S-structure (97b).

(97) a. glaas TuuTtaa hai
    "Glasses break"

b. \[IP pro \[VP glaasi TuuTtaa] [I hai]\]

The same analysis can account for the nominative NP in the "Dative/Instrumental Subject" construction; thus (92b) (we can assume) has the D-structure and S-structure (98).

(98) \[IP pro \[VP tumko bhuukhi lagtii] [I hai]\]

There is no need for movement in any of these cases.
2.3.4 Passives of Intransitives

As outlined in subsection 2.3.1, the unaccusative hypothesis states that in some languages (e.g. Dutch, Welsh and Irish) the unergative verbs can passivize while the unaccusative verbs do not passivize at all in any language of the world. In Hindi, too, we see the same thing happening. Consider (99)-(101) which have unergative verbs:

(99) a. jon calaa
    John moved
    "John moved"

    b. jon se calaa gayaa
       John by moved pass.
       "It was moved by John"

(100) a. mai doDtaa huu
      I run be-pr.1p.sg.
      "I run"

    b. mujh se nahii doDaa jaataa hai
       me by not run pass. be-pr.3p.sg.
       "It is not run by me"

(101) a. caliyee
      come
      "Come"
b. caa la jaay  
come pass.

"Let it be come by you"

As contrasted with these, it is impossible to passivize an unaccusative verb:

(102) a. glaas TuuTaa hai  
glass break be-pr.3p.sg.

"The glass breaks"

b. *glaas se TuuTaa jaataa hai  
glass by broken pass. be-pr.3p.sg.

"It is broken by the glass"

(103) a. kiwaaD khultii hai  
door open be-pr.3p.sg.

"The door opens"

b. *kiwaaD se khulaa jaataa hai  
door by opened pass. be-pr.3p.sg.

"It is opened by the door"

As stated earlier the failure of the unaccusative verbs to passivize can be explained straightforwardly, if we assume that the Hindi passive morpheme requires an external θ-role.
Since an unaccusative verb belongs to the class of intransitive verbs which do not assign an external theta-role, a passive of an unaccusative verb will be ungrammatical as it will violate the theta criterion. An unergative verb (on the other hand) assigns an external theta role to its subject. In a passive of an unergative verb this external theta-role will be assigned to the argumental passive in the INFL; so that these passives will be licit.

A further point to be made clear is that the Hindi argumental passive morpheme does not require Case; in this respect, it is like the Dutch passive morpheme, and unlike the English passive morpheme. This property enables the Hindi unergative verb (like the Dutch unergative verb) to passivize, since the passive morpheme's only requirement, namely an external θ-role, is met by these verbs.

2.4 Passive in Hindi and English

Now, after the discussion on passive in Hindi, we are in a position to attempt a comparison between English passives and Hindi passives within the framework given by Baker (1985). The passive morpheme in English is of the category INFL. Since it is an argument, the verb assigns its external theta-role to it, thereby making the spec of IP a valid
landing site for a moved element. The passive morpheme in English, besides being an argument of the category INFL, requires Case. Since a category cannot assign Case to itself, the passive morpheme, though being of the category INFL, will not assign nominative Case to itself, the Case normally assigned by the INFL. So, the only Case available is the accusative Case. This Case is assigned by the verb to the passive morpheme argument. And the object argument, which is now deprived of the accusative Case, moves to the spec of IP where it is assigned nominative Case by the INFL. This explains why the passive morphology in English absorbs the theta-role of the spec of IP and the accusative Case of the verb.

In Hindi, the passive morphology is, again, an argument and of the category INFL. Since it is an argument it needs a theta-role. Hence, the external theta-role of the verb is assigned to it. But it is different from the English passive with regard to Case. The passive morpheme in Hindi does not require Case. Hence, the accusative Case, which the passive morpheme in English takes over from the verb, is still available for the object argument. The accusative Case is assigned by the verb to its object argument. This accusative Case is incorporated into the passive morpheme in INFL. Thus, verbs which fail to incorporate Case in active
counterparts do so in the passive. Whereas in English the passive morpheme absorbs the external theta-role and Case, in Hindi the passive morpheme absorbs the external theta-role only. Instead of absorbing Case (as it does in English) it incorporates the Case assigned by the verb.

The difference is that "incorporation" is a preference rule. Failure to apply the incorporation rule results in unidiomatic, though not wholly ungrammatical, sentences. This explains why both in active and passive an object argument can surface with a ko Case-marker where it should not have surfaced. This is because the preference rule of "incorporation" has failed to apply.

Thus, within the parametric choice given in (71), the passive morpheme requires Case in English but does not do so in Hindi. Instead, it "incorporates" the Case assigned by the verb. The parametric choice in (71) now will not face any problem with regard to Burzio's generalization -- either for English or for Hindi. In English the verb assigns Case to the passive morpheme and therefore assigns an external theta-role. In Hindi, the (passive) verb assigns Case to its object argument and, therefore, assigns an external theta role too. This theta role is taken over by the passive morpheme argument in the INFL instead of the spec of IP. The spec of
IP in Hindi is filled with an expletive pro which does not need a theta-role and which will be assigned nominative Case by the INFL. In English, the object argument moves to fill this position.

The non-requirement of Case by the passive morpheme argument in Hindi explains why we can have passives of intransitive verbs in the language. An intransitive verb (unergative) assigns an external theta role but not Case. The external theta role will be taken over by the passive morpheme argument. Since it does not require Case, an intransitive verb in Hindi can also be passivized. The scenario is different in English. The passive morpheme argument in this language requires Case, and since an intransitive verb cannot assign Case to it, an intransitive verb cannot passivize in English.

An unaccusative verb does not passivize in either language because the theta criterion is violated by this structure. An unaccusative verb does not assign an external theta role whereas the passive morpheme argument requires a theta-role universally.

Summing up, we get the passives of only transitives in English while in Hindi both transitive and intransitive (unergative) verbs can passivize.
2.5 The Passive Parameter

We started off with the following parameters of the Passive (repeated here):

(41)\[\begin{array}{c}
\text{Pass} \\
\text{obligatorily absorbs Case} \\
\text{(e.g. English)}
\end{array}\]

(42)\[\begin{array}{c}
\text{Pass} \\
\text{absorbs Case} \\
\text{(e.g. English)}
\end{array}\]

We rejected (41) because the parametric choice "optionally absorbs Case" was theoretically a weak claim. Besides, there was a problem with Burzio's generalization too. We adopted (42) to explain the passives in Hindi, though this too had problems with Burzio's generalization. To explain the non-appearance of ko in passives in Hindi, we added (to the parametric choice in (42)) the claim that the accusative Case was "incorporated" by the passive in Hindi. We posited that 'Case incorporation' was a preference rule. If this rule failed to apply where it could, the result would be an unidiomatic sentence. We saw that the passive morpheme
increased the "incorporating strength" of the verb to the extent that what could not be incorporated in the active could be incorporated in the passive. To give a formal expression to this, we adopted Baker's characterization of Passive as given in (71), repeated here.

(71) I. Passive is of the category INFL, and
   (i) needs Case (e.g. English, Chichewa)
   (ii) takes Case if it is there (e.g. the Germanic languages including German, Dutch and Icelandic)
   (iii) never needs Case (e.g. the Celtic languages Welsh and Irish)

II. Passive is of the category Noun and incorporates into INFL (e.g. Lithuanian, North Russian).

Based on Baker's characterization of Passive, we suggested that in Hindi the passive morpheme, which is an argument of the category INFL, does not need Case. The verb, therefore, assigns Case (to its object argument) which is subsequently "incorporated" by the passive morpheme in INFL. The advantage of (71) over (42) is clear. Since the passive morpheme is an argument in INFL, it receives the external
theta-role of the verb. Thus, we do not run into a problem with Burzio's generalization. However, Baker's claim in (71) is not devoid of problems. The characterization of the passive morpheme as something that needs Case in some languages, does not need Case in some other languages, and takes Case if it is there in still other languages looks a bit quirky. If Passive is an argument, then it should behave uniformly across languages with regard to Case as it does with regard to theta-role. Put differently, it should behave either on a par with NPs or with CPs. But it behaves like an NP when it takes Case and like a CP when it does not and like a fence-sitter between NP and CP, ready to switch sides, when it takes Case if it is available. To do away with this quirkiness, let us try to revise the parameter (71) itself.

One way to do this is to make only the assumption that passive is an argument of the category \textsc{I}_{\text{FL}}, and try to see if the interaction of this assumption with the various principles of UG viz., the theta theory, the Case theory, the extended projection principle, the pro-drop parameter and so on, will account for variations among languages with regard to the passive. All along we will assume that the passive verb can assign Case to its object argument across languages. This assumption is motivated by passives in
Hindi where the object argument can optionally surface with an accusative Case-marker (unidiomatically but not ungrammatically).

For ease of exposition, we will continue to assume that the passive morpheme belongs to the category INFL; but later in section 2.6, we will try to do away with this stipulation also.

(i) Theta Criterion: The theta theory requires that each argument must be uniquely assigned a theta-role. The passive morpheme being an argument must, therefore, bear a theta-role. Since the passive argument is of the category INFL, it will occupy the INFL node. As predicted by the X-bar theory of syntax, the passive morpheme being under the sister node of VP will receive only the external theta-role from the verb. Thus, the theta-criterion and the X-bar theory of syntax jointly predict that the passive morpheme will be assigned an external theta-role only.

(ii) Case theory: As already stated in (71), Baker's assumption is that the passive morpheme argument requires Case in some languages, does not require Case in some other languages and takes Case if it is there in still other languages. To do away with this quirkiness of the passive morpheme, let us say that it does not require Case in any
language. In this way, the passive morpheme argument will behave uniformly across languages and will be on a par with other incorporated elements, which do not normally require Case. We will examine the consequences of this stipulation later in the discussion.

(iii) The extended projection principle: This principle requires that the subject position of IP must be filled. The passive interacts very closely with this principle to produce variation among languages. We will suggest that all transitive verbs and all intransitive verbs (of the unergative class) can be passivized in all languages of the world. But only those languages allow the passive of intransitive to surface, which can fill the subject position. From this perspective, the passive interacts with the pro-drop parameter.

(iv) The pro-drop parameter: Let us examine, keeping the extended projection principle in mind, how the passive interacts with this parameter. Non-pro-drop languages can be classified into two groups — those which have a poor expletive system and those which have a fairly rich expletive system.
a. Non-pro-drop languages with a poor expletive system

A language which falls in this category is English. As we said above, a crucial question for passives is whether the spec of IP can be filled. As is well known, transitive verbs can be freely passivized in English.

(104) a. John was killed by Bill
    b. The clothes were torn by Mary
    c. The bread was eaten by the hungry man

In transitive verb constructions, the object NP moves to fill the subject position. We have already said that the passive verb can assign an accusative Case. In the sentences (104a-c), the NPs, John, the clothes and the bread are assigned accusative Case by the passive verbs killed, torn and eaten respectively. (About Case conflict, we will talk later in the discussion.) It is not the Case filter which triggers movement of the object argument but the extended projection principle. Now the contention is that even English can allow its intransitive verbs to passivize. That is, it should be possible to passivize such sentences like I run, you walk, he jumps and so on. But, if such sentences are passivized, what element is available to occupy the subject position of IP? We know that a non-thematic subject position in English can be occupied by the expletives it and there. So, it should be possible to have passive sentences like
(105) a. It is run by me
    b. It is walked by you
    c. There is jumped by him
    d. There is smiled by Mary

But all these sentences of course are ungrammatical. The reason for this (we claim) is not that the intransitive verbs cannot be passivized but that English does not have a suitable expletive to supply to the subject position -- there being severe restrictions on the occurrence of it and there. The restrictions on the presentational expletive there are still only partially understood; but one undoubted restriction is that it should be coindexed with a non-specific NP in the VP. The expletive it needs to be coindexed with a CP; coindexing it with any other category, e.g. an NP or even a gerund, produces ungrammaticality:

(106) a. It is clear that Bill is stupid
    b. *It is clear Bill's stupidity/Bill's being stupid

Obviously, an expletive it coindexed with nothing is also illicit (in English).

But if somehow we could find a suitable NP to fill the subject position, it should be possible to passivize the intransitive verbs. This is the reason why we have passives of intransitive verbs in cases where a V-P reanalysis can
occur; for example consider the following instances of what have been termed "pseudo-passives":

(107) a. The bed has been slept in
b. The road has been walked on
c. The fence has been jumped over
d. Mary was smiled at

In the sentences above the V-P reanalysis "releases" the complement NP of the preposition, in the sense that it is now in a properly governed position and can move. So, its movement to the subject position satisfies the extended projection principle.

To sum up, it is the extended projection principle, the non-availability of an expletive pro, and the lack of any other suitable expletive which prevents an intransitive verb's passivization in a non-pro-drop language like English.

b. Non-pro-drop languages with a rich expletive system

But as we know, there are non-pro-drop languages which do have passives of both transitive and intransitive verbs: German, Icelandic and Dutch are examples. These languages freely allow their transitive verbs to passivize. With transitive verbs, only personal passives are allowed, that is, such passives where the object NP moves to the subject position.
German (Jaeggli (1984))

(108) a. Dieser Roman wird von vielen studenten gelesen

"This novel was read by many students"

b. *Es wird diesen Roman von vielen gelesen

"This novel was read by many students"

Icelandic (Zaenen, Maling, and Thrainsson (1985))

(109) a. Sigga var tekin fóst af lögreglunni

"Sigga was arrested by the police"

b. *pad var tekin Siggu fasta af lögreglunni

"There was arrested Sigga by the police"

These languages also allow the intransitive verbs to passivise. This is so because there are suitable expletives in these languages to occupy the non-thematic subject position.
German (Jaeggli (1986))

(110) a. Es wurde getanzt
       it was danced
       "There was dancing"

b. Es wurde bis spät in die Nacht getrunken
       it was till late in the night drunk
       "Drinking went on till late at night"

Dutch (Perlmutter (1978))

(111) a. Er wordt hier door de jonge lui veel gedanst
       "It is danced here a lot by the young people"

b. Er wordt voor de koning gekneid
       "It is kneeled before the king"

c. Er wordt in deze kamer vaak geslapen
       "It is often slept in this room"

Icelandic (Zaenen, Maling and Thrainsson (1985))

(112) pad var dansad í gær
       there was danced yesterday
       "There was dancing yesterday"

Thus, what *it* and *there* cannot do in English with regard to passives of intransitive verbs, *es*, *er* and *pad* do in German, Dutch and Icelandic respectively.
c. pro-drop languages and passive

Assuming that both transitive and intransitive verbs in all languages can be passivized, we have seen in the preceding discussion that the extended projection principle and the non-pro-drop property of some languages as well as their expletive system closely interact to allow passives of transitive verbs in all non-pro-drop languages while only those non-pro-drop languages allow the passive of intransitive verbs which can make available to the empty subject position of IP a suitable expletive. Pursuing this line of analysis we can say that all pro-drop languages will allow passive of both transitive and intransitive verbs. This is so because in pro-drop languages there is a ready expletive in *pro* to fill the subject position of IP. And therefore we get impersonal passive of both transitive and intransitive verbs. This fact is borne out by languages like Welsh and Irish.

Welsh (Comrie (1977))

(113) a. Lladdodd draig ddyn
    killed dragon man
    "A dragon killed a man"

b. Lladdwyd dyn (gan ddraig)
    was killed man by dragon
    "A man was killed (by a dragon)"
Irish (McCloskey, quoted in Baker (1985:599))

(114) Marghadh beirt ar an bhóthar areír
     were killed two people on the road yesterday
     "Two people were killed on the road yesterday"

Welsh and Irish have VSO word order. So, one may think that the object argument moves to the subject position. But there is a good amount of evidence to show that the object argument stays in its D-structure position and there is a null expletive in the subject position. (For some evidence, see Baker (1985:599-600).)

(113) and (114) are examples of impersonal passives of transitive verbs in Welsh and Irish respectively. The following are examples of impersonal passives of intransitive verbs in the two languages, again with a null expletive in the subject position.

Welsh (Perlmutter and Postal (1984))

(115) a. Dannswyd gan y plant
     dance-imp. by the children
     "It was danced by the children"

     b. Sefir pan ddaw'r athro i mewn
     stand-imp. when comes teacher in
     "It is stood (up) when the teacher comes in"
Irish (McCloskey, quoted in Baker (1985:598))

(116) Táthar ag damhsa
be-pr.imp. dance prog.
"There is dancing"\textsuperscript{10}

V. Case incorporation and passive

The Case incorporation rule outlined in section 2.1 may be inducted into UG as the phenomenon is quite widespread: besides Hindi, many genetically unrelated languages like Spanish, Georgian and Malayalam exhibit this phenomenon. Passive interacts with this Case incorporation rule to form yet another typological class of languages. The interaction of passive and Case incorporation may be subject to parametric variation; for example, in Hindi Case incorporation by the passive morpheme is a preference rule; but there might be languages in which it is obligatory. English is a likely candidate for this proposal. There might be still other languages in which it is neither preferred nor obligatory, but purely optional. North Russian seems to be one such language.

There are at least three consequences of the interaction of Case incorporation and passive for a pro-drop language. The object NP in a passive construction may surface
(117)  
i. with the accusative Case in the VP (when the Case incorporation rule does not apply)

ii. with the accusative Case incorporated but still in the VP

iii. with the accusative Case incorporated but appearing in the subject position (Move-O being an optional rule).

In Hindi and North Russian the interaction of passive and Case incorporation produces all the three situations described above.

North Russian (Timberlake (1976))

(118)  
a. Ее мужа убито на войне
    her man-acc. kill-pass-n-sg. war
    "There was killed her husband during the war"

b. у лисиц унесено курица
    by fox carry-pass.n.sg. chicken fem.sg.
    "By the fox was carried off a chicken"

c. Шапка-то у парня в окно брошена
    hat-fem-sg. by guy window throw-pass. fem.sg.
    "The hat was thrown out of the window by the fellow"
In (118a), the object argument appears with an accusative Case. Since there is no agreement between the verb and *muka* in (118a), we can definitely say that the object argument is still in the VP. (North-Russian has no Object-Verb agreement.) This sentence then is an example where Case incorporation does not apply. In (118b), the object argument is supposed to surface with a nominative Case (Timberlake (1976)). Still there is no agreement with the verb. On the basis of this it is concluded that the object argument with the "nominative Case" appears in the VP. But note here that the nominative Case-marker in North Russian is Ø (as it is in Hindi and several other languages). So, it can be safely concluded that this is an instance of the accusative Case being incorporated from the object argument, and not of a nominative Case. Thus (118b) is an example of the situation given in (117 ii) above. In (118c), the object argument is again supposed to be in the nominative Case. But there is agreement with the verb. Since there is Subject-Verb agreement in North Russian, it is rightly held that the object argument is in the subject position. Now, (118c) is an example of the situation given in (117 iii), i.e., the accusative Case is incorporated from the object argument which later moves to the subject position. (Note that there may be Case conflict here; but more about this later.) While considering the examples of North Russian given above, it should be
borne in mind that Scrambling is fairly free in Russian (Pesetsky (1982)).

Passives in Hindi also exhibit all the three situations described in (117). This should be clear from the S-structures given below:

(119) a. pro merii ko bulaayaa gayaa
Mary acc. called jaa - perf.
"Mary was called"

b. pro merii bulaayii gayii
Mary called-fem. jaa-perf.fem.

c. merii ti bulaayii gayii
Mary called-fem. jaa-perf.fem.

In (119a), Case incorporation does not apply. Since Case incorporation is a preference rule in Hindi, (119a) is considered to be unidiomatic because the rule does not apply here. In (119b) the Case has been incorporated but the object argument stays in the VP. In (119c) the Case has been incorporated but the object argument moves to the subject position. However, note that in both (119b) and (119c) there is agreement with merii because Hindi displays both subject-verb and object-verb agreement. The situation in Hindi is almost parallel to that in North Russian.
In Passing, it should be pointed out that both Hindi and North Russian are pro-drop languages. Hence, both allow impersonal passives of intransitives. For examples in Hindi, see (99-101). Some North Russian examples are given below.

North Russian (Timberlake (1976))

(120) a. u menja uže vstato bylo
   by me stood-n.sg. aux.n.sg.
   "By me there's already been getting up"

   b. Mnogo begano v kolxoze
      much run n.sg.
      "There's been a lot of running down on the Kolkhoz"

Summarizing the analysis given above, passive is an argument of the category INFL. The passive morpheme does not deprive the verb of its property of assigning Case. That is, a transitive verb will assign Case irrespective of whether it is in the active or the passive form. The external theta-role of the verb is taken by the passive morpheme because of the fact that it is an argument and because it is generated under INFL, a sister node of VP. Passives of both transitive and intransitive verbs can be freely formed in all languages of the world and it is the other principles of UG, interacting
with the passive, that decide which language will have which kind of passive.

We shall conclude this section by taking up the question of Case-conflict. We said that the passive form of a transitive verb can assign Case to its object argument. If this is so, then in a non-pro-drop language like English, where the object argument must move to the subject position in order to satisfy the extended projection principle, the object argument will get two Cases -- once in the object position and later in the subject position. In a pro-drop language this risk can be avoided. If the subject position is occupied by an expletive pro, the object argument can stay in its D-structure position with only one Case -- accusative, move-ε being an optional rule. But if move-ε applies and the object argument moves to the subject position, we face a similar situation as in a non-pro-drop language like English. While this is true, we feel that the analysis should not be abandoned to avoid just the Case conflict problem. Case conflict is not a serious violation of the theory as there are languages in which a single NP can be doubly Case-marked, for example Cuzco Quechua (Lefebvre and Muysken (1982)). Consider the following sentences from Cuzco Quechua:
(121) a. mariyacha muna-n [xwancha-q platanu ranti-na-n-ta]
"Maria wants Juan to buy bananas"

b. mariyacha xwancha-q-ta_i muna-n [e_i platanu
Maria Juan-gen.acc. want-3p. banana
ranti-na-n-ta]
buy-NOM.3p.acc.
"Maria wants Juan to buy bananas"

In Cuzco Quechua any Case-marked NP from an embedded clause can be raised to a pre-verbal position in the matrix clause. The Case-marked raised NP surfaces with an accusative Case in the matrix clause. In (121) the subject NP of the nominalized (Nom.= Nominalizer) embedded clause is in the genitive Case. But when the same NP is raised into the matrix clause it bears also the accusative Case-marker apart from the genitive Case-marker. (122) shows the distribution of Case on NPs in a raising construction.

(122) embedded raised
nominative ⊙ -ta nominative+ objective
genitive -q (pa) -q(pa)-ta genitive + objective
objective -ta/⊘ -ta objective
oblique obl. obl. oblique
The double Case-marking of a raised NP is obvious when a genitive NP is raised from a nominalized embedded clause. Since the morphological realization of the nominative Case is $\emptyset$, the double Case-marking of a raised nominative NP is not obvious. Similarly, an NP with the accusative Case in the embedded clause appears in the matrix clause with only one accusative Case-marker as the morphological realization of the accusative Case is -ta or $\emptyset$. However, the raising of a genitive NP is irrefutable evidence of double Case-marking.

In languages like English in which the nominative morpheme and the accusative morpheme both are $\emptyset$ for most NPs, it becomes difficult to show the double Case-marking on the object argument in a passive construction. However, English has different nominative and accusative forms for pronouns. Using pronouns (then) as crucial evidence, we must admit that an accusative pronoun never surfaces as the subject of a finite passive sentence in English:

(123) *Him is loved by everyone.

But (123) does not conclusively show that no double Case-marking takes place here. While Quechua allows double Case-marking of an NP in the surface, it is likely that most other languages require one of the Cases to be deleted in the PF. In English (we can assume), it is the accusative Case which is deleted in the situation under consideration.
But can we give a reason why it is always the nominative Case which is retained in the subject position of a finite passive clause? If we adopt an idea proposed in Mahto (1989), we have an answer to this question. Mahto argues that the relationship between nominative Case and AGR has been mis-analyzed: AGR does not assign nominative Case to the subject position; instead, it is only a nominative NP which can trigger agreement (in English). If this is correct, we can say that in instances of double Case-marking of the subject NP in a finite clause, the nominative Case is invariably chosen so that the sentence can surface with agreement. (It is a reasonable assumption that a finite clause in English cannot surface without agreement.)

In view of the Quechua facts and also due to lack of evidence to the contrary, we can hold that the object argument of a passivized verb can bear two cases — accusative as well as nominative—underlyingly. The theory should not bar Case-conflict.

We can therefore stick to the analysis given above and accept it as a principle of UG that a transitive verb will assign Case irrespective of whether it appears in the active or the passive form.
2.6 Is the Passive Morpheme just an Argument?

We started with the premise that passive is an argument of the category INFL. Now, the question that we seek to answer is: Is it necessary to stipulate the category to which the passive morpheme belongs? In other words, can we do away with the phrase "of the category INFL" and just stick to the statement that passive is an argument and still derive the same results as we did in the discussion above?

One reason why we wish to explore this possibility is that there are serious gaps in Baker's execution of the idea that Passive is of the category INFL. Recall that (following Baker) we represented Passive as "sharing" the INFL-node with Tense and AGR.

(124)

Given this representation, one would expect all three elements of INFL to show up on the V. But as we know, only the Passive (participial) morpheme is realized on the V; Tense and AGR are realized on an auxiliary verb be whose only
function seems to be to bear these two elements. It is unclear how this comes about.

There is a more serious problem if we adopt the current analysis of INFL proposed in Chomsky (1988) and Pollock (1989). This analysis assumes a stricter ƒ-theoretical view of INFL, and claims that there cannot be a multiple-headed INFL; therefore, Tense and AGR must be assumed to head different maximal projections. The representation of S is now as follows:

\[(125)\]

```
  AGRP (=S)
   /   \
  NP   AGRP'
     /   \
    AGR TP
      /   \
     T VP
      V ...
```

In this structure, it is difficult to see where we can accommodate the Passive morpheme. Can the Passive morpheme head a maximal projection of its own? If the Passive is an argument, this is a bizarre suggestion; for an argument cannot be a maximal projection and take VP as its complement.
In view of these considerations, we wish to suggest that for the passive morpheme, the right analogy is with clitics. Like clitics, it is generated in an argument position and then cliticized to V. The question now is: in which argument position should it be generated?

Can the passive morpheme be generated in the subject position, as shown in (126)?

(126)

```
AGRP
  /-en
AGR'  
  |
AGR  TP
  |
T    VP
  |   |
V    VP
  |  |
be   V  NP
   |   |
kill a man
```

But if it cliticizes to V, we shall have an unbound trace. This trace will moreover be obliterated when the direct object moves into the subject position, resulting in a non-recoverable deletion. To put the same fact in theta-theoretical terms, this will be a Case of movement into a theta-position, which
is prohibited. Besides all this, this structure does not express our intuition that -en is generated closer to the main verb than to be.

Can the passive argument be generated in the \([\text{NP}, \text{VP}]\) position, i.e., the direct object position of the verb? But in this position, a transitive verb would assign its internal \(\emptyset\)-role to -en, with the consequence that a sentence like *John was killed* would have the meaning, "John killed somebody." We can easily rule out this structure by assuming that -en is classified as a "subject clitic".

A passive morpheme will be disallowed from an adjunction position of AGRP, TP and VP because these are not theta-positions and the passive morpheme argument needs to be generated in a theta-position.

The passive morpheme is, thus, ruled out from the spec of AGRP (or for that matter, of TP), the complement position of VP and an adjunction position to AGRP, TP and VP. The only position now left to host the passive argument is the spec of VP. This is shown below:
In this position the occurrence of the passive morpheme argument does not violate any principle of UG. *kill* will assign the internal theta-role to *a man*, the external theta role to the passive morpheme *-en*. *a man* will move to the spec of AGRP to satisfy the extended projection principle and the non-drop character of the language. *-en* will lower to attach to the verb, leaving a trace which will be bound by the head: note that the head will now be the complex form \([v V -en]\) which will have the indices of both its elements. Another verb *be* hosts the tense and agreement morphemes. Thus, we get a well formed sentence *a man was killed* with the passive morpheme being generated in the spec of VP at D-structure.
The same is true for Hindi.

(128)

jon will either move to the spec of AGRP or stay in its D-structure position. The passive morpheme (the past particpial form -yaa) will lower to the verb maar. Another verb jaa hosts the tense and AGR. Thus, we get jon maaraa gayaa "John was killed".

Incidentally, this analysis of the passive clarifies the question of what actually the passive morpheme is. In English the passive morpheme is supposed to be the combination, be-en. Similarly in Hindi it is held to be yaa-jaa. But as is clear from (127), kill cannot host the tense and AGR morphemes because the passive morpheme -en will be stranded:
there is obviously a restriction on the number of morphemes a
verb can host. Hence, to support the tense and AGR morphemes
we need a verb to be generated. In Hindi too, we have the
auxiliary a apart from the participial a only because we
need the a to carry tense and aspect morphemes. But in
languages where there is no restriction on the number of
morphemes a verb can host, only one morpheme should be
sufficient to passivize the verb. An example of such a
language is Chichewa. Consider (129).

(129) a. mkango u-na-ph-a fisi chaka chatha
   lion SP-past-kill-asp. hyena year last
   "The lion killed a hyena last year"

   b. fisi a-na-ph-edw-a ndi mkango chaka chatha
   hyena SP-past-kill-pass-asp. by lion year last
   "A hyena was killed by the lion last year"
   (Baker (1985:591))

Here, the verb ph hosts the subject prefix (SP), the tense
morpheme, the aspectual morpheme and also the passive morpheme.
Since all the bound morphemes can be hosted by the verb,
there is no need in Chichewa to have another verb to carry
the tense and agreement and aspect morphemes.
This analysis of passive will explain why the past participial morpheme carries the passive meaning even without the verb be in English.

(130) a. the man killed by me  
b. the ball kicked by John  
c. the thrown book  
d. those spoken words

It should be pointed out, however, that in Hindi we still need jaa along with the past participial morpheme in such constructions as (131). This is so because the aspect morpheme has to be hosted.

(131) a. merii likhii jaatii kitaab  
       my written jaa-ing book  
       "My book which is being written"  

       b. jon ke phaadDee gaye kapDe  
       John of torn jaa-perf. clothes  
       "The clothes of John which have been torn"

(See Chapter 3 for an analysis of such constructions which are in fact examples of gap relatives.)

Summing up the discussion, it is not necessary to say that the passive morpheme is of the category INFL, as Baker
does. It is enough to say that the passive morpheme is an argument. Since, it can be generated only in the spec of VP, we derive all the results that were derived by stipulating that it was of the category INFL. There are two advantages of this analysis. First, it fits in well with the X'-theoretical view of a sentence outlined in Chomsky (1988) and Pollock (1989) and second, we are able to locate the passive morpheme in both English and Hindi.
Chomsky (1986b) assumes that N, A and P assign inherent Case at D-structure to complements they theta-mark; and that V and INFL assign structural Case at S-structure. It seems reasonable (however) to unify the assignment of Case to theta-marked complements, by saying that V (too) assigns Case to a complement it theta-marks at D-structure. (Passive morphology on the verb, in a language like English, would of course "absorb" this Case and prevent Case assignment — and this would induce the well-known obligatory movement of the complement.) V, as well as INFL, will continue to assign structural Case at S-structure to positions they do not theta-mark; this will take care of the Nominative Case on derived subjects and "Exceptional Case-marking". It is this modified position that we shall assume (henceforth) in this thesis. See section 2.1.5 for a further discussion of inherent Case and Structural Case where some evidence is provided that a transitive verb can assign an inherent Case too.

The full form of some abbreviations used in (7) and (11) are given below:

3N - 3 person Neuter
3M - 3 person Masculine
Suf - nominal inflectional suffix
There are some counter-examples to this claim. For instance, consider (i-iii):

(i) \(\tilde{\text{ma}}\)\text{\textasciitilde{u}}\text{\textasciitilde{s}ka ghar jaantaa }\tilde{\text{h}}\text{\textasciitilde{u}}\)
\begin{align*}
I & \text{his house know be-pr.lp.sg.} \\
& "I know his house"
\end{align*}

(ii) \(\tilde{\text{ma}}\)\text{\textasciitilde{s}ka makaan jaantaa }\tilde{\text{h}}\text{\textasciitilde{u}}
\begin{align*}
I & \text{his house know be-pr-1p.sg.} \\
& "I know his house"
\end{align*}

(iii) \(\tilde{\text{ma}}\)\text{\textasciitilde{s}i is shahar ke har raaste jaantaa }\tilde{\text{h}}\text{\textasciitilde{u}}
\begin{align*}
I & \text{this town of every streets know be-pr.1p.sg.} \\
& "I know all the streets of this town"
\end{align*}

It seems that (for unclear reasons) ghar, makaan and raaste behave like abstract NPs so far as Case incorporation is concerned. See subsection 2.1.4.5 for incorporation of Case from abstract NPs.

Hindi grammarians, however, consider passive sentences like (40a) wrong because of the appearance of ko with the direct object. Guru (1920:25?) quotes the following sentences from Dwivedi (editor of "Saraswati" -- a Hindi magazine) who considers them ungrammatical.
But such sentences have come into common usage. So, the issue between (40a) and (40b) is not that of ungrammaticality vs. grammaticality but of unidiomaticity vs. idiomaticity. A theory of passive must generate both sentences in (40) and somehow predict that (40a) is unidiomatic. The question mark here and elsewhere represents unidiomaticity.

'Burzio's generalization will run into a problem with the parameter in (41) as well. If the passive verb in Hindi can optionally assign Case and if it chooses to assign Case then it would assign a theta role to the Spec of IP; in which case, the Spec of IP being empty at D-structure would violate the theta-criterion.
Regarding the perfective marker, another line of analysis could also be taken. Consider the following paradigms.

(1)  

i. sootaa - sooyaa  
    sleep asp.  
    sleep perf.  

ii. khaataa - khaayaa  
    eat asp.  
    eat perf.  

iii. piitaa - piyaa  
    drink asp.  
    drink perf.  

iv. letaa - liyaa  
    take asp.  
    take perf.  

(2)  

i. maartaa - maaraa  
    beat asp.  
    beat perf.  

ii. tooDtaa - tooDaa  
    break asp.  
    break perf.  

iii. kaaTtaa - kaaTaa  
    cut asp.  
    cut perf.  

iv. likhtaa - likhaa  
    write asp.  
    write perf.  

On the basis of (1) and (2) it can be claimed that the base form of the perfective marker is -aa, and that y is inserted when the verb ends with a vowel. However,
it can also be argued that -yaa is the base form of the perfective marker and -y is deleted when the verb ends with a consonant. I will leave this debate open as it is peripheral to our concerns here, and assume that -yaa is the base form of the perfective marker.

7 The auxiliary system in Hindi needs to be studied in detail. This will help us in giving a more articulated structure of INFL. Pending such a study, I have assumed this structure of INFL for Hindi.

8 Such passives in Hindi have been termed "abilitative", "capabilitative" and so on by linguists working in the Generative Semantic or Relational Grammar (cf. Bai (1972), Pandharipande (1978), Sinha (1980), among others).

9 Baker assumes that the passive morpheme is of the category in Lithuanian to account for his claim that there are passives of unaccusative verbs in this language. I leave the Lithuanian passive of unaccusative for further research and consider only those languages in which the passive morpheme has been assumed to be of the category INFL by Baker.

10 However, there are apparently some pro-drop languages like Malayalam and Spanish which do not allow the passive of intransitive verbs. The passivizing strategy of
these languages needs to be investigated carefully. In Malayalam, the passivizing strategy involves the use of an auxiliary verb pet, which imposes a selectional restriction on the subject position: the subject must have the Patient theta-role (Jayaseelan, p.c.). Since an unergative intransitive verb has no Patient theta-role in its argument frame, it cannot satisfy this requirement of the Malayalam passive. The case of Spanish (and other similar languages), we shall leave as an open question, only suggesting that they may also be capable of an explanation in terms of language-specific restrictions.