In this chapter we present a grammar of some select anaphoric and elliptical constructions in Hindi. In the beginning, the type of anaphors considered for the study is dealt with. In the next, the various types of anaphors and elliptical constructions are discussed in detail and a computational grammar of the same is arrived at.

Recall the classification of the anaphors of Malayalam in the previous chapter. As far as the anaphors of Hindi are concerned, they can be classified in the same way as the Malayalam anaphors.

Let us begin with the pronouns in Hindi. The following lists the Hindi pronouns in a tabular form.

<table>
<thead>
<tr>
<th>PERSON</th>
<th>Singular</th>
<th>Plural</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>First</td>
<td>mai</td>
<td>hum</td>
<td></td>
</tr>
<tr>
<td>Second</td>
<td>tum, tu (-honorific), a:p (+honorific)</td>
<td>tum, a:p</td>
<td>voh, ve (+honorific)</td>
</tr>
<tr>
<td>Third</td>
<td>voh, ve (+honorific)</td>
<td>ve</td>
<td></td>
</tr>
</tbody>
</table>
Here we observe that there is a singular-plural distinction in all pronouns. The pronouns take the entire range of cases. For the purpose of illustration, the case form of one of them is given below.

<table>
<thead>
<tr>
<th>Noun</th>
<th>Case</th>
<th>Case Marker</th>
</tr>
</thead>
<tbody>
<tr>
<td>voh</td>
<td>Nom</td>
<td>Null</td>
</tr>
<tr>
<td>usne</td>
<td></td>
<td>ne</td>
</tr>
<tr>
<td>us ko</td>
<td>Acc</td>
<td>ko</td>
</tr>
<tr>
<td>us se</td>
<td>Ins</td>
<td>se</td>
</tr>
<tr>
<td>us se</td>
<td>Abl</td>
<td>se</td>
</tr>
<tr>
<td>usko</td>
<td>Dat</td>
<td>e</td>
</tr>
<tr>
<td>uskeliye</td>
<td>Ben</td>
<td>keliye</td>
</tr>
<tr>
<td>us se</td>
<td></td>
<td></td>
</tr>
<tr>
<td>uska</td>
<td>Poss</td>
<td>a</td>
</tr>
<tr>
<td>uspar</td>
<td>Loc</td>
<td>par</td>
</tr>
<tr>
<td>usme</td>
<td></td>
<td>me</td>
</tr>
</tbody>
</table>

The relationship of the pronouns with its antecedent is discussed below. Consider the following examples:
Each of the sentences above has possessive pronoun and in (1) the antecedent is the subject\textsuperscript{1} of the sentence “ra:m” “Ram”. In (2) the antecedent is “sy:a:m” “Syam” which is the object of the sentence. The same holds for sentence (3) where the pronoun “uski” “her” has its antecedent “mani:sa” “Manisha”, which is the subject of the clause in which the possessive pronoun occurs. Thus the antecedent of the possessive pronoun is the subject or the object of the clause in which it occurs. That is the NP immediately preceding the possessive pronoun. Consider the following examples:

4. ra:m ne kaha ki mo:han uskei bacce ko hardin mar:ta hai.
Ram said that Mohan beats his child every day.

5. ra:m ko ma:lum hai ki mo:han uskeliye, ka:m nahi kare ga.
Ram said knows that Mohan does not work for him.

6. si:ta ne kaha ki mo:han ussei na:ra:z hai.
Sita said that Mohan is unhappy about her.
7. raːmː ki mə ne khaːk ki moːhən ussːe, naraːz həi.
Ram –poss mother-erg say-pst compl mohan he-abl unhappy copula
(Ram’s mother said that Mohan is unhappy with him (Ram).)

In sentence (4) the pronoun is “uske” “his” and its antecedent is “raːm” “Ram” which is the subject of the immediate clause. The sentence (5) has non-possessive pronoun “uske-liye” and the antecedent of this is “raːm” “Ram” which is the subject of the immediate clause. The same argument holds for (6) and (7). In the above sentences the antecedent precedes the pronoun. From the above we can arrive at the following.

1. A pronoun P is coreferential with an NP iff the following hold:
   a. P does not precede the NP.
   b. If P is non-possessive, then NP is the subject of the IC in which P does not occur.
   c. If P is possessive, then NP is the subject of the IC in multiple clause constructions or the NP immediately preceding the P.

Now consider the one-pronoun. On the basis of countability, which is an inherent feature, the one-pronoun in Hindi are of two types: The pronoun, which are [+C], and those which are [-C]. The two instances of one-pronoun, which are homophones have the form “kuch” [+C], “kuch” [-C]. The [+C] pronoun takes [+/-animate, +count] NPs as its antecedent and [-C] pronoun takes [-animate, -count] NPs. In the case of homophone pronouns the antecedent is [+/-animate, +/-count] NPs. The antecedent NP is the non-subject NP in the immediate clause in which one-pronoun does not occur. Here we have
to use world knowledge, which is outside the purview of this work. These are featured in the tabular form below.

<table>
<thead>
<tr>
<th>One-Pronoun in Hindi</th>
<th>Inherent feature of One-Pronoun</th>
<th>NP which can be the antecedent</th>
</tr>
</thead>
<tbody>
<tr>
<td>ek “one”</td>
<td>+C</td>
<td>+/-animate, +count</td>
</tr>
<tr>
<td>thoda “little”</td>
<td>-C</td>
<td>-animate, +count</td>
</tr>
<tr>
<td>kuch “some”</td>
<td>+C,-C</td>
<td>+/-animate, +count</td>
</tr>
</tbody>
</table>

Given below are examples which demonstrate the above claim regarding the [+C] pronoun along with the two other claims that hold for the [+C] pronoun, namely that (a) the antecedent must precede the pronoun and (b) the one-pronoun must have an explicit antecedent.

8. mai ne do cidiya, ghosle me dekhi, mo:han ne ek, sakha me dekhi.
   I-erg two birds nest-loc see-pst mohan-erg one branch-loc see-pst
   (I saw two birds in the nest, Mohan saw two on the branch.)

9. *mai ne ek, ghosle me dekhi, mo:han ne do cidiya, sakha me dekhi.
   I-erg one nest-loc see-pst mohan-erg two birds branch-loc see-pst
   (I saw one bird on the tree and Mohan saw two in the nest.)
10. *mo:han ne das pustak, kharida. e:k; kharab tha.
    mohan-erg ten book buy-pst one bad copula
    (Mohan bought ten books. One was torn.)

11. *mo:han ne pa:ni; bhara, ra:m ne do; senka
    mohan-erg water fill-pst ram-erg two threw away
    (Mohan filled water, Ram through two.)

In (8) "ek" "one" refers to the "birds" in the previous sentence. In (10) "ek" "one" refers
    to the books. In (9) the one-pronoun occurs in the first sentence and can not refer to
    "birds" in the following sentence. It remains antecedentless and become ungrammatical.
    From this it is clear that the NP should precede the one-pronoun. In (11) the one-pronoun
    "do" "two" which is [+C] can not have the NP "pa:ni" "water" which is [-count], as its
    antecedent. From the above examples it is evident that the antecedent should have the
    feature [+count]. In the following examples we consider [-C] one-pronouns.

    mohan milk buy-pst cat little drink-pst
    (Mohan bought milk, the cat drank a little.)

    mohan milk buy-pst cat two drink-pst
    (Mohan bought milk, the cat drank two.)

In (12) the One-pronoun "tho:da" "little" refers to "du:dh" "milk" and in (13) "do"
    "two" which is [+C] can not refer to "du:dh" "milk" because it is not [+C].

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14. aurateːm baccoːn ko paːniː diya ve kuchɪ pɪːye.
woman-pl children-acc water give-pst they some drink-pst
(Women gave some water to the children, they drank some.)

15. moːhan ne raːm ko seːvɪ diya ve kuchɪ khaːya.
mohan-erg ram-acc apple give-pst he some eat-pst
(Mohan gave Ram some apple they ate some.)

In (14) the one-pronoun “kuch” “some” refers to “paːni” “water”, which is [-C] and in (15) “kuch” “some” refers to apple which is [+C]. From the above we arrive at the following:

II. A one-pronoun corefers with an NP iff

e. Non-subject NP is in IC of one-pronoun.
f. NP precedes the one-pronoun.
g. one-pronoun and NP agree with respect to C features.

Now consider the non-pronominals in Hindi. There are two types of non-pronominals in this language: emphatic and non-emphatic reflexives. Incidentally in Hindi the emphatic reflexive can also be used as non-emphatic reflexive. First we distinguish between the two uses of these clearly. An emphatic reflexive is a non-argument adverbial expression and a non-emphatic reflexive is an argument of the verb. Consider the following examples:
16. mo:hani ne apnea:p; ghar cala gaya.
mohan-erg refl house go-pst
(Mohan went home by himself.)

17. mo:hani ne apnea:p; ko aine me dekha.
mohan- erg refl- acc mirror-loc see-pst
(Mohan saw himself in the mirror.)

In the (16) the reflexive “apnea:p” is a non-argument of the verb and hence it is an emphatic reflexive. In (17) “apnea:p ko” is an argument of the verb and hence it is not an emphatic but a non-emphatic reflexive. Now consider the emphatic reflexives in Hindi. The emphatic reflexives are “apnea:p”, “kudh” and “svayam”. The following example shows “apnea:p”-antecedent relationship.

18. baccei ne apnea:p; khana khaya.
children-erg refl food eat-pst
(Children ate their food by themselves.)

he refl come-fut
(He will come by himself.)

In (18) the antecedent of the emphatic reflexive apnea:p is “bacce” “child” and it is the subject of the clause in which it occurs. Same is applicable for (19) where “voh” “they” is the antecedent of “apnea:p”. Consider the other emphatic reflexive “khud”.

20. manisha; khud; a:yi thi.
manisha refl come-pst
(Manisha came by herself.)
21. mo:han; khud; paratha kha:yi
   mohan refl paratha eat-pst
   (Mohan ate the paratha by himself.)

22. mo:han ka pitaji; khud; sku:l gaye the.
    mohan-poss father refl school go-pst
    (Mohan’s father himself went to the school.)

In (20) the antecedent of “khud” is “manisha” which is the subject of the clause in which it occurs. The same holds for (21) where “mo:han” which is the subject of the clause is the antecedent of “khud”. In (22) the antecedent of the emphatic reflexive “khud” is “mo:han ka pitaji”. In the following examples we consider the other type of emphatic reflexive “svayam” which is the borrowed form from Sanskrit. Consider the following sentences.

23. bhagava:n; svayam; prakat ho gaye.
    God refl manifest pst
    (God himself became manifested.)

24. ra:m ki ma ne kaha ki mo:han; svayam; khana kha raha hai.
    ram-poss mother-erg say-pst compl mohan refl food eat-prst-cont
    (Ram’s mother said that Mohan is eating his food himself.)

25. manisha svayam sabhashi nahim di.
    manisha refl praised neg give-pst
    (Manisha did not praise herself.)

In (23) the emphatic reflexive “svayam” has the antecedent “bhagava:n” “God” which is the subject of the clause in which the emphatic reflexive occurs. The antecedent of “svayam” in (24) is “mo:han” “Mohan” which is also the subject of the clause in which
the emphatic reflexive occurs. In (25) the antecedent is “manisa” “Manisha” which is again the subject of the clause in which the emphatic reflexive occurs. From the above sentences the antecedent is the subject of the clause in which it occurs.

III An emphatic reflexive \( R_1 \) corefers with an NP iff

h. NP is the subject of the clause in which \( R_1 \) occurs.

Corefers with an N, the head of possessive NP,

i. If the NP is the subject of the clause that contains \( R_1 \).

Consider the non-emphatic reflexives. There are four non-emphatic reflexives in Hindi and they are “apna”, “apnea:p”, “khud”, “svayam ”. The following examples show the distribution of “apna”. Consider the following sentences.

26. mo:han ne apne ko aine me dekha
mohan-erg refl-acc mirror-loc see-pst
(Mohan saw himself in the mirror.)

27. mai apni ladki ki intazar me hum
I refl girl-acc wait-loc copula
(I am waiting for my daughter.)

28. manisa ne apnekeliye ghar kharida
manisha-erg refl-ben house buy-pst
(Manisha bought a house for herself.)

In (26) the antecedent of “apne ko” is the subject of the clause “mo:han” “Mohan”. The same is the case with (27), where antecedent of “apni” is “mai”. Sentence (28) has
"manisa" "Manisha" as the antecedent for the non-emphatic reflexive "apnekeliye", which is the subject of the clause. Now consider the following sentences. Here the emphatic reflexives, which can become non-emphatic reflexives are dealt with.

29. mo:hani ne apnea:p ko aine me dekha
    mohan-erg refl-acc mirror-loc see-pst
    (Mohan saw himself in the mirror.)

30. si:ta ne kaha ki mo:hani ne apnea:p ko sabasi di.
    sita-erg say-pst mohan-erg refl-acc praise give-pst
    (Sita said that Mohan praised himself.)

31. manisa: ne svayami aine me dekha
    manisha-erg refl mirror-loc see-pst
    (Manisha saw herself in the mirror.)

The sentence (29) has the non-emphatic reflexive "apnea:p ko" and its antecedent is "mo:han" "Mohan". In (30) "apneko" has its antecedent "mo:han" "Mohan" which is the subject of the clause. The antecedent of "svayam ko" in sentence (31) is "manisa" "Manisha" which is also the subject of the clause in which the non-emphatic reflexive occurs. From the above we can arrive at the following:

III. A non-emphatic reflexive $R_2$ corefers with an NP iff the following holds:

i. NP is the subject of the clause in which the $R_2$ occurs.

k. With an N if the NP is possessive then the head noun is the antecedent of $R_2$
Consider the reciprocals now. There are two reciprocals in Hindi: “paraspar” and “ek dusre”. The following examples show the relationship between the antecedent and the reciprocal.

32. ye baccei ek dusarei se ba:t nahi karenge.
   These children eachother-acc talk neg do-fut-pl
   (These children will not talk to eachother.)

33. ye ek duserei ko pasand nahim karte hai.
   These eachother-acc like neg do-prst-pl copula
   (They do not like each other.)

In sentence (32) the antecedent of “ek dusre” is “bacce” “children” which is plural and precedes the reciprocals. In sentence (33) the antecedent is “ye” “these” which again is plural and precedes the reciprocal. Unlike Malayalam, reciprocals in Hindi take all case suffixes. Consider the other reciprocal “paraspar”.

34. uni dono me paraspari ladhai hua.
   This two-loc each other war be-pst
   (There was war between them.)

In the above sentence the antecedent of the reciprocal “paraspar” is “un dono”. Here also the antecedent is plural and precedes the reciprocal. This reciprocal “paraspar” does not take any case suffix. From the above it is clear that the antecedent of a reciprocal is the subject of the clause in which it occurs and must be plural.
V. A reciprocal $R'$ corefers with an NP iff the following holds:

1. NP is the subject of the clause in which the reciprocal occurs.
2. NP is plural.
3. NP precedes $R'$

Now consider the distributive reflexives. The distributive reflexive "apna apna" is the reduplicated form of the non-emphatic reflexive "apna" and behaves like reciprocal.

35. moːhan aur raːmɪ ko apne-apneː ghar pasand hai.
   Mohan and Ram-acc each other house like copula
   (Mohan and Ram like their respective houses.)

36. moːhan aur raːmɪ ne siːta aur giːta ko apni-apnii kitaːb di.
   Mohan and Ram-erg sita and Geeta-acc each other book give-pst
   (Mohan and Ram gave their respective books to Sita and Geeta.)

In sentence (35) the antecedent of the distributive reflexive is "raːm aur moːhan" "Ram and Mohan", which is the subject of the sentence and is plural. It precedes the distributive reflexive. In sentence (36) the antecedent is "raːm aur moːhan" "Ram and Mohan" which is plural, which precede the distributive reflexive and also is the subject of the clause in which the distributive reflexive occurs. The distributive reflexive does not take any case suffixes. It takes the gender of the subject NP in a non-ergative sentence and that of the object NP in an ergative sentence. In conclusion it can be stated that
VI. A distributive reflexive D is coreferential with an NP iff the following holds:

   o. NP is plural.
   p. NP precedes D.
   q. NP is the subject of the clause in which D occurs.

Consider the ellipsis and gaps in Hindi. They occur in discourses, each with at least two parallel structures, where some constituents from one are elided for reasons of economy or emphasis and can be understood in terms of the corresponding constituent in the other of the parallel constructions.

The gaps are of two types, forward and backward as already observed in the last chapter. In forward gapping the gaps occur in the second clause. The gaped entity can be the subject NP, the object NP, the whole of the verb phrase or just the subject, object or the verb of the sentence. Consider the following examples of backward gapping:

37. mohan ne si:ta se aur hari ne gita se sa:di ki.
    mohan erg sita-comm and hari-erg gita- inst marry-pst
    (Mohan married Sita and Hari married Gita.)

38. mohan ne ek kita:b aur hari ne ek kalam si:ta ko diya.
    mohan erg one book and hari-erg one pen sita-acc give-pst
    (Mohan gave one book and Hari gave one pen to Sita.)
Each of the above sentences contains two parallel constructions. The parallel constructions are identified by the presence of the coordinate marker. Here the coordinate marker is “aur” “and”. In (37) the element gapped is “sa:di ki” “married” which is a complex verb and in (38) the gapped material is “si:ta ko” “to Sita” and “di” “gave” where both verb as well as the object is gapped. Now consider some examples of forward gapping.

39. si:ta ne ro:ti khayi, ca:y pili.
   sita-erg roti eat-pst tea drink-pst
   (Sita ate roti, drank tea = Sita ate roti and drank tea.)

40. mo:han vanvas ke liye gaye, kRisna bhi.
    mohan forest loc go-pst krishna
    (Mohan went to the forest and Krishna = Mohan went to the forest and Krishna to the forest.)

41. sya:m bacco:m ko pya:r karta hai, magar unki patni nafarat karta hai.
    syam children-acc love be-prst but he-poss wife hate be-prst
    (Syam loves children but his wife hates.)

In (39) the element which is gapped is “si:ta” “Sita” which is the subject of the sentence. In (40) it is the object and the verb together that is gapped. Sentence (41) has “bacco:m ko” “children” as the gapped element, which is the object of the sentence. The above examples we can conclude that subject, object and the verb can be gapped and also the object and the verb together can be gapped. From the above we can arrive at the following regarding forward and backward gapping.
VII. If Q is a sentence and Q' and Q'' are the two parallel structures which constitute Q, then the verb V or the noun phrase NP occurs recursively iff

A. for forward gapping
   r. if the explicit constituent is in Q'
   s. V is in Q'

B. backward gapping
   t. the explicit constituent is in Q''.
   u. NP is the object of Q''.
   v. V is in Q'.

Coming to ellipsis next, we consider inter-sentential ellipsis involving the wh-constructions (wh-const). The elided material can be any constant and unlike gaps even non-constituents can be elided. In the case of wh-constructions the material that cannot be elided is the OBJECT (for the purpose, OBJECT is used to refer to what is called "discourse focus"). Consider the following examples.

42. tum kaha gayi thi?
   you where go-pst
   (Where did you go?)

   sku:l
   school
   To school (I went to the school.)
In (42) there are two constituents elided, “tum” “you” and “gayi thi” “went”. The former is the subject and the latter is the verb. The constituent that is not elided in the response is the objective/locative, which is the focus of the sentence and the wh word “kaha” “where” takes a nominative focus. Now consider the following examples:

43. kal ko:n a:ya tha?
yesterday who come-pst
(Who came yesterday?)
        ra:m
        ram
        (Ram came yesterday.)

44. voh kitna sa:l ka tha?
    he how years acc pst
(How old is he?)
        das    sa:l.
        ten    years
        (He is ten years old.)

In (43) the wh word is ko:n “who” and the focus to it in the response is “ra:m” which is in nominative form. In (44) the focus to the wh word “kitna” “how much” in the response is “das” “ten” which is also in nominative form. Hence the wh-word “ko:n” and “kitna” has focus in the nominative case. Now consider the wh-word which takes NP in accusative element as focus.

45. ra:m ne kisko dekha tha?
    ram-erg who see-pst
(Who did Ram see?)
sya:m ko
syam-acc
( Saw Syam. )

46. sya:m ne kya dekha tha?
sya:m-erg what see-pst
( What did Syam see?)

sa:p ko dekha tha.
snake-acc see-pst
( Saw a snake. )

The wh word “kis ko” “to whom” in sentence (45) has focus “sya:m ko” “Syam” in the response which is in the accusative as wh word. The same is the case with (46) where the wh word is “kya” “what” and the focus is “sa:p ko”. Consider the following sentences.

47. ra:m ne kab dekha tha?
ram-erg when see-pst
( When did Ram see?)

das baje
ten time
(Ten o’clock.)

Here in (47) the wh word is “kab” when the focus is “da baje” “ten O’clock” which is nominative. In the following examples the wh word takes locative as focus.

48. ra:m kaha gaya tha?
ram where go+pst
( Where did Ram go?)

sku:l.
school
( To the school. )
Both (48) and (49) have wh word in locative and their respective focuses are also in locative. The following table gives the wh word and the possible focus it can take.

In (50) the wh word is “kyse” “how” which is in locative and the focus for this wh word is also in locative “sku:ter se” “in scooter”. The following table gives the wh word and the possible focus it can take.
VIII. If $S$ is a wh-construction, then the elided fragment in the responds can be of the following:

- $w.$ the subject
- $x.$ the verb
- $y.$ both the subject and verb.

To conclude, we have dealt with different types of anaphors and ellipses in Hindi in this chapter. The grammar for each type of anaphors and ellipses is spelt out. Here we would like to say that certain constructions like the following are out of the scope of this study.

51. ra:m ne ek phal sa:m ko diya, vo khaya
Ram erg'one fruit sam-acc give-pst he eat-pst
(Ram gave one fruit to Sam and he ate.)
52. ra:m ne ek phal sa:m ko diya aur vo pastaya.
    ram-erg one fruit sam-acc give-pst and he regretted
    (Ram gave a fruit to Sam and he regretted it.)

    In these cases the syntax above, which is what we are dealing with here, can not give
    a unique solution. In the above cases the pronoun "avan" can take both "ra:m" and
    "sa:m". This ambiguity can be resolved using world knowledge.

Notes

1. Here we do not distinguish between the logical subject and grammatical subject and
    as far as the identification of the subject is concerned, we go by morphological
    marking on the NP (ergative, nominative and dative) depending on the sentence
    concerned. For example:

53. mo:han se uski ka:m nahi hua
    mohan inst he-fem-poss work neg copula
    (Mohan could not do the work)

    Here "mo:han se" is the agent. Some might call it a logical or an underlying subject.
    For the present study it is a non-subject post positional phrase.

2. Pronouns have a tendency to look for an antecedent in the immediate clause. If an
    immediate clause is absent then it considers the subject of the clause in which occurs
    as the antecedent. Consider the following examples.

54. ra:m; ne kaha ki mo:han ne uski; kita:b di
    ram-erg say-pst compl mohan-erg he-poss book give-pst
    (Ram said that Maohan gave his book.)
55. mo\(\text{han}\) ne uski ka\(\text{m}\) kiya.
    mohan-erg he-poss work do-pst
    (Mohan did his work.)

In (54) the candidate antecedents for the pronoun "uski" are "mo\(\text{han}\)" "Mohan" which is the subject of the clause in which the pronoun occurs and "ra\(\text{m}\)" "Ram" which is the subject of the immediate clause. The accepted antecedent in this sentence is "ra\(\text{m}\)" "Ram". But in (55) there is only one candidate antecedent "mo\(\text{han}\)" "Mohan" which is the subject of the clause in which it occurs.

3. Focus is defined here as the constituent that relates to the wh-word in the preceding query as its response.

In Hindi there is no morpheme or word which will transform a declarative statement to interrogative as in Malayalam. The transformation from declarative to interrogative is through intonation. In some particular cases the word "kya" is used to make an interrogative statement. Consider the following example.

56. khana khaya tha kya
    food eat pst que word
    (Did you eat?)

Here the word "kya" is different from the wh word "kya". This word gives the sense of interrogation to the declarative statement.