Abstract

Hindi-Urdu is an Indo-European language which preserves many syntactic and morphological traits of the older Indic language, which showing the influence of Persian and Arabic in vocabulary, as well as Sanskrit. It is primarily a head-final language, with inflections for case, tense, aspect and agreement. Complex predicates are productive source of new vocabulary, along with verb-verb compounds. Subject properties are associated with dative noun phrases, reflexive pronouns and auxiliary verbs, in addition to nominative and ergative case, which marks transitive subjects. There is also differential object marking of direct objects. Finite clauses differ significantly from non-finite clauses, both in position and head direction. Agreement, reflexive binding and operator wh-scope are possible across non-finite clause boundaries, but are restricted within finite clauses.

1. Urdu and Hindi, Hindi and Urdu

Urdu and Hindi are two terms for essentially one language which originated out of the Indic dialect spoken in Delhi, in approximately the 16th and 17th centuries; see Masica (1991: 27-30) for a fuller account. Common to colloquial Hindi and Urdu is a large vocabulary which was mostly derived from Indic roots, but also borrowed from Persian and Arabic. English borrowings are increasingly common. The syntax and morphology of Hindi and Urdu are virtually identical, except for a small number of constructions influenced by Persian, or directly borrowed.

Urdu is distinct from Hindi in its writing system, which is a modified Perso-Arabic script, and in Persian and Arabic vocabulary used in formal vocabulary. Hindi is now written in the Devanagari syllabic script also used for Sanskrit, and borrows much technical and formal vocabulary from Sanskrit.

This sketch of Hindi-Urdu morphology and syntax can be supplemented in more depth by various useful reference grammars and pedagogical grammars which have insightful descriptions. Masica (1991) is a particularly clear and detailed survey of the Indic languages, of which Hindi-Urdu is one, allowing for comparison with more or less closely related languages. Subbarao (2012) is a linguistically based comparison of languages of South Asia, showing typological similarities and differences among languages of different families; there is much discussion of Hindi-Urdu.


1.1. Basic features of the clause

Hindi-Urdu is a mostly head-final language with case clitics, agreement morphology on the verbal complex. It distinguishes finite from non-finite clauses in ways which very generally
affect coindexing and scope relations.

Hindi-Urdu has verb final structure shown in (1), and in most other respects the basic clause is consistently head-final (see section 4.4 below). Some important features of the basic clause are illustrated in (1) and (2), showing the same sentence in the future tense, and the present perfect.

(1) vee laRkee aap=koo eek ciTThii likh-eeNgee
    ‘Those boys will write you a letter.’

(2) un laRkooN=nee aap=koo eek ciTThii likh dii hai
    those.OBL boy.M.Pl.OBL=ERG you=DAT one letter.F.SG.NOM write give.PFV.F.S be.PRES.3.S
    ‘Those boys have written a letter to you.’

The unmarked order of constituents is subject, indirect object, direct object and verb; variations are nevertheless possible for discourse effect (see for example Kidwai 2000). The case of the transitive subject varies; in present and future sentences such as (1), the subject is nominative, which is the direct, unmarked case. In past or perfect sentences, the subject has the ergative postposition =nee. (See section 2.2 for information on case marking.) Agreement morphology is expressed on the verbal complex. It reflects the properties of the nominative subject in (1), but if the subject is marked by a postposition case marker, agreement reflects the properties of the nominative direct object. (See section 2.3 for information on agreement.) Postpositional marking also requires a morphological change in some nouns and pronouns, to the oblique inflectional form, as shown in the subject of (2). Finally, the verbal complex in (2) combines the main verb \textit{likh} ‘write’ with another verb ‘give’, which adds the idea of completion of the event and benefit to the indirect object. (See section 4.2.1 for more information about complex predicates.)

I have used this pair of examples to point out briefly some of the important features of this language. These features will be described in greater depth in sections to follow. Here are some highlights of the topics to be included. In this language, there is extensive agreement for person, number and gender in both nominal and verbal categories. Case distinctions are expressed with postpositional clitics, except for nominative ‘direct’ case which is null. Transitive subjects have ergative case in perfective finite sentences, an instance of ‘split ergativity’. Verbs are inflected for tense and aspect, in many possible combinations. Verb compounding expresses several relations, including aspectual distinctions. Subordinate clauses differ in syntactic status as adjuncts or argument, depending whether their inflection is finite or non-finite. Non-finite clauses may be sentence internal, in argument or modifier positions. Finite clauses are prohibited from argument positions. Instead they must be adjoined, either to the matrix clause or to a sentence-internal nominal. Finite clauses are autonomous domains for agreement, reflexive binding and relative/question scope, while non-finite clauses are transparent to long-distance coindexing relations.

In this chapter, I focus on the syntax and related of Hindi-Urdu as seen through the perspective of a (Chomskyan) generative theory of grammar, such as Chomsky (2004) and
earlier work. I use this kind of syntactic theory because it is a useful way for organizing and labeling the linguistic data from a specific language, while providing a general definition of crucial categories and relationships shared by human languages. I refer to work done in different linguistic theories, as well as work which is basically descriptive. The references in each section give a much fuller account of the data and the problems at issue.

Hindi-Urdu, like many languages, presents problems for generalizing from the most descriptive level of analysis. Both Hindi-Urdu and other Indic languages have properties which follow neither from their Indo-European roots or from typological similarities to non-Indo-European languages of South and East Asia. Hindi-Urdu is an Indo-European language with ergative subject case, like Basque and Georgian. It is head-final, has non-nominative subjects like Japanese and Korean, but its verbal inflection and agreement patterns are unlike what is found in these languages. Unlike English, it has both locally and long-distance bound anaphors, which have only a subject antecedent. Like its Indo-European ancestors, Hindi-Urdu retains the correlative type of sentence-adjointed relative clause. Because of its origin as a lingua franca, it shows certain influences from Persian. So the analysis of Hindi-Urdu cannot follow easily from the results achieved over the last thirty years in generative grammars for the analysis of other languages, like English, Spanish, Chinese and Japanese, for example, whatever the specific theory used. The organizing plan of this chapter is to start with basic clause structure, to note case and coindexing relations within the clause, then to categorize non-finite clauses, and finally to contrast complex sentences with non-finite and finite clauses. The references give further data, as well as different positions on how to analyze these constructions. The goal is to point out aspects of the language which present interesting problems for further research.

2. Sentence constituents and basic order

In this section, I give a brief overview of the lexical and functional categories in clause structure, pointing out important features of case and agreement, tense and aspect.

2.1. Sentence arguments and transitivity

In ‘unmarked’ sentence orders, the verb is final; the following sentences have an intransitive verb in (3), a transitive verb in (4) and a ditransitive verb in (5). Each verb has the appropriate number of arguments which it selects, plus an optional adverb modifier, such as jaldii ‘soon, quickly’ in (5).

(3) baccee saarii raat soo-tee haiN
child.M.PL.NOM whole.F night.F sleep-IPFV be.PRS.3.Pl
‘(The) children sleep through the whole night.’

(4) tum yah film kal deekh-oo-gee
you.FAM this film.F.SG.NOM tomorrow see-FUT.2.PL
‘You will see this film tomorrow.’

(5) woo aadmii aap=koo ciTTii jaldii bheej-ee-gaa
that man.M.SG.NOM you.FORM=DAT letter.F.SG.NOM quickly send-FUT.PL-M.SG
‘That man will soon send you a letter.’

2.2. Case

Each of the arguments of the verb is case-marked. The indirect object *aap=koo* ‘you-dat’ is marked by the clitic postposition =*koo*, which is obligatory. (See Butt and King (2004) for discussion of the clitic status of postpositions in Hindi-Urdu.) The subjects in (3)-(5) have the unmarked or direct case, which involves the absence of a postposition. I have glossed the case as nominative, the default case. This case is found also on direct objects, for instance in the examples (4) and (5). It is possible to mark the direct object with =*koo* if it is specific or animate, as in (6):

(6) *tum*              *is*             *film=koo/*          *hamaaree*  *doost=koo*  *deekh-oo-gee*
    *you.FAM* this.OBL film.F.SG.OBL=ACC /our.OBL friend=ACC see-FUT.2.TPL
‘You will see this film/our friend.’

The case situation in Hindi-Urdu is somewhat contradictory: subjects and direct objects may have nominative case, and direct objects may have either nominative case or the postposition =*koo*, which I have glossed ‘accusative’. The dative use of =*koo* is obligatory and invariant, but =*koo* as a direct object marker depends on the specificity and animate reference of the object. See Legate (2004) for discussion of unmarked or zero default case, (Butt 1993) for the referential properties of =*koo* and Aissen (2003) for a comprehensive account of the reference conditions for direct object marking; in Hindi-Urdu compared with other languages.

Transitive subjects also have ergative case in the perfective finite sentences (7)-(9). The subject is marked by the ergative postposition =*nee*.

(7) *baccooN=nee*              *saarii*    *raat*    *soo-yaa*    *hai*
    child.M.PL=ERG whole.F night.F sleep-PFV.M.SG be.PRS.3.SG
‘(The) children sleep through the whole night.’

(8) *tum*  =*nee*      *yah film*  *kal*   *deekh-ii*    *hai*
    *you.FAM=ERG* this.film.F.SG.NOM yesterday see-PFV.F.SG be.PRS.3.SG
‘You have seen this film yesterday.’

(9) *us*     *aadmii=nee*    *aap=koo*    *ciTThii*    *jaldii*    *bheej-ii*
    that.OBL man.M.SG=ERG you.FORM=DAT letter.F.SG.NOM quickly send-PVF.F.SG
‘That man quickly sent you a letter.’

The main use of the postposition =*nee* is to mark a transitive/ditransitive subject in finite sentences with perfective aspect. Agency is not the main factor, as experiencers such the subject of (8) have ergative case (Davison (2004); see Butt and King (2004) and Woolford (2006) for a contrary view). Nevertheless, the majority of ergative marked subjects refer to volitional, causative agents. There are some options for ergative case on intransitive verbs, with varying degrees of grammaticality for different speakers or varieties of the language.
(10) kal raat kuttooN=nee bhauN-kaa
    yesterday night  dog.M.PL.OBL=ERG  bark-PFV.M.SG
    ‘Yesterday night (the) dogs barked.’

(11) raam /raam=nee zoor=see cillaa-yaa
    Ram.NOM Ram=ERG force=with  shout-PFV.M.SG
    ‘Ram shouted loudly.’ (Mohanan 1994:71)

(12) (*baccee=nee roo-yaa
    child.MSG.OBL=ERG  cry-PFV.M.SG
    ‘The child cried (on purpose).’

The verb bhauNk-naa ‘bark’ may have an ergative-marked subject without the assumption that the dogs barked on purpose as in (10). Other verbs with subjects referring to human beings may convey that the act was done on purpose as in (11)-(12), but speakers I have consulted reject sentences like (12). See discussion of the semantic quality of the ergative in Mohanan (1994: 71-72), Butt (1995:15) and Butt and King (2004).

The case uses in (1)-(9) reflect grammatical functions as structural cases in Chomsky’s terminology, with the exception of the dative =koo, which is a lexical case linked to the thematic role of goal. Other postpositions related to specific thematic roles are found in Hindi-Urdu; they will be discussed in sections below.

2.3. Agreement

The verbal complex is marked for agreement in person, number and gender. Person and number are required in finite clauses, while number and gender are characteristic of non-finite inflection. Agreement is obligatory in sentences which have a nominative argument. Note that in (3), there is a feminine adverbial saarii raat ‘all night’, which has no postposition, but as a non-argument, it does not trigger agreement. Instead, the masculine plural subject baccee ‘children’ determines agreement. If there are two nominative arguments, as in (4), the subject takes precedence. If the subject has a postpositional case, as it does in (8)-(9), then the object triggers agreement. The agreement is the default third person masculine singular if both the subject and direct object have postpositions, as occurs when the subject is ergative and the direct object has the accusative postposition =koo, as in (13).

(13) tum =nee is film=koo kal deekh-aa hai
    you.FAM=ERG this.OBL film.F.SG.=ACC yesterday see-PFV.M.SG be.PRS.3.SG
    ‘You have seen this film yesterday.’

The verbal complex may consist of the verb alone, as in (6), where the tense is future, and has features for person, number, and somewhat anomalously, also for gender. Or there may be combination of a non-finite participle, imperfective or perfective, and a finite copula, as in (3) and (8). Both components of the verbal complex have the same agreement features. In the terminology of Bhatt (2005), the participle and copula are covalued and therefore show the same agreement features, number and gender on the participles, and number and person on the copula.
2.4. Tense and aspect

In this section I survey briefly the tense and aspectual morphology of Hindi-Urdu. For a more detailed account, including the nuances of meaning, and the possibilities of combination in Hindi-Urdu, see Schmidt (1999), Montaut (2006), McGregor (1995), and Butt and Rivzi (2010).

The finite tenses are the present, represented by the copula *hai* ‘be.present’ and past *thaa* ‘be.past’. These are indicative, contrasting with the subjunctive *hoo*. The future indicative is formed from the subjunctive, with the addition of a suffix -*gaa*, as in *hoo-gaa* ‘be-future’; sentences (5) and (6) have future verb forms showing the complex pattern of agreement. These are all more or less suppletive forms of the verb *hoo-naa* ‘be-infinitive’. The infinitive suffix itself -*nna* could be regarded as non-finite tense, dependent for its tense reference on the tense of the matrix clause; infinitive clauses are discussed below with other embedded non-finite clauses.

Aspect is expressed by the imperfective suffix -*taa* (3), the perfective suffix -(y)*aa* in (8) and (9), and by a progressive auxiliary *rahaa* (14). Complex aspectual combinations can be formed from the participle affixes in combination with main verbs (15). See Butt and Rivzi (2010) for more examples of composed aspectual combinations and their meanings.

(14) kuttee  bhaunK  rahee  haiN
     dog.M.PL bark  PROG.M.PL be.PRS.3.PL
     ‘(The) dogs are barking.’

(15) kuttee  bhaunK-tee  rah-tee  haiN
     dog.M.PL bark-IPFV.M.PL stay.IPVF.M.PL be.PRS.3.PL
     ‘(The) dogs are continually barking, keep on barking.’

The perfective participle is used in combination with the copula to express the present, past or future perfect (8). Used alone in a non-embedded sentence, the perfective expresses a kind of neutral past or aorist, as in (9)-(10), discussed in Montaut (2006: 103-6).

Perfective and imperfective participles are used as subordinate clauses, often as modifiers, but also as complements; these will be discussed further below. There is another aspectual form which is used only as a modifier. This is the conjunctive participle, a bare verb stem with the invariant suffix -*kar*, as in (16). It normally means that the embedded clause event is completed in relation to the matrix tensed verb, but it also may be used adverbially, with a perfective meaning which includes the resulting state overlapping with the matrix verb in (17).

(16)  [PRO(i) yah khabar  sun-kar] woo(i)  xush  hoo  ga-ii
     this news.NOM hear-CP 3S.NOM happy be go-PFV.F.SG
     ‘[PRO(i) having heard this news] she(i) became happy.’

(17) woo(i)  [PRO(i) sooc samajh-kar]  ciTThii  likh
     3SG.NOM think understand-CP letter.FSG.NOM write
     *rahaa*  *thaa*
     PROG  be.PST.3.M.SG
‘He was carefully writing a letter.’ (Literally, ‘having thought and understood.’)

For additional properties of the conjunctive participle -kar, see section 2.5.3 below.

In many languages with tense inflection, person and number are represented in finite clauses, while number and gender are typical of non-finite inflection. This generalization applies to a limited degree to Hindi-Urdu, but as Butt and Rivzi 2010 point out, person and number are expressed only on the copula, the imperative and subjunctive/future. Past tense is expressed by the perfect participle without person features. See Davison 2002 for an explanation of how the perfect participle can have aorist, neutral past meaning, contrasting with an overt past marker in an ‘eastern Hindi’ language, Kurmali. the perfect participle without person features.

So is there a real difference between finite and non-finite clauses in Hindi-Urdu? I believe there is, and it is revealed in complex sentences. Coindexing, agreement and wh-scope relation may cross non-finite clause boundaries (5.3), but not finite clause boundaries (6.2).

2.5 Subject properties

As in many languages, the subject is hard to define by absolute criteria in Hindi-Urdu. The subject is not always in first position, in a language with some freedom of phrase order. It does not uniquely have nominative case, or uniquely determine agreement (8)-(9). But there are other clause relationships which (nearly) always define a subject. One of them is anteceding a reflexive pronoun, regardless of case.

Subjects have other case choices, determined by specific semantic classes of predicates or constructions. These classes will be discussed below in the section on diatheses and verb classes. Subjects may be required to have dative case (18)-(19), genitive (30) or locative cases (21). This is true of biclausal sentences such as (19); see Davison (2008) for discussion of this analysis.

(18) baccooN(i) =koo apnii(i/*j) billii dikhaaii dii
child.M.PL =DAT self.GEN.F cat.F.SG.NOM sight give-PFV.F
‘The children saw, caught sight of their cat.’

(19) raam=koo [PRO(i) apnee(i/*j) bhaaii=koo khijaanaa] nahiiN caahiyee
Ram-DAT self.GEN brother-DAT tease-INF not ought
‘Ram(i) ought not [PRO(i) to tease his(i/*j) brother].’

(20) raam=kee caar baccee thee
Ram=GEN.M.PL four child.M.PL.NOM be.PST.M.PL
‘Ram had four children.’ (Mohanan 1994: 139)

(21) raam=meeN bilkul dayaa nahiiN thii
Ram=in completely mercy.F.SG.NOM not be.PST.SG
‘Ram had no mercy at all.’ (Mohanan 1994:139)

Dative subjects are required for psychological predicates such as (18), and constructions of obligation like (19), but see Bashir 1999 for some variation in meaning between uses of =koo

8
and =\textit{nee} in obligation sentences. Genitive case is used for inalienable possession in (20), while locative case is used for inherent qualities in (21). Other kinds of subject marking will be shown in section 3 on diatheses.

\subsection*{2.5.1. Binding of reflexive pronouns}

The reflexive pronoun is invariant for person, number and gender, and the reference of the antecedent must be to an animate entity (See discussion in Davison (2001)). The possessive \textit{apnaa} ‘self’s’ is bound by a subject, regardless of case, shown in (22)-(23), and never bound by a non-subject, as in (24).

\begin{itemize}
\item (22) \textit{bacce(i) apnee(\textit{i}/\textit{j}) bhaaii =koo tang kar rahii hai} \\
\textit{child.F.SG self.GEN.OBL.M brother =DAT vexed do PROG.F.SG be.PRS.3SG} \\
‘The little girl is teasing/tormenting her brother.’
\item (23) \textit{bacce(i)=nee apnee bhaaii=koo tang ki-yaa (hai)} \\
\textit{child.F.SG.ERG self.GEN.OBL.M brother-DAT vexed do-PFV.M.SG be.PRS.3SG} \\
‘The little girl (has) teased/tormented her brother.’
\item (24) \textit{eek bacce(i)=nee duusree bacce(i)=see apnaa(\textit{i}/\textit{j}) khilaunaa} \\
\textit{child.OBL=ERG second child.OBL=from self’s.M.SG toy.M.SG.NOM} \\
\textit{chii li-yaa snatch take-pf.msg} \\
‘One child snatched his own toy from another child.’
\end{itemize}

The full reflexive, \textit{apnee (aap) ‘self’s (self) also requires a subject antecedent, as in (25):}

\begin{itemize}
\item (25) \textit{maaN (\textit{i}) bacce(ej)-koo apnee aap(\textit{i}/\textit{j})-see kaisee alag kar sak-tii hai?} \\
\textit{mother child=ACC self’s self-from how separate do can-IPFV be.PRS} \\
‘How can the mother(i) separate the child(j) from herself/*himself?’
\end{itemize}

Only subjects can control the null subject of the conjunctive participle, as in (26):

\begin{itemize}
\item (26) \textit{[\textit{PRO(\textit{i}/\textit{j}) yah baat sun-kar]} pita(a)(\textit{i})-koo beeTee(\textit{j})-par taras aa-yaa} \\
\textit{this matter hear-CP father-DAT son=on pity.M.SG come-PFV.M.SG} \\
‘[\textit{PRO(\textit{i}/\textit{j}) having heard this], the father(i) felt pity for (his) son(j).’}
\end{itemize}

\subsection*{2.5.2. Auxiliary verb orientation}

Non-nominative subjects, like nominative subjects, are in the semantic scope of subject oriented auxiliaries, such as \textit{baiTh-naa ‘to do something inadvertently’(27) and paa-naa ‘manage’ (28):}

\begin{itemize}
\item (27) \textit{maiN /*=nee aap=kii Daak paRh baiTh-aa} \\
\textit{I NOM /*=ERG you=GEN.F mail.F.SG read sit-PFV.M.SG}
\end{itemize}
'I inadvertently read your mail (by mistake).'

(28) koosT gaarD=koo yah naaNw dikh nahiiN paa-ii
    Coast Guard=DAT this ship.F.SG be.seen not manage-PFV.F.SG

‘The Coast Guard did not manage to spot this ship.’ (Also: ‘This ship did not manage to
be visible to the Coast Guard.’)

The auxiliary ascribes properties to the subject, such as ability in (25), inadvertence in (27), or
success in (28). The ambiguity of which argument is the subject will be discussed below in the
section on diatheses, or conditioned variation in what the subject and object may be. The VV
combination in (27) is discussed in 4.3.1; note that the intransitive baiTh ‘sit’ blocks the ergative
=nee on the subject of the transitive verb paRh ‘read’.

2.6. Object properties

Indirect objects consistently have the lexical dative case =koo. They are semantic goals,
and have no subject properties (see 3.1.2 below). Direct objects have a range of case forms,
including the unmarked nominative, the postposition =koo as well as locative cases and other
cases lexically selected by the clause predicate. Objects of N-V complex predicates have genitive
case (4.3). Direct objects control agreement when they are nominative and the subject is not.
They have some subject properties in passive sentences (3.1.2).

2.6.1. Case, differential object marking

There is variation in the case of direct objects in Hindi-Urdu which is determined by the
semantic/pragmatic factors animacy and definiteness. This variation is an instance of Differential
Object Marking (DOM), found in many languages, such as Spanish, Hebrew, Turkish, Persian
and other Indic languages (Aissen (2003), Masica (1991: 364-369). Definite, specific indefinite
and animate direct objects are morphologically marked either with a distinct accusative suffix,
such as Persian -ra, or with a form identical to indirect object marking, as in Spanish and Hindi-
Urdu, which uses the case clitic =koo. Languages differ in how semantic and pragmatic factors
determine whether Differential Object Marking is required, optional or absent. In Hindi-Urdu,
animacy is a stronger factor than definiteness/specificity, while in Persian,
definiteness/specificity outranks animacy (Aissen 2003). There is much individual speaker
variation. Wherever ergative subject marking is possible, differential object marking is also
possible; exceptionally the DOM marker =koo can be used where the ergative is not possible for
specific transitive verbs, as in (37). (See 3.2 below for verb classes in which ergative marking is
not found.)

3. Alternations in clause structure

3.1. Diatheses

Natural languages typically lack an absolute one-to-one association of case and grammatical
functions. Hindi-Urdu has many variations in case marking of arguments (Montaut 1991). The
alternation of nominative and ergative case on transitive subjects in (1)-(2) is one example,
dependent on the aspectual and other morphology of the verbal complex. There are also contrasts of largely synonymous predicates which allow ergative or dative subjects, syntactic alternations of passive and active sentences, as well as lexically derived intransitive and causative predicates which require different case marking from the corresponding transitive predicates.

Many psychological predicates require dative experiencers, which have the subject properties of controlling reflexives and participle null subjects. Dative case is ‘privative’. It is correlated with the absence of agency and volitionality. Ergative case is not privative; it is consistent with either volitionality or its absence. There are corresponding ergative-subject predicates which overlap in meaning with experiencer predicates.

(29) a. baccooN=nee acaanak eek bhaaluu deekh li-yaa
   child.M.PL=ERG suddenly one bear.NOM see take-PFV.M.SG.
   ‘The children suddenly/by chance saw a bear.’

b. baccooN=koo acaanak eek bhaaluu deekhaaii di-yaa
   child.M.PL=DAT suddenly one bear.r.NOM sight.F.NOM give-PFV.M.SG
   ‘The children suddenly/by chance saw a bear.’

The dative subject version in (29b) is ‘marked’ in the sense that it has only a non-volitional interpretation. The ergative subject verb is not specified for volitionality but it is consistent with a range of interpretations, from non-volitional in (29a) to volitional in (30). See Davison (2004) for further discussion.

(30) baccooN=nee dhyaan=see eek bhaaluu deekh li-yaa
   child.M.PL=ERG thought-with one bear.M.SG.NOM see take-PFV.M.SG
   ‘The children carefully looked at a bear.’

Another near minimal pair involves goal subjects:

(31) a. usee ghuus mil-tii hai
    3SG.DAT bribe.F.SG.NOM get-IPFV-F.SG be.PRS.3SG
    ‘He/she gets bribes.’

b. woo ghuus lee-taa hai
    3SG.M.NOM bribe.F.SG.NOM take-IPFV.M.SG be.PRS.3SG
    ‘He takes bribes.’

The verb mil-naa ‘get/receive/obtain’ allows a dative goal subject, which involves a recipient who receives something in the normal course of events; it is used for shopping in the usual way as well as for situations in which something is given to a more or less passive recipient. It can also mean ‘to meet by chance’.

Syntactic passive sentences show shifts of case as well as grammatical function. With the addition of the auxiliary jaa-naa ‘go’ and perfective morphology on the main verb, the direct object in (32a) assumes subject properties in (32b,c) but the differential object marker =koo may or may not be omitted in passive sentences (Mohanan 1994: 183-4). The differential object marker is a structural case, unlike the goal =koo DAT, which is never omitted. Yet it is unusual
among language with passive sentences for an accusative case to be retained optionally. Also somewhat unusual is the fact that the negative passive sentence in (32d) has an idiomatic ‘ability’ meaning.

(32) a. pulis-nee coor=koo pakaR-aa  
police-ERG thief=ACC seize-PFV.M.SG  
‘The police caught the thief.’ (Mohanan 1994: 183)

b. (pulis-see) coor pakaR-aa ga-yaa  
police-INST thief ACC seize-PFV.M.SG go-PFV.M.SG  
‘The thief was caught (by the police).’ (Mohanan 1994: 183)

c. coor=koo pakaR-aa ga-yaa  
thief=DAT seize-PFV.M.SG go-PFV.M.SG  
‘The thief was caught.’ (Mohanan 1994: 183)

d. pulis-see coor=koo pakaR-aa nahiiN ga-yaa  
police-INST thief=ACC seize-PFV.M.SG not go-PFV.M.SG  
‘The police could not bring themselves to catch the thief.’ (Mohanan 1994: 183)

Passive movement does not apply to indirect objects to create a new subject. There are passive sentences like (33), retaining the dative case on the goal. The goal does not bind a reflexive or the null PRO subject of a conjunctive participle with -kar, which are strictly subject oriented.

(33) *[PR0(i) ghar badal-kar] usee(i) apnii(i) Daak  
house change-CP 3SG.DAT self.GEN mail.F.SG.NOM.  
pahuNc-aa-ii nahiiN ga-yii  
reach-CAUS-PERF.F not go-PERF.F  
‘Having moved, he/she could not be forwarded self’s mail.’

This sentence also has a logophoric reading, ‘[PRO(i) having moved], I(i) couldn’t forward my(i) mail to him/her(i).’

Many verbs in Hindi-Urdu, both transitive and intransitive, have causative counterparts. For example, the intransitive verb baiTh-naa ‘to sit’ combines with the suffixes -aa and -vaa to form causative verbs (often with phonological changes in the stem). (See Ramchand (2008) for a recent formal account of the event structure of Hindi-Urdu causative sentences.)

Both the nominative subject and the instrumental agent of a passive sentence can be the antecedent of a reflexive; both the agent and theme have subject properties in passive sentences like (33a) The subject of baiTh- ‘sit’ binds a reflexive pronoun in (34a). In an active causative sentence, the semantic subject of baiTh is a syntactic object, and only the external argument/causative agent has subject properties in (34b).

(34) a. ravii(i) apnii(i/*j) saaiikal=par baiTh ga-yaa  
‘Ravi(i) sat on his(i/*j) bicycle.’
b. vijay(j)=nee ravii=koo apnii(*i/j) saaikal=par biTh-aa-yaa
   Vijay=ERG Ravi=DAT self.GEN bicycle=on sit-CAUS-PFV.M.SG
   ‘Vijay(j) seated Ravi(i) on self’s(*i/j) bicycle.’ (Mohanan 1994: 123)

c. ravii(i) vijay(j)=see apnii(i/j) saaikal=par biTh-aa-yaa ga-yaa
   Ravi[NOM Vijay=INST self.GEN bicycle=on sit.CAUS-PFV go-PFV.M.SG
   ‘Ravi(i) was seated by Vijay(j) on self’s(i/j) bicycle.’ (Mohanan 1994: 123)

The passive version (34c) shows that both the agent vijay the object ravii count as an antecedent for the reflexive, though only the syntactic subject counts as the antecedent in the causative active sentence (34b). This fact about reflexive coindexing suggests that subject properties are not unique to a specific constituent or specific case. But see section 2.5 for instances in which subject properties are consistent for one constituent, regardless of case.

3.2. Causative verbs and the effects on sentence structure.

The case of arguments is determined by lexical alternations, including causative derivation and detransitivization. An intransitive, transitive or ditransitive verb is embedded below a causative head, such as deekh-naa ‘see’ (35a), and bheej-naa ‘send’ (35b):

(35) a. siitaa(i)=nee baccee(j)=koo apnii(i/*j) tasviir dikh-aa-ii
   Sita =ERG child=DAT self.GEN picture.F[NOM] see-CAUS-PERF.F.SG
   ‘Sita(i) showed the child(j) self’s (i/*j) picture (Montaut 1991:75)

b. maiN=nee raam=see miiraa=koo kitaab bhij-vaa-ii
   ‘I had Ram send Mira the book.’ (Montaut 1991: 77)

The causee subject has dative or instrumental case, and though it is the thematic subject of the embedded verb, it does not bind a reflexive, as in (35). The causee, as a direct object, may acquire subject properties by passive movement, as in (34).

3.3. Derived intransitive verbs

Many transitive verbs have derived intransitive forms, which can be combined with instrumental agent phrases, as in (36a,b). For a fuller summary of the productivity of these derived forms, see Montaut 2004:85-89.

(36) a. maalii =see peeR kaT ga-yaa (kaaT-naa ‘cut’)
   gardener =INST tree.M.SG.NOM be.cut go-PFV.M.SG
   ‘The gardener cut the tree (by mistake, inadvertently).’

b. mujh=see yah kitaab bik nahiiN ga-ii (beec-naa ‘sell’)
   I=INST this book.F.NOM be.sold not go-PFV.F.SG
   ‘I could not bring myself to sell this book.’ (R. Pandharipande, p.c)
3.4. Lexical classes of bivalent verbs and case requirements

Ergative case is normally the case of transitive subjects in Hindi-Urdu, but there is actually greater freedom of subject case in bivalent verbs, choices which are lexically determined. Most classes have a variety of semantic types of verb, except for Class C, which contains primarily psychological verbs. So I will use psychological verbs in all the examples, showing that the differences of classes are fundamentally structural rather than semantic. In Davison (2004), I proposed four classes of bivalent predicates, defined by the case of the subject and objects (46). Examples are given in (38)-(41):

(37) Transitive verb classes, by case (Lexical case in bold)

<table>
<thead>
<tr>
<th>Class</th>
<th>Case of subject</th>
<th>Case of direct object</th>
<th>Case of indirect object</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class A</td>
<td>Obligatorily ergative</td>
<td>Nominative or dative</td>
<td>Dative</td>
</tr>
<tr>
<td>Class B</td>
<td>Optionally ergative</td>
<td>Nominative or dative</td>
<td>*</td>
</tr>
<tr>
<td>Class C</td>
<td>Dative</td>
<td>Nominative</td>
<td>*</td>
</tr>
<tr>
<td>Class D</td>
<td>Nominative</td>
<td>Lexical postposition</td>
<td>*</td>
</tr>
</tbody>
</table>

(38) Class A, obligatory ergative subject

*bhaatu=nee apnee daaNiooN=see baccooN=koo Dar-aa-yaa*
bear=ERG self.GEN teeth=INST children=DAT fear-CAUS.PFV.M.SG
'The bear frightened the children with its teeth; caused the children to be afraid of its teeth (by growling, showing teeth).'

(39) Class B, optionally ergative subject

a. *jab maiN=nee maasTar=jii=see sawaal samajh-aa,*
when I=ERG teacher=HON=from question[NOM] understand-PFV.M.SG
*too maiN=nee usee dubaaraa apnee aap hal kar-kee deekh-aa*
then I=ERG 3s.DAT again self:GEN self solution do-PRT see-PFV.M.SG
.'When I understood the question from the teacher, then I saw it again solved.'
(Nespital 1997:1122)

b. *maiN yah baat pahlee hii samajh-aa*
I.NOM this matter first only understand-PFV.M.SG
*[ki raakeesh apnii zid=par drRh hai]*
that Rakesh self:GEN obstinacy=on fixed be.PRS.3SG
'I understood from the first that Rakesh had become fixed on his own obstinacy.' (Nespital 1997:1122)

(40) Class C, dative subject

*tabhii usee [ eek khaalii rikshaa aa-taa] dikh-aa*
then-only 3SG.DAT one empty rikshaa.NOM. come-IPFV  be.seen-PFV.M.SG
'Just then he saw [an empty riksha coming].' (Nespital 1997:701)

(41) Class D, locative object
baccee  bhaaluu=see  Dar-tee  haiN    /Dar ga-yee
child.M.PL.NOM]   bear=from    fear-IPFV be-PRS.3.MPL/fear go-PFV.M.PL.
‘The children are afraid of the bear/became afraid of the bear.’

Classes A and B have ergative subjects as well as differentially case marked direct objects with -koo, sensitive to the referential properties of the object. The subject is always available as a binder of a reflexive. Classes C and D never have differential object case. There is an interesting alternation in Class C, which allows the experiencer to bind either reflexive or a pronoun, and under certain circumstances, the internal object may bind a reflexive in the dative argument. Some verbs allow reversal of grammatical functions, so that the theme is subject and the experiencer is a non-subject.

In Davison (2004), I propose that Classes C and D consist of a VP projection only, allowing some freedom in which argument in Class C moves to the specifier of TP. Both are equidistant from TP, because there is no vP projection in (45b). Class A and B predicates, however, project a vP projection which introduces the external argument above VP, as in the tree structure in (42b). This vP projection plays some role—which is yet to be determined—in differential case marking with =koo, as the VP projection alone, in Classes C and D, does not allow =koo on direct objects. In vP, the internal object argument in VP cannot move to the specifier of TP, because the external subject argument is closer. Class A predicates are the only ones which project a dative indirect object, perhaps through a higher projection within vP, as in (42b), or a higher dative phrase above v. The structure must reflect the fact that the indirect object normally precedes the direct object.

Bhatt (p.c.) speculates that the direct object with =koo moves to a higher vP projection which is higher than the indirect object. See Butt (1993: 98ff for discussion of a proposal involving weak and strong structural case positions which can apply to Hindi-Urdu. Case licensing of the direct object remains something of a puzzle, whether it is =koo or the unmarked nominative. The v head of VP might have an [acc] feature which values the =koo marker as accusative case, but the nominative would seem also to be an accusative case. Otherwise the TENSE head would have to value two nominative arguments, the subject, which is closest, and the direct object within the vP, across a phase boundary.

Monovalent verbs fall into several distinct classes in other languages. See Ahmed (2010) for a discussion of the question of whether Hindi-Urdu verbs can be divided unambiguously into unaccusative and unergative verbs.

4. Basic clause structures

4.1. Transitive and intransitive structures

I want to sum up the precedent discussion of clause structure, grammatical functions and case of
arguments by putting this information together in two illustrative phrase structure trees, one containing a class A main verb (42), and another with a class C verb (45).

(42) a. vee mujhee meerii Daak pahuNc-aa rahee haiN
   3.M.PL.NOM I.DAT my-F mail.F.NOM reach-CAUS PROG.M.PL be.PRS.3.PL
   ‘They are forwarding my mail to me.’

b. 
   \[ \begin{array}{c}
   \text{TP} \\
   \text{DP} \\
   \text{T'}[EPP] \\
   \text{vee [Nom]} \\
   \text{‘they’} \\
   \text{AspP} \\
   \text{Tense [Present]} \\
   \text{vP} \\
   \text{Aspect [Progressive]} \\
   <\text{vee}> \\
   \text{v’} \\
   \text{VP} \\
   \text{v [causative]} \\
   \text{DP.DAT} \\
   \text{mujhee} \\
   \text{‘I-dat’} \\
   \text{DP.NOM} \\
   \text{meerii Daak} \\
   \text{‘my mail’} \\
   \text{pahuNc} \\
   \text{‘arrive’} \\
   \end{array} \]

The constituent order in (43) is the unmarked order in Hindi-Urdu (and other head final languages. Variations of order are possible. Movement (‘scrambling’) both to the left (43) and right (44) alters the canonical Subject-IO-DO-V order.

(43) [meerii Daak] vee mujhee pahuNc-aa rahee haiN
   my-F mail.F 3.M.PL.NOM I.DAT reach-CAUS PROG.M.PL be.PRS.3.PL
   ‘They are forwarding my mail to me.’ [DO S IO V]

(44) yah kitaab dii thii [siita=nee] [raam=koo]
   that book.F.S[NOM] give.PFV.F.SG be.PST.F.SG Sita=ERG Ram=DAT
   ‘Sita had given that book to Ram.’ (Bhatt and Dayal 2007: 288) [DO V S IO]

Movement to the left has different consequences from movement to the right. Mahajan (1990a) shows that leftward movement has effects on coindexing properties; the constituent which is moved to the left to some higher position is able to bind a lower TP internal constituent which would otherwise c-command it (see below in section 3, and Kidwai (2000) for further
discussion). Rightward scrambling does not have the same effect on coindexing, but does restrict the scope of wh-phrases (Bhatt and Dayal 2007) (see section 6.3.2 below). The variations in (43) and (44) are in some sense ‘marked’, in that they have various effects on interpretation, and they support the conclusion that constituent order in this language is not free in some arbitrary way, but is basically linearized with heads preceding complements, except for C and D heads. The support for this conclusion will be given in the following sections.

These variations and their effects are reported for sentences like the examples above, which have transitive, class A verbs. Below I will give my proposed structure for a sentence with a class C verb, lacking a vP phrase. (Alternatively, there would be a vP projection with radically different case and thematic role properties; see the remarks in sections 3.1 and 3.2 above.)

(45) a. siita=ko eek upay suuujh ga-yaa
    Sita.=DAT one means.M.SG.NOM be.visible go-PFV.M.SG
    ‘Sita saw a solution; a solution came to Sita mind to Sita.’

b.                                TP
    DP[DAT]         T’ [EPP]
                   ASPECT Tense[Aorist]
    VP                   Aspect [Perfective]
    <DP[DAT]> V’
    DP[NOM]m.sg V
    V              V
    suujh          ga-yaa
    ‘ be.visible’ ‘go-PFV.M.SG

The dative experiencer DP, which originates in VP, moves to the specifier of TP to satisfy the requirement that a TP have a subject. The nominative theme stays in place within VP, and as the only nominative argument, controls the agreement. The V has the perfective aspect standing for the simple past or aorist tense. What is new in this phrase structure is the syntactic combination of the main verb suujh ‘be visible, come to mind’ with another verb jaان-nee/ga-yaa ‘to go, go PFV’. In the next section I will summarize briefly two kinds of verb combinations and their effect on aspect and case.

4.2. Combinations of verbs and other constituents

The clause structure of Hindi-Urdu involves tense/aspect nodes, which can be filled with an affix or a full finite auxiliary verb. In addition, Hindi-Urdu makes frequent and
productive use of combinations involving verbs. There are two kinds of combinations, VV combinations in which a main verb combines in the syntax with a ‘vector’ or light verb, and N or A and V, which form lexical items. The VV construction is discussed in Hook (1974), Butt (1995), and Nespital (1997), while the compounding of a ‘light’ main verb with N or A to form a lexical unit which behaves like a single predicate is discussed in Hook (1979), Verma (1990), Mohanan (1994), and Davison (2005).

4.2.1. Verbal combinations

VV consists of a main verb followed by another (vector or ‘light’) verb which adds some aspectual or adverbial information to the representation of the event.

(46) a. baccaa  roo paR-aa  
child.NOM cry fall-PFV.M.SG
‘The child burst into tears, suddenly began to cry.’ (cf. Butt 1997: 121)

b. us=nee roo Daal-aa  
3SG=ERG cry put.down-PERF.M.SG
‘He/she wept copiously on purpose.’ (Butt 1997: 123)

c. bacce=nee kitaab paRh lii  
child.OBL=ERG book.F.SG read take-PFV.F.SG
‘The child read the book (completely) (for his own benefit).’

d. maiN zarurrat=see zyaadaa khaa ga-yaa, peeT phuul  
ga-yaa, jhapakii lag ga-ii  
I.NOM necessity-from more eat go-PFV.M.SG belly[NOM] swell go-PFV.F.SG
‘I ate (up)/gulped more than was necessary, my belly swelled up, and I felt sleepy.’
Montaut 2006: 126.

Hook (1974) and Nespital (1997) show that the set of possible vector verbs is not completely fixed, and speakers differ in the details of what vector verbs occur with which main verbs. All vector verbs also occur as main verbs. They add information about inception (46a), intentionality or its absence (46b, 46d), and telicity (46c) (Hook (1974), Nespital (1997), Butt (1995 and 1997). There are subtle constraints on which combinations are possible, and what the contribution of the vector verb is (Nespital 1997). For example, verbs with stative inherent aspect tend not to combine with vector verbs.

Vector verbs are either transitive, as in (46b,c) or intransitive, as in (46a,d), affecting the case of the subject of the combined VV. Typically transitive verbs have transitive vectors, and intransitive main verbs have intransitive vectors, so that the subject case reflects transitivity in (46 a, c, d ) But mixed combinations are possible, as in(46 b, d) and (27).

The combination of vector and main verb is complex. The main verb argument structure prevails, while the vector verb determines the subject case. See Butt 1995, 1997 for a very clear and comprehensive account of how the event structure of the vector verb is ‘bleached’, losing some of its specifications, so that it refers to the inception of the event referred to by the main
4.2.2. Verbal compounds with nouns and adjectives

The combination of a noun or adjective with a verb such as transitive *kar-naa* ‘do’ or intransitive *hoo-naa* ‘be, become’, *aa-naa* ‘come’ is a very productive source of new predicates (Verma 1993), in fact the only source in recent times. The nouns are complex event nominals. The result combines the event structures and the arguments of the noun and the verb. There are several different surface forms which result in the case of transitive NV compounds (47c,d). These compounds often coexist with monomorphemic doublets. But the compounds are not fully compositional; *yaad kar-naa* ‘do memory’ means not only ‘to remember’ but also ‘to miss someone’, as in (47c,d), while *khooj kar-naa* means not only ‘to search for’ but also ‘to discover’ in (47a). There can be subtle differences of meaning; the monomorphemic verb *khooj-naa* ‘search, find’ compared with *khooj kar-naa* ‘find, discover’. The monomorphemic verb is unspecified for telicity, while the combination is telic (Hook 1974).

(47)  

a. *ganapati singh=nee [eek naii bimaarii=kii khooj] kii hai*  
  Ganpat Singh=ERG one new illness=GEN search.F.SG.NOM do-PFV. be.PRS  
  'Ganpat Singh has discovered a new disease.' (Bahl 1974:222)

b. *baccooN=koo billii=see Dar lag-taa hai*  
  child=DAT cat=from fear.NOM strike-IPFV be.PRS  
  'The children are afraid of the cat.'

c. *us=nee moohan =koo bahut yaad ki-yaa*  
  3s=ERG Mohan=DAT much memory.F.SG do-PFV.M.SG  
  'He/she remembered Mohan very much.' (Bahl 1974:xxix)

d. *maiN=nee [un=kii yaad] kii*  
  I=ERG 3pl=GEN.F memory-F.SG.NOM do-PFV.F.SG  
  'I remembered, recalled them; I missed them.'

The light verb determines the case of the subject, which is ergative in (47a,c,d) or dative in (47b). The N itself has properties of a syntactic object. It has nominative case, and triggers verb agreement in (47a,b, d). Case marking of the object arguments in a sentence with a complex predicate follows more than one pattern. Genitive case is used for the logical object of N in (47a,d). A second option is locative case in (47b), which is selected by the root *Dar* ‘fear’. A final option is the normal differential object marker =*koo* in (47c), suggesting that the N and V have fused syntactically as a single unit with case valuing properties; see Hook (1979) and Davison (2005).

If locative or dative case were the only possibilities for the thematic object, then it would be possible to propose that N incorporates into V, perhaps by raising, so that argument structures would merge in this derived head. But this analysis does not account for the genitive case, which is the default case for a combination of N and a DP. The genitive case suggests instead that the event nominal N first combines with its DP thematic object, licensing its thematic object. This DP-N phrase then undergoes argument merger with V. (These issues are discussed in greater
detail in Davison (2005). I conclude that Hindi-Urdu does not form complex predicates by syntactic incorporation in (47a,b,c), because the N rather than N+V selects thematic object case.

4.4. Noun Incorporation

Incorporation in Hindi-Urdu is very restricted. There is a small number of N-V pairs which directly mark the direct object like (47c) (see Hook (1979), Davison 2005)). In addition it has been proposed by Mohanan (1995) that a generic indefinite direct object is semantically incorporated with the main verb: kitaab beeec-naa ‘book sell-INF, do book-selling’. The incorporated object is generic and non-referential. Dayal (2011) shows that what is incorporated is a phrase (NumP) which though singular in form can have plural reference. This kind of incorporation is limited and non-compositional, for example, makkhii maar-naa ‘lit. kill flies, waste time’ (Dayal 2011:134). In many languages, many verbs of manner of motion incorporate directionality: ‘float under the bridge’. Narasimhan 2001 shows that Hindi-Urdu manner of motion verbs require directionality to be expressed separately, without lexical incorporation.

4.5. Branching direction

Hindi-Urdu is mostly left branching in its lexical categories, and some of the functional categories like tense and aspect.

4.5.1. Lexical categories, left branching

I will discuss first the lexical categories V, A, N and P, which have complements to the left. Verbs have direct objects to the left, as we see in (4) and (5). Adjectives have complements to the left, with case selected by the adjective in (48) and (49):

(48) [PRO(arb) jaa-nee =koo] taiyaar
    go-INF.OBL-=DAT. ready
    ‘Ready [PRO to go]’

Nouns take complements to the left:

(49) [zindagii =kii] (eek) kahaanii
    life =GEN.F one story.F
    ‘(A) story [of (one’s) life’

The genitive case is the typical unmarked case for noun complements. The genitive postposition has adjectival inflection, agreeing with the NP it modifies—see Payne (1995). Note that the genitive phrase may be outermost (8a). See Verma (1967) for an overview of the Hindi Noun Phrase.

Postpositions fall into two categories, both left branching. Case markers for ergative, dative, genitive and locative case are expressed as clitics to the right of their complements; see Butt and King (2004) for evidence that Hindi-Urdu postpositions are clitics and not suffixes.
They require oblique morphology. Other postpositions do not express case, but instead have adverbial meanings derived in many cases from nouns, and because of their nominal category, they require genitive case on their complements, which itself is oblique in inflection:

(50)  a. [un=kee aa-nee=kee] kaaraN
3.PL=GEN.OBL come-INF=GEN.OBL reason
‘Because [of their coming]’

b. [qaanuun =kee] xilaaf
law=GEN.OBL opposition/contrary
‘Against [the law]’

A small number of adpositions, including Persian borrowings occur as both prepositions and postpositions, shown in (51a,b):

(51) a. maiN=nee [binaa [paRh-ee]] yah kitaab pheeNk dii
I =ERG without read-PFV.OBL this book.F.SG throw give-PFV.F.SG
‘I threw this book away without [having read (it)]’

b. [paRh-nee-kee] binaa
read-INF-GEN.OBL without
‘Without [reading]’

There are also Persian prepositions, such as baa- ‘with’ and bee- ‘without’, which form Hindi-Urdu compound words (Schmidt (1999:250ff.)):

(52) a. baa-iimaan ‘with faith, faithful’

b. bee-sharm ‘without shame, shameless’

Another interesting construction borrowed from Persian is the ezafe construction, which in Hindi-Urdu, especially in Urdu, contrasts with the genitive =kaa postposition (Schmidt 1999:246-47). The ezafe is a clitic on the possessor, which precedes the possessed in (53a) (Bögel and Butt 2010)

(53)  a. [maalik = ee] makaan
master.M.SG EZ house
‘Owner of the house, landlord’

b. [makaan =kaa] maalik
house.MSG =GEN.M.SG owner.MSG
‘Owner of the house, landlord.’

4.5.2. Functional categories
The functional categories include Focus, Aspect, Tense and Negation, which are head final, and Complementizer, which is head initial. The focus particles ‘also’, ‘only’ and ‘even’ are final clitics which may precede or follow case clitics (54a,b):

(54) a. [caah-nee=kii] hii baat nahiiN hai
    want-INF=GEN.F.SG only matter not is
    ‘It is not only a matter of wanting.’ (Montaut 2006: 288)

    b. siitaa [niitaa=see] bhii sundar hai
    Sita.nom Nita=from even beautiful is
    ‘Sita is even more beautiful than Nita.’ (Montaut 2006: 294)

Tense and Aspect follow their verbal complements. Negation has several forms. Besides nahiiN ‘not’, there are variant forms of negation. In imperative sentences, mat is possible, and nonfinite clauses require na. The position of negation is somewhat less fixed. Constituent negation follows what is negated, with special intonation on the complement. as in (55a):

(55) a. siitaa=nee nahiiN kitaab khariid-ii, (kisii aur=nee khariid-ii)
    Sita=ERG not book.F.SG.NOM buy-PFV.F.SG some else=ERG buy.PFV.F.SG
    ‘Sitaa didn’t buy a/the book, someone else did. (Vaisishth 2000: 111)

    b. raam rooTii khaa-taa nahiiN thaa
    Ram.M.SG.NOM bread.NOM eat-IPFV.MSG not be.PST-M.SG
    ‘Ram did not (used to) eat bread.’ (Vaisishth 2000: 109)

    c. raam rooTii nahiiN khaa-taa thaa
    Ram.M.SG.NOM bread.NOM not eat-IPFV.M.SG be.PST.M.SG
    ‘Ram did not (used to) eat bread.’ (Vaisishth 2000: 109)

    d. *raam rooTii khaa-taa thaa nahiiN
    Ram.M.SG.NOM bread.NOM eat-IPFV-MSG be-PST.M.SG not
    ‘Ram did not (used to) eat bread.’ (Vaisishth 2000: 110)

Sentential negation is only sentence-final (55d) with special emphasis. Otherwise, it occurs before the main verb, or within the verb-auxiliary sequence. The variant orders could be derived by assuming that Negation is the head of a projection above vP and Aspect, as in(55b). In (55c), v-Aspect optionally raises to Tense (55c), stranding Neg in surface structure. (See Mahajan (1990) for a proposal which raises Neg to Tense at LF, deriving the right c-command relation for negative polarity indefinites.)

Hindi-Urdu is not an entirely ‘harmonic’ language in terms of head direction, that is, in consistency of head direction. The CP and DP are head-initial (56). See examples below of finite complement clauses (section 6.1).
In contrast to the nearly universal head final structure of projection heads in this language, the complementizer *ki* ‘that’ and other finite clause markers like *agar* ‘if’ are always initial (56a). The complementizer and conjunctions in Hindi-Urdu are examples of a higher projection which may be disharmonic with lower phrasal projections (Biberauer et al. 2009); the highest projection may be head-initial when the lower projections are head-final. These highest projections have markedly different properties from non-finite clauses, both in order within the complex sentence (section 2.1.2) and in cross-clausal coindexing relations (section 6.2).

5. Finite and non-finite clauses

Finiteness is notoriously difficult to define in a universal way (see the contributions to Nikolaeva (2007). The fundamental difference between finite and non-finite clauses in Hindi-Urdu lies in the inflection expressed on the verb. Person inflection is found only in finite clauses, a standard finding in many languages. Both finite and non-finite clauses express number and gender on both the tense and aspect projections. Curiously, however, person agreement may be absent in past tense finite clauses, without affecting their intrinsic finite qualities, such as licensing ergative case. (see (9), (24) above). This occurs when the tense auxiliary *hai* ‘is’ or *thaa* ‘was’ is omitted in the simple past or aorist (30); see Montaut (2006)). Even the past tense forms of *hoo-naa* ‘be’ are inflected only for number and gender, as in (17) and (20) above.

5.1. Finite inflection

Finite inflection includes indicative and subjunctive or contingent mood, as well as imperative inflection. Indicative inflection expresses past, present and future inflection, as in the examples above; see also Butt and Rivzi 2010.

(57) a. Contingent/subjunctive

\[
\text{sita}=\text{DAT} \text{ fear strike-PFV} \quad [\text{ki kahiiN} \quad \text{us}=\text{GEN} \text{ brother not} \quad \text{na} \quad \text{aa pahuNc-ee}]
\]

\[\text{Sita=DAT} \text{ fear strike-PFV that somewhere 3S=GEN brother not come-CONT-3S} \]

‘Sita was afraid [that her brother would turn up].’ (Montaut 2006:244)

b. Imperative (familiar form)

\[
\text{mujhee} \quad \text{paisaa} \quad \text{dee} \quad \text{doo!}
\]

\[\text{I.DAT} \text{ money.NOM give give.IMP.2S.FAM.} \]

‘Give me money!’

With verbs of fearing, the contingent complement contains a pleonastic negation *na* ‘not’, as in
The familiar imperative, contingent and future are related morphologically; compare (57a) and (1) above. Imperatives include the verb stem with -iyee(gaa) (polite form), and the bare, non-agreeing infinitives, essentially non-finite forms used in finite contexts.

Subordinate finite clauses will be discussed in section 6 below. They include complements, adverbial clauses, and relative clauses.

5.2. Non-finite subordinate clauses

Non-finite inflection includes the participles and the infinitive suffixes mentioned above in section 2.4. Non-finite clauses are distinguished from finite clauses in several ways: verbal inflection, the form of negation (na instead of nahiiN), and occurrence in sentence internal position. They normally occur as complements or modifiers, typically to the left of a head, in unmarked phrase order. These include infinitives (58), imperfective participles (59), perfective participles (60) and the conjunctive participle (61). Note the case on the non-finite clause, selected by the matrix clause. In (59) and (60), I am assuming an analysis of the complement as a proposition, the complement of a small number of verbs deekh ‘see’, sun ‘hear’, paa ‘find’ and lag ‘strike, seem’.

(58) a. usee [PRO saaikal calaa-naa] aa -taa hai
   3S.DAT bicycle.F drive-INF come -IPFV.M be.PRS.3SG
   ‘He/she knows [(how) to ride a bicycle].’

   b. ham [PRO wahaan jaa-nee] =kii sooc rahee haiN
      we.M there go-INF.OBL =GEN.F think PROG.M.PL be.PRS.3PL
      ‘We are thinking of [PRO going there].’

   c. vee loog [PRO macchlii pakaR-nee] =kee liyee aa-yee
      3M.PL people.M fish.F catch-INF=GEN.OBL for come-PFV.M.PL
      ‘These people have come [PRO to catch fish].’ (Subbarao 1984:33)

(59) us=nee [billii=koo duudh pii-tee hu-ee] deekh-aa
   3S=ERG cat.F=ACC milk.M.NOM drink-IPFV.OBL be-PFV.F see-PFV.M.SG
   ‘He/she saw [the cat drinking the milk].’

(60) a. [ woo bahut thak-ii hu-ii ] lag-tii hai
   3.F.SG.NOM much be.tired-PFV.F be.PFV.F strike-IPFV.F be.PRS.3SG
   ‘She seems very tired.’

   b. [is leekhak=kii likh-ii hu-ii] kitaab mujhee
      this.OBL writer=GEN.F write-PFV.F be.PFV.F book.F.NOM I.DAT
      bahut pasand hai

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much liking is
‘I very much like (the) book [written by this author].’

(61) a. maiN too abhii [PRO khabar paa-kar] aa-yaa huuN
I.M.SG.NOM] topic now.EMPH news get-CP come-PFV be.PRS.1SG
Having heard the news, I have come just now. As soon as I heard the news, I came.
(Porizka 1963: 152)

b. us=nee [PRO sooc -samajh -kar] ciTThii likh-ii
3s=ERG think understand-PRT letter.F.S write-PERF.F.S
‘He/she wrote the letter carefully.’

Non-finite clauses may be used as complements, as in (59a,b)-(60), and also adverbially as in
(61a,b). The core meaning of -kar is ‘having Ved’ in (61a), conveying that the event expressed
by V is completed in relation to the matrix clause event. A common use, therefore, expresses
temporal sequence. There is another use shown in (61b), in which the conjunctive participle is
used as a modifier and part of the same event as the main clause. See Narasimhan 2001 for a
discussion of this construction with manner of motion verbs. Whether complements or
adverbials, non-finite forms have the privilege of occurring sentence-internally. Finite clauses,
however, must be externalized by being adjoined to TP, vP or DP (section 6) below).

5.2.1. Non-finite clause types and lexical selection

Control verbs select infinitives, which may be postpositionally case-marked like
nominals, as in (62) and (63). These inflected forms are determined by the matrix predicate in
these sentences. Infinitives can also be marked by postpositional case clitics, such as the genitive
in (63). The default case for subject and object infinitives is the direct or nominative case, as in
(64).

(62) madhuu=nee [PRO baahar jaa-nee] =see inkaar ki-yaa
Madhu.F=ERG outside go-INF.OBL =from refusal do-PFV.M.SG
‘Madhu refused [PRO to go outside].’ (Subbarao 1984:36)

(63) raadhaa=nee moohan=koo [PRO kitaab paRh-nee] =kee liyee/par majbuur
Radhaa=ERG Mohan=DAT book read-INF.OBL=GEN for/on forced
ki-yaa
do.PFV.M.SG
‘Radhaa forced Mohan [PRO to read a book].’ (Subbarao 1984:34)

(64) [us =kaa na aa-naa] ajiib =sii baat hai
3SG.OBL=GEN not come-INF.NOM strange =like matter be.PRS.3SG
‘[For him/her not to come] is a strange thing.’
Non-finite inflection is itself inflected for oblique case; there is also gender agreement in the direct form, which will be shown in section 5.3.1. Raising/Exceptional Case Marking verbs select perfective and imperfective participles, as in (59) and (60a) above. I return to syntactic differences between finite and non-finite clauses in section 6.

5.2.2. A case restriction on controlled null subjects

Subordinate clauses may have null subjects, as well as overt genitive subjects like the one in (64) above. That subject could be null, with an ‘arbitrary’ reference for the subject. Other infinitives, as well as the conjunctive particle have obligatorily null subjects, which is coindexed (‘controlled’) by a matrix antecedent. Some examples include (60a,b). There is an interesting restriction, found in some other languages as well, on the case of the null (PRO) subject. We have seen sentences with dative subjects in (26) and (29a) above; they may be antecedents of the conjunctive participle and the subject-oriented reflexive. If the PRO subject itself has dative case by virtue of the predicate it is associated with, the sentence is strongly ungrammatical. Substituting a nominative-subject predicate makes the sentence entirely grammatical.

(65) a. [*PRO(i) kroodh aa-kar] woo(i) ghar=see nikal ga-yaa
    anger come-CP 3.SG house=from go.out go.PFV.M.SG
    [PRO(i) having gotten angry] he(i) left the house.’

    b. *maN(i) [PRO(i) us=par kroodh aa-naa nahiiN caah-tii huuN
       I.NOM 3.SG.OBL=on anger come-INF not want-IPFV.F
       be.PRS.1.SG
       ‘I(i) don’t want [PRO(i) to get angry at him/her].’

See Davison (2008) for more information about this case restriction, and its implications for the syntactic account of obligatory control. This kind of ungrammaticality can be used as a test for obligatory rather than optional control.

5.3. Properties of non-finite clauses in combination.

The properties of single clauses have been described above, both independent clauses and the principal types of embedded non-finite clauses. This section reviews how clauses combine. I first note how agreement, reflexive binding and wh- scope may cross non-finite clause boundaries.

5.3.1. Non-finite complements and cross-clausal coindexing

Non-finite embedded clauses include infinitive/gerunds, participle complements and relative modifiers, and conjunctive participles/converbs marked by Verb-\textit{kar} ‘having Ved’, which have been outlined in section 2.5.3 above. Here, I focus on infinitive/gerunds, whose \textit{-naa} tense suffix has the nominal properties of case, number and gender, and also adjectival properties
of agreement in number and gender. See Butt (1995) for an analysis of infinitives as nominalizations which allow multiple local agreement relations.

5.3.2. Agreement within and across clause boundaries

In single clauses, the highest nominative argument determines agreement (section 2.3 above). Nominative objects of an embedded complement clause have the option of controlling agreement (Butt 1995, Bhatt 2005). Agreement is found on the infinitive as well as the matrix clause (66a), or is absent (66b). Two or more degrees of embedding allow extended agreement (66c).

(66) a. Long-distance Agreement

\[
\text{laRkooN}=\text{nee} \quad [\text{PRO yah kitaab} \quad \text{paRh-nii} /*\text{naa}] \quad \text{caah-ii}
\]

boys=ERG \quad this book.F.NOM \quad read-INF.F/INF.M \quad want-PFV-F.SG

‘The boys wanted [PRO to read this book].’

b. Default Agreement (masculine sg. 3p)

\[
\text{laRkooN}=\text{nee} \quad [\text{PRO yah kitaab} \quad \text{paRh-naa}] \quad \text{caah-aa}
\]

boys=ERG \quad this book.F.NOM \quad read-INF.M \quad want-PFV.M.SG.

‘The boys wanted [PRO to read this book].’

c. Extended Long-distance Agreement

\[
\text{maiN}=\text{nee} \quad [\text{PRO}\quad [\text{PRO gaaRii} \quad \text{calaa-nii}] \quad \text{siikh-nii}] \quad \text{nahiiN caah-ii}
\]

I=ERG \quad car.F.NOM \quad drive-INF.F \quad learn-INF.F \quad not \quad want-PFV.F

‘I didn’t want [PRO to learn [PRO to drive a car]].’ (P. Dasgupta p.c.)

Long-distance agreement is not possible if the complement is finite, as in (78) below. Nominative subjects of intransitive verbs may also trigger long-distance agreement:

(67) \[
\text{[baseeN} \quad \text{Dipoo-see} \quad \text{nikal} \quad -\text{nii]} \quad \text{shuruu} \quad \text{hu-iiN}
\]

bus-F.PL \quad depot-from \quad come.out \quad -INF.F \quad beginning.M. \quad be-PERF.F.PL

Buses began to come out of the depot.’ (K.V. Subbarao, p.c.)

Various explanations have been proposed to account for how agreement can be extended and why its extension is optional. These proposals include raising the embedded object to the matrix (Mahajan 1990a), making the nominal embedded clause agree with the matrix verb after it has agreed with the nominative object (Butt 1995), and complex predicate formation: the embedded verb combines with the matrix clause because of a (lexical) option, so that the infinitive object clause is realized as a projection which is not fully clausal, lacking a PRO subject (Bhatt 2005).

5.3.3. Anaphoric binding within and across clause boundaries

Reflexive pronouns in Hindi-Urdu are invariant for person, number and gender, and are subject oriented (2.5.2). But they may be simplex (apnaa) or complex (apnee aap). Simplex reflexives in embedded non-finite clauses may be locally or long-distance bound, complex

(68) maaN=nee    shyaam-koo [PRO apnee=koo/apnee aap=koo gumnaam patr
    mother=ERG Shyam=DAT   self’s=DAT/self’s self-DAT anonymous letters
    bheej-nee] =see mana   kiyaa
    send-INF=from forbidden do-PFV.M.SG
  ‘Mother forbade Shyam(i) [PRO(i) to send self anonymous letters].’ (Davison 1999)
Ambiguity: apnee-koo = Mother, Shyam (Local and long-distance reading)
Non-ambiguous: apnee-aap-koo = Shyam/*Mother (Only local reading)

(69) maaN=nee    raadhaa(i)=koo [PRO(i) apnee=koo/apnee aap=koo deekh-nee]
    mother-ERG Radhaa-DAT self’s=ACC /self’s self=DAT see-INF.OBL
    nahiiN di-yaa
    not give-PFV.M.SG
  ‘Mother did not allow Radha(i) [PRO(i) to look at self].’
Ambiguity: apnee-koo: Mother, Radha
Non-ambiguous: Radhaa, *Mother

See the papers in Cole, Huang and Hermon (2001) for a discussion of how these properties of binding may be accounted for in a Chomskyan theory of syntax.

There are clear parallels between long-distance agreement and long-distance binding, in that both are limited by finite inflection in embedded clauses. But long-distance reflexive binding is available in more embedded contexts than long-distance agreement. Reflexive binding is possible across a case-marked infinitive, such as -see ‘from’ in (68). Case marking of this sort blocks long-distance agreement (70):

(70) baccooN=nee  [PRO ciTTiiyaaN likh -nee /*-ni =see inkaar
    children=ERG          letter.F.PL.NOM write-INF.OBL.M/ INF.F=from refusal
    ki-yaa /*-kiN
    do-PFV.M.SG *do-PFV.F.PL
  ‘The children refused [PRO to write letters].’

5.3.4. Wh-scope in non-finite clauses

Nonfinite clauses are also transparent for wh-scope, unlike finite clauses. An interrogative DP in a non-finite clause must have matrix interrogative scope. This is true for the complement infinitive (71) and the participial relative in (72):

(71) aap(i)=nee [[PRO(i) kyaa kar-nee] = kaa phaisalaa ki-yaa?
    you=ERG what? do=INF.OBL =GEN decision do-PFV.M.SG
  ‘What did you decide [PRO to do ____]?’ (Not ‘You decided [what PRO to do].’

28
(72)  

\[
\text{[}(\text{kis}=\text{kii} \quad \text{lih}=\text{hu}=\text{ii}) \quad \text{ kitaab]} \quad \text{aap}=\text{koo} \quad \text{sab}=\text{see} \quad \text{pasand} \quad \text{hai}?
\]

who?=GEN  write-PFV  be-PFV  book.F  you=DAT  all=from  liked  is

*’Who(i) do you like best the book [which(j) _(i) wrote ___(j)]?’

The Hindi-Urdu sentence is fully grammatical with matrix interrogative scope, because the
perfective participle modifier clause is non-finite. The finite counterpart in section 6.3.1 below is
as ungrammatical as the English translation of (72). See section 6.3.2 below for the limits placed
on wh- scope in finite clauses, and how these restrictions may be evaded.

6. Finite subordinate clauses

6.1. Finite clauses as verbal complements

Complement clauses are normally adjoined to the right (73), but are possible on the left.
(74). They are simply ungrammatical in argument position, in which they would receive case
(75). Instead, finite clauses can be coindexed with an optional nominal in the argument position.
There are many differing views on exactly how the construction is derived. For example, the
finite complement complement clause might be generated in preverbal object position and
extraposed to the right (or left), leaving a pronoun copy. Or the finite complement may be
generated to the right as an adjunct, coindexed with an expletive in object position. The pronoun
in object position may be the object, coindexed with the finite adjunct clause. There is still no
agreement on the most plausible analysis. Finite clauses used as complements are optionally
marked by the clausal prefix, the complementizer \text{ki} ‘that’:

(73)  

\[
\text{ham} \quad (\text{yah}) \quad \text{jaan-tee} \quad \text{haiN} \quad [\text{(ki)} \quad \text{vee} \quad \text{aa} \quad \text{rahee}
\]

we.NOM  this.NOM  know-IPFV.M.PL  be.PRS.3.PL  that 3.PL  come  PROG

haiN

be.PRS.3.PL

‘We know [that they are coming].’ (cf. Subbarao 1984)

(74)  

\[
\text{[(*ki)} \quad \text{vee} \quad \text{aa} \quad \text{rahee} \quad \text{haiN}], \quad \text{maiN} \quad \text{aisaa/yah} \quad \text{sooc-taa} \quad \text{huuN}
\]

\[
\text{that} \quad \text{3.PL} \quad \text{come} \quad \text{PROG} \quad \text{be.PRS.3PL} \quad \text{1.NOM} \quad \text{such/this} \quad \text{think-IPFV} \quad \text{be.PRS.1SG}
\]

‘[They are coming], so/this I think.’

In many case the pronominal \text{yah} ‘this’ and the complementizer \text{ki} ‘that’ in (72) may be omitted.
Subbarao 1984, Mahajan 1990a and Montaut 2004 explore the conditions for omission.

Though the \text{ki} clause is interpreted as the complement of \text{jaan-tee} ‘know. IPFV’, this
clause cannot occur in preverbal object position (75), unless the \text{ki} clause is right-adjoined to a
noun phrase like \text{yah baat} ‘this fact’ (76). This restriction holds for Hindi-Urdu and some other
Indic languages, but not for all (Bayer (1999), who notes that there are either initial or final
complementizers in Indic languages. It is proposed in Davison (2007) that some Indic languages
like Marathi and Bengali have an initial ‘high’ complementizer position (‘force’) on the left, as
well as a lower projection on the right (‘focus’ or ‘polarity’) which licenses a complementizer.

29
This expansion of the complementizer into different positions derives from Rizzi’s (1997) proposal about the left periphery of finite clauses.

(75) * ham [ki vah aa nahiiN sak-aa] nahiiN jaan-tee  
    we.NOM that 3.S.NOM. come not be.able-PFV not know-IPFV.M.PL  
    ‘We did not know [that he was not able to come].’

(76) ham yah baat [ki vee aa rahee haiN] jaan-tee  
    we.NOM this matter.NOM that 3.PL come PROG are know-IPFV  
    haiN be.PRS.3PL  
    ‘We know *(this fact) [that they are coming].’ (cf. Subbarao 1984)

A finite clause in (76) is adjoined to a clause internal full DP, which occurs in argument position.

There are two possible analyses of complement clauses. The syntactic complement could be the finite ki clause, which is forced by some principle to adjoin to the right or left side of TP (see Manetta 2010). Alternatively, the syntactic complement may be the optional pronoun or NP yah, yah baat, aisaa ‘this, this fact, such.’ Some evidence for the second position is shown in a previous section; non-finite complements have case postpositions selected by the matrix verb (Subbarao 1984:34ff) (see (62)-(63) above), and this case also carries over to the pronoun in object position when the subordinate clause is finite and adjoined to the right, as in (77).

(77) maaltii(i)=nee is (baat) =see inkaar ki-yaa [ki woo(i) baahar jaa-ee]  
    Malti =ERG this matter=from refusal do-PFV that 3.SG outside go-CONT.3SG  
    ‘Malti refused/denied [that she would go outside].’

In sum, the actual complement is a nominal element in preverbal object position, coindexed with the adjoined finite clause. This issue remains controversial, as we note in section 6.3.3 below. I will nevertheless refer to these finite clauses as complements, as they are interpreted as the main verb complement either directly or indirectly.

### 6.2. Coindexing relations

Finiteness in complement clauses introduces opacity in coindexing relations, such as the long-distance agreement and reflexive binding which is possible in the non-finite complement clauses described in section 5.3.2 above. In contrast to examples 5.3.1 above, the sentences in (78) and (79) are ungrammatical if agreement in (78) or binding in (79) crosses a finite clause boundary.

(78) laRkooN=nee kah-aa /*kah-ii [ki unhooN=nee yah kitaab  
    boys=ERG say-PFV.MSG / say-PFV.F.SG that 3PL=ERG this book.F.SG.NOM  
    paRh-ii/ *paRh-aa]
The boys said [that they read this book].’

The only possible agreement is found within the complement clause, in which the perfective verb agrees with the feminine singular direct object. The matrix verb cannot show agreement with this object, unlike the sentence with a non-finite complement (section 5.3.1). Similarly, reflexive binding in (78) is not possible across finite clause boundaries, unlike the long-distance binding which is an option for embedded non-finite complements in section 5.3.2.

(79) maaN(i)=nee raadhaa(j)=see kah-aa [ki usee(j) apnee(*i/j)=koo deekh-naa
Mother=ERG Radhaa=INST say-PFV that 3.SG.DAT self=ACC see-INF
nahiiN caahiyee
not ought
‘Mother(i) told Radha(j) [that she(j) should not look at self(*i/j).’

Within the finite ki clause, the anaphor apnee is locally bound by the subject usee ‘3SG[DAT]’. The matrix subject antecedent maaN=nee ‘mother=ERG’ is not available. In contrast, the matrix subject is a possible binder if the embedded clause is non-finite, as in (68) above.

In sum, subordinate complement clauses in Hindi-Urdu are external to matrix object position, whether by base generation or adjunction later in the derivation. Coindexation is limited within the single finite clause, with respect to agreement and reflexive binding.

6.3. Adjunct clauses

Finite adverbial clauses introduced by conjunctions are also adjoined, probably to the highest projection of the matrix clause. The adverbial clause may precede or follow the matrix, modified clause. The conditional clause typically precedes in example (80).

(80) [agar tum is kuursii =par aisee baiTh-oogee]
if 2.FAM.SG this,OBL chair.F.OBL =on so sit-FUT.2.FAM.SG
too woo TuuT jaa-eegii
then 3.PL break.INTR go-FUT.3SG
‘If you sit that way on this chair, it will break.’

Historically, adjunct clauses derive from the relative clauses found in earlier stages of Indic. Many of the conjunctions which introduce adverbial clauses belong to the Indo-European y-relative series, like yad ‘which, if’, which was replaced by the Persian agar ‘if’.

6.3.1 Finite relative clauses

Relative clauses in Hindi-Urdu and other Indic language fall into several different categories, distinguished primarily by order, but also by form. The specific relations among the different type are a matter of considerable discussion; the broad outlines of the issues will be
noted below. The correlative relative clause construction in modern Hindi-Urdu consists of a relative clause marked by a determiner/pronoun belonging to the relative j-series (in contrast to the interrogative k-series). The relative determiner joo ‘which’ marks the relativized constituent, which may be in situ, or at the left periphery of the clause. The matrix clause has a corresponding constituent, the one which is modified; it may be null, a pronoun or a full NP (see McCawley 2004 for more detailed discussion). The relative clause normally precedes in (81), but may also follow the matrix clause (82). Both versions must have a restrictive reading.

(81) \[aap =nee joo kitaab-eeN(i) kal khariid-iiN]  
you=ERG rel book.F.PL.NOM yesterday buy.PFV.F.PL  
vee(i) khoo ga-ii haiN  
3PL.NOM get.lost go-PFV.F. be.PRS.3PL  
‘The books [which you bought t yesterday] are missing.’

(82) vee kitaab-eeN(i) khoo ga-ii haiN  
3PL book.F.PL.NOM get.lost go-PFV.F. be.PRS.3PL  
‘The books [which you bought t yesterday] are missing.’

[ joo (kituabeeN)(i) aap=nee kal khariid-iiN]  
rel books.FPL[NOM] you=ERG yesterday buy.PERF.F.PL  
‘The books have gotten lost [which you bought t yesterday].’

The two possibilities of ordering in correlative clauses reflect the possibilities in earliest Sanskrit (Hock (1989)). An innovation, probably influenced by Persian, allows a relative clause to be right-adjoined to a NP in (83). This structure has the restrictive reading of the correlative structures, but it is also the only way that non-restrictive readings can be expressed in modern Hindi-Urdu (Dayal 1996).

(83) mujhee [woo aadmii [joo (*aadmii) siitaa=koo acchaa lag-taa hai]]  
I.DAT 3SG man which man Sita=DAT good strike-IPVF be.PRES.3s  
pasand nahiiN hai  
liking not be.PRS.3G  
‘I do not like the man [who Sita likes].’ (Mahajan 2000:203)

Multiple relatives are possible in left adjoined relative clauses, each relative corresponding to a correlate in the matrix clause:

(84) [jis(i)=nee joo(j) [PRO(i) kar-naa] caah-aa] us(i)=nee woo(j) ki-yaa  
which=ERG which.NOM do-INF want-PFV 3SG=ERG 3.SG do-PFV  
Lit.’Who wanted to do what, he/she did that.’ (Bhatt 2003: 486)  
There is disagreement among speakers about whether multiple relatives are also possible in relatives on the right.

There are various views on the derivation of correlative clauses. There is a general consensus that right adjoined relative clauses like (82) are extraposed to the right from a NP.
adjoined structure (84) (Dayal 1996: 153, Bhatt 2003: 488). The left correlatives like (81) may be derived by leftward movement from a NP adjoined relative clause (Mahajan 2000, Bhatt 2003), subject to locality conditions. Movement of a relative clause from a single head NP is a plausible account, but the existence of multiple relatives with multiple heads argues against movement of a single relative clause with multiple relative constituents. For this reason, Dayal 1996 treats correlatives as adjuncts to the matrix IP; Davison 2009 makes a case for a type of IP adjunction which accounts for locality conditions. Bhatt 2003 proposes a mixed analysis: relative clauses with a single relative are adjoined to the left of the head NP and optionally moved to adjoin to the left, while clauses with multiple relatives are base-generated as IP left adjuncts.

6.3.2. Interrogative scope.

Interrogative phrases are distinguished by the k-series of determiners and pronouns, such as kaun/ kis ‘who (direct/oblique)’, in (71) and (72) above, and (85) and (86) below. Unlike languages like English, there is no requirement for the interrogative phrase to move to the left periphery of the finite clause; instead, the interrogative usually appears in a preverbal focus position (Kidwai (2000). Only yes/no questions have an initial interrogative. As is the case in many languages, this interrogative is ‘what’, kyaa in Hindi-Urdu (see Davison 2007) for comparison of Hindi-Urdu with other Indic languages, in the way that yes/no questions and clausal subordination are expressed).

(85)  
yah kitaab kis=koo sab=see acchii lag-ii?
this book.F.SG.NOM who?=DAT all-from good.F strike-PFV.F.SG
‘Who likes this book the best?’

(86)  
kyaa aap=koo yah kitaab sab=see acchii lag-tii hai?
what? you=DAT this book.F.SG.NOM all=from good.F strike-IPFV.F be.PRS.3SG
‘Do you like this book the best?’

Interrogative scope is restricted to the minimal finite clause. For example in (87), the interrogative force and scope of kaun ‘who.NOM’ is confined to the subordinate clause marked by the complementizer ki.

(87)  
pulis sooc rahii hai [ki coor kaun hai]
police.F.SG think PROG-F be.PRS.3SG that thief.NOM who? be.PRS.3SG
‘The police are thinking (about) [who the thief is ___].’
Not: ‘Who are the police thinking [that the thief is ___]?’

The addition of kyaa ‘what?’ in the matrix clause extends the scope of kaun ‘who?’ to the matrix clause in (88):

(88)  
pulis kyaa sooc rahii hai [ki coor kaun
police.F.SG what? think PROG-F be.PRES.3SG that thief.NOM who? hai]
be.PRS.3SG
Not ‘The police are thinking (about) [who the thief is ____].’
‘Who are the police thinking [that the thief is ____]?’

The interrogative in the most deeply embedded clause can have scope over multiple clauses, provided that each successive matrix clause contains kyaa ‘what?’ (89):

89) us=nee  kyaa kah-aa  [ ki pulis  kyaa sooc rahii  hai
3SG=ERG what  say-PFV  that police.F.SG.NOM  what think PROG.F  be.PRS.3SG
[ki coor  kaun  hai]]?
that thief  who?  be.PRS.3SG
‘Who did he/she say [that the police are thinking [that the thief is ____]]? (cf. Davison 1988)

Without kyaa ‘what’ in each of the clauses, the sentence fails to have matrix scope for kaun ‘who?’

Explaining and giving a formal account of the role of kyaa ‘what?’ has proved to be a surprisingly difficult task. There have been several important contributions to this question, particularly Dayal 1996 and previous work, Lahiri 2002 and Manetta 2010. The main difference among the accounts lies in the status of the matrix kyaa ‘what’ and the subordinate ki clause. On the direct dependency analysis of Manetta 2010, kyaa is a meaningless expletive with interrogative features which agrees with the interrogative in the ki clause. This clause is the real direct object of the matrix verb (and aligned to the right by some unspecified phonetic process). By contrast, the indirect dependency analysis of Dayal and Lahiri, the kyaa is the direct object of the matrix clause, and the ki clause containing the interrogative is an adjunct to the matrix clause. The semantics of the matrix sentence with the object kyaa includes interrogative sentences such as the ki adjunct clause, and effectively combines two questions into one, which gives the embedded interrogative scope over the matrix clause. See Manetta 2010 for a discussion of this account, and of another interrogative structure which involves movement.

Finite clauses restrict interrogative scope where the kyaa ‘what?’ strategy is not possible, in relative clauses, for example in (90). Compare this finite modifier clause with the non-finite participle in (72) above, and (90) below.

(90) *[joo(i) kitaab kis=nee likh-ii hai] (woo(i) aap=koo
which book who?=ERG write-PFV.F be.PRS.3SG 3SG.NOM you=DAT
sab=see acchii lag-iii hai?
all=from good.F strike-IPFV.F be.PRS.3SG
*‘Who(i) do you like best the book [which(j) ____ wrote ____(j)]?’

The status of embedded clauses as adjuncts has some historical foundation. As arguments
or modifiers, these clauses are external to the matrix clause, typically to the right in the case of complements, and to the left in the case of correlative clauses and adverbial finite clauses. The synchronic reason for externalization is unclear: finite complement clauses have categorial properties which are inconsistent with case marking. Non-finite clauses occur in sentence internal arguments and modifier positions, in part because of their nominal or adjectival properties which is reflected in their inflection, but even uninflected -kar conjunctive participles can be internal, adjoined to v/VP. Diachronically, all types of finite clauses in Indic languages have shown no markers of syntactic subordination until quite recently (Davison 2009).

6.3.3. Limits on interrogative scope

It is possible that all finite clauses are ‘islands’, restricting coindexing relations across finite clause boundary. The scope of interrogatives and relatives is limited to the local finite clause. For example, the interrogative in (91) has scope over the entire matrix CP, including the relative modifier clause. But an interrogative in a finite relative clause is ungrammatical, in example (90) above. It cannot have scope over more than its local finite clause, and in the local clause it is incompatible with the typing of the clause as relative.

(91) Interrogative in main clause:

[joo kitaab(i) us=nee t(i) likh-ii hai] woo kis=koo(j)
rel book 3S=ERG write-PFV.F be.PRS.3SG 3.FSG.NOM who?=DAT
sab=see acchii lag-ii?
all=from good.F strike-PFV.F.SG
‘Who likes best the book [that he/she wrote]?’

Interrogatives within a finite clause have scope only over that clause. This point is illustrated in sentence (87) above, in which the interrogative word kaun ‘who?’ has scope over only the subordinate clause. In sentence (88), the presence of kyaa ‘what?’ in the matrix clause extends the scope of kaun ‘who?’ . Similarly, relative phrases have scope only over a single finite clause, but no scope extension is possible by adding a pronoun yah ‘this’ in the matrix clause, in (92):

(92) *[us=nee (yah) kah-aa [ki [joo kitaab(i) aap=nee likh-ii] ]
3SG=ERG this say-PFV that rel book.F.SG.NOM] you=ERG write-PFV.F.SG
woo(i) acchii hai
3SG.F.NOM good.F be.PRS.3SG
‘The book [which he said [that you wrote which]] is good.’

Note that this sentence is grammatical with a different constituent structure and different meaning, ‘He said [that the book [which [ you wrote which]] is good].’ Here the relative phrase has scope over its minimal finite clause.

6.3.4. Obligatory wide scope and non-finite inflection
Interrogatives within non-finite clauses have only matrix scope, not local scope in (71). This fact suggests that non-finite clauses are TP, lacking the Complementizer Phrase projection with the interrogative feature which licenses a local wh-scope interpretation in (87).

(93) \[ \text{vee} \ [\text{PRO} \ kyaa \ kar-nee] =kii \ sooc \ rahee \ haiN? \]
\[ \text{3.M,PL.NOM} \ what \ \text{do-INF.OBL.}=\text{GEN.F} \ \text{think PROG.M.PL} \ \text{be.PRS.3PL} \]
‘What are they thinking of [PRO doing \text{what}]?’
Not: ‘They are thinking of [what PRO to do \text{what}].’

There are no non-finite relative clauses as such, but there is a modifier use of participles which is equivalent to a relative clause, shown in (94). The interrogative must have wide scope.

(94) \[ \left[ \text{kis} =kii \ 0(i) \ likh-ii \ hu-ii \right] \ \text{kitaab(i)} \]
who \ \text{write-PFV.F} \ \text{be-PFV.F} \ \text{book.F.S.} \]
\[ \text{Sab=see acchii hai?} \]
\[ \text{all=from good.F be.PRS.3SG} \]
‘Who is the book which \text{who wrote \text{which}} the best?’

The participle subject \text{kis-kii} ‘who-gen’ has scope over both the participle clause and the matrix clause. No narrow scope reading is possible. The facts in (93) and (94) suggest that non-finite clauses have no Complementizer Phrase projection above the Tense Phrase, accounting for the absence of non-finite clauses marked by \text{joo} ‘relative’ phrases. Non-finite clauses must be full clauses in some sense, however, because they are domains for reflexive binding and local agreement (section 5.3).

7. Summary

7.1. The structure of the clause

I began this discussion of Hindi-Urdu with a survey of the clausal projections within the Tense Phrase, grammatical functions like subject and direct object, and the morphology of nominal case and verbal inflection which reflect and govern the composition of the clause. Case reflects grammatical functions in various ways, in part depending on finiteness, in part on lexical class and diatheses. There is a clear distinction between structural case related to grammatical functions, and lexical case determined by specific verbs and related to semantic roles. Finiteness of clauses affects not only morphology but also syntactic relations of many kinds. It affects where finite clauses may be combined with matrix clauses; they must be in some sense external and adjoined, in examples (73)-(74), even if they are semantic complements. Non-finite clauses in contrast are clause-internal as complements and modifiers. Finiteness governs coindexing relations of several sorts. Verbal agreement, reflexive binding and wh-scope may hold across non-finite clause boundaries, while these relations are strictly local within finite clauses. Exactly how finite verb morphology is represented within the finite clause structure and how it limits these three coindexing patterns is an issue which deserves a more detailed theoretical account.
than is possible in the scope of this chapter.

7.2 Major features of clause structure and morphology in Hindi-Urdu

There are three themes in the outline of Hindi syntax and morphology in sections 1-3. The first is syntactic structure, which is largely left-branching. The verbal projections and the Aspect and Tense projections are head final. Finite CP and DP have initial heads. Finite CPs are far more restricted than non-finite clauses; finite clauses may only be external adjuncts to TP and DP, while non-finite clauses may be complements or phrase-internal adjuncts in a variety of phrases. In section 5, we have seen how finite CPs limit the possibilities for agreement, coindexing and wh-scope.

A second theme is the relation of case to grammatical functions and thematic roles. A clear distinction is found in HU between lexically selected cases like dative (for experiencers and goals) and locatives (for source, etc), in contrast to structural cases which are valued and licensed in specific syntactic configurations. These include genitive, ergative case on transitive subjects, and the dative of specific, animate direct objects. The licensing of the structural cases is restricted by finiteness, aspect and lexical class; the four lexical categories of verbs discussed above may derive from different verbal projections which license case in different ways on the arguments. Verb compounding and diatheses also affect case licensing and the projection of arguments.

A third theme involves chains of related constituents, antecedents which bind reflexive pronouns, and nominative arguments which determine person, number and gender (phi-features) on verbs. These relations are, however, independent; reflexives are strictly subject-oriented, while agreement may be determined by nominative objects as well as subjects. Non-finite clauses allow coindexing relations (reflexive binding, agreement, wh-scope) to cross clause boundaries Finite CPs also have wh-scope relations, primarily in relative clauses and constituent questions. These constructions involve a chain of a TP-internal constituent and the specifier position of CP. Finite clauses limit scope indexing more strictly than non-finite clauses.

8. Abbreviations

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<tr>
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<tbody>
<tr>
<td>CONT</td>
<td>Contingent</td>
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<td>CP</td>
<td>Conjunctive Participle</td>
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<td>DIR</td>
<td>Direct Case</td>
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<td>EMPH</td>
<td>Emphatic</td>
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<tr>
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<tr>
<td>FAM</td>
<td>Familiar</td>
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<tr>
<td>FORM</td>
<td>Formal</td>
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<tr>
<td>HON</td>
<td>Honorific</td>
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<tr>
<td>OBL</td>
<td>Oblique Case</td>
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