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Hindi-Urdu Infinitives as NPs

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1. Introduction

Kachru (1980:40) refers to Hindi infinitive constituents as 'infinitival complements'. As the sentences in (1) show, this analysis is essentially correct. In (la) and (lc) the infinitive *haar banaane* 'make necklace' is functioning as an argument of the finite verb. In (1b), the *haar banaane* is an adjunct of b^{h} ejaa 'send'[1].

(1) a. anjum-ne saddaf-se [haar banaane]-ko kahaa
Anjum.(F)-Erg Saddaf.(F)-Inst necklace(M) -Nom make-Inf.Infl-Acc say-Perf.M.
'Anjum told Saddaf to make a necklace'.

b. anjum-ne saddaf-ko [haar banaane] bhejaa
Anjum.(F)-Erg Saddaf. (F)-Dat necklace.(M)-Nom make-Inf.Infl send-Perf.M.
'Anjum sent Saddaf to make a necklace'.

c. anjum-ne saddaf-ko [haar banaane] diyaa
Anjum.(F)-Erg Saddaf.(F)-Dat necklace.(M)-Nom make-Inf.Infl give-Perf.M
'Anjum let Saddaf make a necklace.'

T. Mohanan (1992:21-25) discusses infinitives in the context of Noun Incorporation and thinks of the infinitive as a $\bar{V}$. Davison's (1988, 1990, 1991a 1991b) concern has been to find a satisfactory explanation for the 'long distance agreement' patterns displayed by the Hindi/Urdu infinitive[2]. In her work, Davison consistently assumes that infinitive constituents such as *haar banaane* in (1) must be analyzed as CPs. That is, she treats the infinitive *banaane* in (1) as a verb and the entire constituent as a complement clause on a par with subordinate complement clauses like the ''that' clause.

On the other hand, both Davison (1990:10, 1991a:10) and T. Mohanan (1990:99) briefly allude to the fact that Hindi/Urdu infinitives

are nominal in character as well. The first section of this paper follows up on these allusions by demonstrating that the constituent headed by the infinitive not only has the distribution of an NP, it can take case markers and undergo some further morphological processes that only apply to NPs. The entire infinitive 'clause' must therefore be analyzed as an NP.

The second section of the paper then examines some of the verbal properties of infinitives. It will be seen that while infinitives behave as if they are NPs 'clause' externally, the infinitive behaves like a verb 'clause' internally most of the time. Infinitives in Urdu thus display the dual behaviour exhibited by verbal nouns in languages like Japanese, Korean (Manning 1992), and Welsh (Cherny, p.c.). It will be argued, however, that under no circumstances can the infinitive 'clause' be analyzed as a CP. Rather, as far as the matrix verb is concerned, it is always an NP.

The last section of the paper then examines 'long-distance agreement' facts from the point of view that infinitives are NPs, but can, in some way, be headed by a V. It is demonstrated that the basic agreement facts compiled by Davison can be accounted for under the view advocated by this paper.

2. Evidence for NP

2.1. Morphology and Case

2.1.1. Morphology

Glassman (1977:87) asserts that an infinitive in Urdu like the *banaane* is "...in reality a verbal noun. As such, it inflects according to the rules for masculine nouns." Bender (1967:91) further says: "The infinitive, when occuring before a postposition is placed in the object form, *i.e.* the final *-aa* is replaced by *-e.*" Basically, he is describing a situation like the one in (1).[3]

The morpheme signalling the infinitive in Urdu is *-naa.* In order to form an infinitive, this morpheme is attached to the bare stem of a verb. The bare stem for 'make' in the examples above is *banaa.* Why then, is "make" in the above examples *banaane* and not *banaanaa*? As Glassman and Bender both indicate in the quotes above, the morpheme *-naa* is actually the masculine form of the infinitive and also functions as the default. Infinitives can agree in gender and number with nouns in certain constructions. They also seem to be able to function as 'objects', as Bender says, and are then inflected with the 'oblique' form *-ne.* Notice that in (1a) the infinitive complement is indeed an argument of the matrix verb *kahaa* 'said'. In (2b), on the other hand, the infinitive is functioning as an adjunct. Although the infinitive constituent in (1b) is not an 'object'

per se, it does appear in exactly the same place and fulfils the same function as an NP adjunct.

The examples in (2) show that the morphology on the infinitive can also vary according to the gender of its object. In fact, the matrix verb also agrees with the embedded object of the infinitive, thus creating an effect of agreement across clause boundaries. In Urdu/Hindi the generalization for verb agreement is that a verb will agree with its highest nominative argument.[4] Agreement is thus usually clause-bounded. Davison (1988, 1990, 1991a, 1991b) discusses the agreement patterns below in detail and has proposed several different analyses. I will return to this question of agreement at the end of the paper. For now, I confine myself to discussing the morphology on the infinitive.

(2) a. *mujʰe [gaaṛii calaanii] aatii hai*
I-Dat car-F-Nom drive-Inf-F come-Impf-F is
'I know how to drive a car.'

b. *mujʰe [tãgaa calaanaa] aataa hai*
I-Dat tonga-M-Nom drive-Inf-M come-Impf-M is
'I know how to drive a tonga.'

c. *mujhe [lafz paṛʰne] aate hãĩ*
I-Dat word-Pl-Nom read-Inf. Pl know-Imp.Pl are
'I know how to read the words.

In (2a) the infinitive is agreeing with the feminine nominative *car,* so the morpheme *-nii* is used to indicate feminine gender on the infinitive. In (2b), on the other hand, the embedded nominative object *tonga* is masculine and the infinitive is in the correspondingly masculine form *naa*. When the infinitive agrees with a plural entity, as in (2c) the appropriate morpheme is *-ne*.

At first glance, this *-ne* would appear to be same *-ne* as on the *banaane* 'make' in the "tell" construction, the purposive, and the permissive in (1a), (1b) and (1c) respectively, However, although the two forms are homophonous, they do not perform the same function. The *-ne* in the permissive is not a marker of agreement, rather, it is a reflection of the non-nominative status of the infinitive. As (3) and (4) show, the *-ne* on *banaane* isinvariable: it does not vary in order to agree with the nominative argument in the sentence. In (3b) a feminine infinitive to correspond to the feminine *car* is ungrammatical. Similarly, in (4b), a masculine infinitive to go along with the masculine *tonga* is bad.[5]

(3) a. *anjum-ne saddaf-ko [gaaṛii calaane] dii*
Anjum. (F)-Erg Saddaf. (F)-Dat car.(F)-Nom drive-Inf.Infl give-Perf.F
'Anjum let Saddaf drive the car.'

b. *anjum-ne saddaf-ko [gaaṛii calaanii] dii
Anjum.(F)-Erg Saddaf.(F)-Dat car.(F)-Nom drive-Inf-F give-Perf.F.
*'Anjum let Saddaf drive the car.'

(4) a. anjum-ne saddaf-ko [ṭāgaa calaane] diyaa
Anjum.(F)-Erg Saddaf. (F)-Dat tonga-M-Nom drive-Inf.Infl give Perf. M
'Anjum let Saddaf drive the tonga.'

b. *anjum-ne saddaf-ko [ṭāgaa calaanaa] diyaa
Anjum.(F)-Erg Saddaf.(F)-Dat tonga-M-Nom drive-Inf-M give-Perf.M
*'Anjum let Saddaf drive the tonga.'

When Glassman (1977:87) asserts that the infinitive "inflects according to the rules for masculine nouns," he is refering to the paradigm for masculine nouns ending in *-aa,* such as laṛkaa 'boy'. These masculine nouns are inflected either when they are plural or when they appear in non-nominative case. This is illustrated somewhat more clearly below with the accusative/dative marker *-ko* as an example non-nominative case marking. The possible inflections of the infinitive show what the correspondence is.

	Nom.Singular	Nom.Plural	Dative/Accusative	Feminine
Masc. Noun	laṛkaa	laṛke	laṛke-ko	XXX
Infinitive	banaanaa	banaane	banaane-ko	banaanii

The inflected infinitive in the permissive *banaane* 'make', thus seems to pattern with masculine nouns ending in *-aa.* There is one addition in that the infinitive can also carry feminine inflection, as indicated above.

The only problem with the view that *banaane* 'make' is a verbal noun which is being inflected for non-nominative case is that there is no overt case marker on the infinitive in (1b-c). However, the infinitive in the "tell" construction in (1a) does come with a *-ko,* which looks exactly like the accusative/dative marker *-ko.* In addition, it is not always true that the 'oblique' *-e* can only appear on masculine nouns when they are followed by an overt case marker. In some locatives, as in (5), an overt locative case marker may not be present, but the masculine noun, in this case *daakxaanaa* 'post-office', is inflected with the *-e.*

(5) *anjum daakxaane gayii*
Anjum.(F)-Nom postoffice-M.Infl go-Perf.F
'Anjum went to the postoffice.'

To sum up, then, the morphology of the inflected infinitive *banaane* 'make' in the complex predicates discussed here suggests that *banaane* is functioning as a verbal noun and that the morpheme *-naa/nii/ne* is acting as a nominalizer.

2.1.2. Case

The "tell" construction introduced at the beginning of this paper is repeated here in (6). The question to be resolved here is what the *-ko* in this example really is. Is it actually a case marker? Or is it some kind of a complementizer?

(6) anjum-ne saddaf-se [haar banaane]-ko kahaa
Anjum.(F)-Erg Saddaf.(F)-Inst necklace.(M)-Nom make-Inf.Infl-to say-Perf.M
'Anjum told Saddaf to make a necklace.'

The sentence in (7) represents the corresponding finite way of expressing the same thought. The embedded clause in this example is introduced by the complementizer *ke* 'that'. Although Urdu is a head final language, complemeetizers canonically appear at the beginning oo a clause. Thus *ke* in (7) behaves like a canonical complementizers, while the *-ko* in (6) does not. Furthermore, the *-ko* only appears on a few nonfinite clauses. Therefore, if it were analyzed as a complementizer, it would have to be analyzed as a rather restricted, unproductive, and funny kind of complementizer, especially as it never appears with a finite embedded clause like (7).

(7) anjum-ne saddaf-sei kaha [ke voi haar banaaye]
Anjum.(F)-Erg Saddaf.(F)-Inst say-Perf.M that Pron-3rd-Sg necklace.(M)-Nom make-Subj
Anjum told Saddaf that she (Saddaf) should make a necklace.'

The examples in (8) and (9) are taken from Davison (1991b) and show that *-ko* is not the only postposition that can appear after an inflected infinitive. In (8), the infinitive *aane* 'come' is followed by the genitive case marker *-kii*. The infinitive in (9) can be followed either by the *-ko*, the locative *par* 'on', or the postposition *ke liye* 'for'.

(8) [[un-ke aane]-*kii* baat] mahatvapuurN hai
their-Gen come-Inf.Infl-*Gen* matter.(F)-Nom important is
'The fact of their coming is important.'

(9) a. *raadʰaa-ne mohan-ko [kitaab paṛʰne]-ko majbuur kiyaa*
Radha.(F).-Erg Mohan. (M)-Dat book.(F)-Nom read-Inf.Infl-*Acc* force do-Perf. M
'Radha forced Mohan to read a book.'

b. raadʰaa-ne mohan-ko [kitaab paṛʰne] *par* majbuur kiyaa
Radha.(F)-Erg Mohan.(M)-Dat book.(F)-Nom read-Inf.Infl-*on(Loc)* force do-Perf.M
'Radha forced Mohan to read a book.'

c. raadʰaa-ne mohan-ko [kitaab paṛʰne]-*ke liye* majbuur kiyaa
Radha.(F)-Erg Mohan.(M)-Dat book.(F)-Nom read-Inf.Infl-*of sake* force do-Perf.M
'Radha forced Mohan to read a book.'

In light of the examples in (8) and (9), it is likely that the *-ko* in the "tell" construction in (6) is actually a case marker and not a

complementizer. Unlike the-*ko,* which has multiple functions in Urdu, the other postpositions in (8) and (9) can only be analyzed as one kind of postposition. Case markers in Urdu do not otherwise appear on entities which are not nominal.[6]

It is clear that the entire infinitive 'clause' in (6) is acting as the direct object of the verb *kahnaa* 'to say' (also see Davison (1991a) for an analysis of infinitive 'clauses' as satisfying argument positions in theta-grid). The *-ko* case marker in the "tell" construction in (6) thus must mark the entire infinitive 'clause' as the direct object of the verb *kahnaa* 'to tell'.

The sentence in (12) illustrates the coordination of two case marked NPs. Here both the *girls* and the *boys* are the intended recipients of the candy. Although the dative case marker *-ko* has scope over both NPs, it only appears on the laṛke 'boys'. This fact, along with the data in (10) suggests that the dative case in (12) is actually attaching to the entire coordinated NP, as demonstrated by the bracketing in (12).

(12) *[[laṛkiyõ] aur [laṛkõ]]-ko ṭofii do*
girl-F.Pl and boy-M.Pl-Dat toffee-F-Nom give-Imp
'Give the boys and girls some candy.'

Now, if it is true that case in Urdu attaches phrasally, then the *-ko* in the "tell" construction, repeated here in (13), then would also seem to be a case marker which is attached phrasally to the constituent headed by the infinitive *banaane* 'make'.

(13) *anjum-ne saddaf-se [[haar banaane]-ko] kahaa*
Anjum.(F)-Erg Saddaf.(F)-Inst necklace.(M)-Nom make-Inf.Infl-Acc say-Perf.M
'Anjum told Saddaf to make a necklace.'

Thus case marking actually provides the first tangible piece of evidence that the infinitive constituent *haar banaane* 'make necklace' in (13) must be an NP. Case markers in Urdu are restricted to appearing on NPs. They can never appear on an embedded finite clause (a CP), as is demonstrated in (14). Here the CP is the "that" clause encountered previously.

(14) **anjum-ne saddaf-sei kahaa [ke voi haar banaaye]-ko*
Anjum.(F)-Erg Saddaf.(F)-Inst say-Perf.M that Pron-3rd-Sg necklace.(M)-Nom make-Subj-Acc

*'Anjum told Saddaf that she (Saddaf) should make a necklace'.

Evidence from coordination also show that, with regard to case, infinitive clauses like *haar banaane* 'make necklace' behave like NPs. In(15), for example, *Saddaf* is being told to do two things: *haar banaane* 'make necklace' and *xat lik^{h}-ne* 'write letter'. The case marker-*ko*,however,

does not appear on both of the infinitive constituents, it appears only on the latter. This example is parallel to (12), in which two NPs are coordinated.

(15) anjum-ne saddaf-se [[haar banaane] aur [xat
Anjum.(F)-Erg Sadaf.(F)-Inst necklace.(M)-Nom make-Inf.Infl and letter. (M)-Nom
likʰne]-ko] kahaa
write-Inf.Infl-*Acc* say-Perf.M
'Anjum told Saddaf to make a necklace and write a letter.'

The ability of infinitive 'clauses' to take case is thus a first indication that they are functioning as NPs. The subsequent sections will seek to demonstrate conclusively that the infinitive 'clauses' are indeed noun phrases.

2.2. *Distributional Evidence for NP*

2.2.1. *Finiteness and Case*

Davison (1991b) shows that nonfinite and finite clauses in Hindi/Urdu have differing distributions. Finite clauses can only appear "clause externally" while nonfinite clauses appear in "clause internal argument positions" (Davison 1991b:1). This is demonstrated by the examples in (16). The sentence in (16a) contains an infinitive which can appear clause internally. The sentences in (16b) and (16c), on the other hand, contain the corresponding finite clause. As can be seen, when the finite clause appears 'outside" the main clause, as in (16b), the sentence is good. However, when the finite clause appears 'inside' the matrix clause in (16c), the result is ungrammatical.

(16) a. anjum-ne saddaf-se [kitaab paɽʰne-ko] kahaa
Anjum. (F)-Erg Saddaf.(F)-Inst book.(F)-Nom read-Inf. Infl-Acc say-Perf.M
'Anjum told Saddaf to read a book'

b. anjum-ne saddaf-se; kahaa [ke vo; kitaab paɽʰe]
Anjum.(F)-Erg Saddaf.(F)-Inst say-Perf.M that Pron-3rd-Sg book.(F)-Nom
read- Subj
'Anjum told Saddaf that she (Saddaf) should read a book.'

c. *anjum-ne saddaf-se; [ke vo; kitaab paɽʰe] kahaa
Anjum.(F)-Erg Saddaf. (F)-Inst that Pron-3rd-Sg book. (F)-Nom read-Subj
say-Perf.M
'Anjum told Saddaf that she (Saddaf) should read a book.'

Davison explains this contrast between nonfinite and finite clauses in Urdu with a modification of Stowell's (1981) Case Resistance Principle: "Finite inflection may not be directly combined with case." (Davison 1991b:3). According to Davison, nonfinite clauses can only appear in positions which are governed and are assigned Case.[7] The facts

Davison cites can be accounted for just as well under the theory that nonfinite clauses like the one in (16a) are NPs. As Bresnan (1991) also presents evidence from Bantu against the Case Resistance Principle, and as it is not quite clear how the 'semantic' case of infinitive adjuncts marked by postpositions interacts with abstract Case, the idea that infinitive constituents are simply NPs and as such have all the case-taking properties associated with NPs seems preferable.

Infinitives can thus appear anywhere NPs usually can, *i.e.* anywhere within an S before the verb. The finite clause introduced by *ke*'that', on the other hand, is not an NP, it is a CP. As such, it does not pattern with NPs, rather, it appears at the edge of a matrix clause because it is adjoined to S (or IP, depending on one's particular beliefs). This restriction in terms of distribution can thus be represented at phrase structure by means of the rules in (17).

(17) S--> NP, V
S --> S, CP

As the phrase structure rules in (17) indicate, I follow T. Mohanan (1990) in assuming that Urdu is flat and does not contain a VP node. For the purposes of this paper, *the issue of configurationality per se is irrelevant.* However, as I feel more comfortable working under the assumption of flatness and no convincing evidence has been presented that would support an alternative view, I will continue to assume that Urdu is flat.[8]

2.2.2. Correlatives

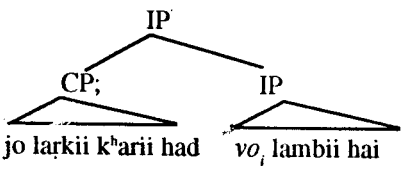
A recent article by Srivastav (1991) on the syntax and semantics of correlatives in Hindi might help to illustrate more clearly that the infinitive 'clauses' are indeed functioning as NPs. Although the issue of correlatives is only tangentially relevant here, I believe her analysis can help illuminate the structure of nonfinite versus finite clauses.

In the course of her analysis of correlatives, Srivastav (1991:682) makes essentially the same point as Davison: "In Srivastav (1989, 1991) it is shown that CPs in Hindi cannot appear in case-marked positions. Thus finite complements of verbs must appear post-verbally, thereby accounting for the non-rigid SOV pattern of the language." However, as already mentioned, her main concern is not with nonfinite clauses, it is with correlatives. She identifies two types of correlatives in Hindi. An example, taken from Srivastav (1992:652), of the type relevant to this paper is given in (18).

(18) *[jo laṛkii khaṛii hai] vo lambii hai*
which girl-F-Nom standing-F is Pron-3rd-Sg tall-F is
''The girl who is standing is tall.'

Srivastav (1991:653) analyzes the correlative in (18) as ''a quantificational structure in which the relative clause binds the main clause nominal.'' The best way to illustrate what she means is to reproduce the structure she posits for the correlative in (18). So, in (19) the CP, the relative clause, is coindexed with the pronoun *vo* in the main clause. This coindexation gives rise to the correlative reading of (18).

(19)



Srivastav (1991:655) furthermore suggests that ''only NPs with demonstratives qualify as variables that can be bound in such configurations.'' This added condition on what can be bound by a correlative like the one in (18) is motivated by sentences which are ungrammatical when there is no demonstrative in the main clause. An example, taken from Srivastav (1991:648), is shown in (20). Here the numeral *do* 'two' does not function as a demonstrative, the relative clause cannot be coindexed with it, and the resulting sentence is ungrammatical. The sentence in (20) contrasts with the sentence in (18).

(20) **[jo laṛkiyãã khaṛii haĩ] do lambii hãĩ*
which girl-F-Pl standing-F are two tall-F are
* Two girls who are standing are tall.'

Now, if one takes a closer look at the finite ''that'' clauses, they seem to pattern with the correlative construction in (18). That is, they behave as if they are subordinate clauses which must coindex with a demonstrative in the main clause. The pattern is illustrated in (21), taken from Davison (1991b:3). The sentence in (21a) is good because the demonstrative is 'this' is available for coindexing with the finite ''that'' clause. But if there is no demonstrative in the main clause, as in (21b), the resulting sentence is bad.

(21) a. *raadhaa-ne mohan-ko$_i$ [is$_j$ baat-par] majbuur kiyaa [ke$_j$ vo$_i$*
Radha.(F)-Erg Mohan.(M)-Dat this matter.(F)-on force do-Perf.M that Pron. 3rd. Sg

kitaab paṛʰe]
book.(F)-Nom read-Subj
'Radha forced Mohan to read a book.'

b. *raadhaa-ne mohan-ko$_i$ [baat-par] majbuur kiyaa [ke$_i$vo$_i$
Radha.(F)-Erg Mohan.(M)-Dat matter.(M)-on force do-Perf.M that Pron.3rd. Sg
kitaab par^{h}e]
book.(F)-Nom read-Subj
* 'Radha forced Mohan to read a book.'

Finite "that' clauses thus seem to pattern with the correlatives examined by Srivastav and could be analyzed along the same lines as suggested by Srivastav for correlatives. Infinitive 'clauses', on the other hand, do not patten with correlatives or "that" clauses[2] indicating that they do not pattern with CPs in Hindi/Urdu.

2.2.3. *Relative Clauses*

Restrictive relative clauses are analyzed as CPs which modify a noun by Srivastav (1991:638). This section briefly illustrates that infinitives do not pattern as CPs in this instance either. Example (22) provides a sentence with the relative clause *jo kitaab* paṛh rahii hai 'who is reading a book'. As can be seen, this sentence is well-formed.

(22) laṛkii [jo kitaab paṛh rahii hai] aaj-kal laahor-me
girl-F-Nom who book.(F)-Nom read Stat-Perf.F is today-yesterday Lahore-in
rahtii hai
stay-Impf.F is
"The girl, who is reading a book, lives in Lahore nowadays.'

(23) *laṛkii [kitaab paṛhne] aaj-kal laahor-me rahtii hai
girl-F-Nom book. (F)-Nom read-Inf.Infl today-yesterday Lahore-in stay-Impf.F is
* "The girl, reading a book, lives in Lahore nowadays.'

An infinitive can never appear in the position of a relative clause. This is demonstrated by the unacceptability of (23). If infinitives were CPs and not NPs, one might expect them to pattern with at least some of the other CPs in the language. So far, this has not been the case. But, perhaps one could argue that the crucial difference between relatives, correlatives, "that" clauses and the infinitives is that the former are all finite while the latter is nonfinite. The next section will show that finiteness versus nonfiniteness is not the crucial distinction because infinitives do not pattern with other nonfinite clauses either.

2.2.4. *Participials vs. Infinitives*

The nonfinite embedded clauses presented so far are, of course, not the only kind of nonfinite clause in Urdu. Another kind, called a "participial construction" by Kachru (1980:34), is illustrated by the sentence in (24).

(24) *[rotii huii] baccii-ko bulao*
cry-Impf.F being-F child-F-Acc call-Imp
'Call the crying child".

Notice that the morphology on the verbs *rotii huii* 'crying be' is completely different from the infinitives. There is no morphology to suggest that the embedded verb here may be functioning as a verbal noun. The defining characteristic of participials such as the one in (24) is that they are formed with a participial of the verb *honaa* 'to be'. In (24) the *huii* is feminine because it is agreeing with the feminine noun it is modifying.

Kachru (1980) and Davison (1991b) note that the participial in (24) can be used either as an adjective or an adverbial. In (25a) the participial is functioning as an adjective, while in (25b) it is an adverb.

(25) a. *[[ṛotaa huaa] laṛkaa] ayaa*
cry-Impf.M being-M boy-M-Nom come-Perf.M
'The crying boy came.'

b. *laṛkaa [rotaa huaa] ayaa*
boy-M-Nom cry-Impf.M being-M come-Perf.M
'The boy came crying.'

The significance of these participials is that they do not pattern with the infinitives. It is not just the case that finite clauses must be differentiated from nonfinite clauses as to their phrase structure positions, distinctions must also be drawn within the category of nofinite clauses. Infinitives have the distribution of NPs while the participials in (25) pattern with adjectives and adverbials. This is illustrated in (26) and (27). The example in (26a) contrasts with (25a) a participial functioning as an adjective yields a perfectly good sentence. However, in (26a), where a nominative infinitive has been substituted into the adjective position, the result is bad.

(26) a. **[[ronaa] laṛkaa] ayaa*
cry-Inf-M boy-M-Nom come-Perf.M
* 'The crying boy came.'

b. **laṛkaa [ronaa] ayaa*
boy-M-Nom cry-Inf-M come-Perf.M
* 'The boy came crying'.

Similarly, (25b) contrasts with (24b). In (24b) the participial is functioning nicely as an adverb. The nominative infinitive *ronaa* "to cry" in the same position in (25b), however, results in an ill-formed sentence.

The accumulated evidence from distribution has thus so far consistently pointed to the conclusion that infinitive 'clauses' are behaving as if they are NPs. And although I will not demonstrate it here, it is quite clear that infinitives can appear wherever NPs usually can: in subject, object, indirect object, or adjunct position. The next section will look at further

evidence for the NP analysis from the attachment of the suffix-*valaa* to nonfinite clauses.

2.3. -valaa

Glassman (1976:304) characterizes-*valaa* 'one' as a suffix (which) may imply the possessor, seller, agent, or distributor of something, have the sense of 'the one with' or be used to convey value or price. It inflects to agree with whatever it is used with.'' T. Mohanan (1992) identifies two types of *-valaa,* one which attaches lexically, as in (27), and one which attaches to a phrase.

(27) *sabzii-valii ayii hai*
vegetable-F-one-F come-Perf.F is
'The vegetable seller has arrived.'

When *-valaa* attaches lexically, it can attach either to a noun, as in (27), or to an adjective, as in (28). The output may either be an adjective or a noun, regardless of whether-*valaa* was suffixed on to a noun or an adjective. In other words, N+valaa could function as a noun, as in (27), or it could function as an adjective, as in (29), adapted from Glassman (1976:304).

(28) laal-valii ṭopii mujhe dikʰao
red-one-F hat-F-Nom I-Dat show-Imp
'Show me the red hat!'

(29) do rupae-valaa ṭikaṭ le ao
two rupee-one-M stamp.(M)-Nom take come-Imp
'Bring a two-rupee stamp!'

Similarly, a combination of Adj+valaa can result either in an adjective, as in (28), or in a noun, as in (30). Note that the Adj+valaa, *coṭii-valii* 'small one', is case marked in (30). So when X+valaa is functioning as a noun, it is possible to mark it with case.

(30) cʰoṭii-valii-ko zaraa bulao
small-F-one-F-Acc just call-Imp
'Just call that small one (girl)

The suffix *-valaa* cannot appear on verbs. The examples in (27)-(30) exhaustively illustrate the uses of *-valaa* when it is attached lexically. The sentences in (31b-c) are ill-formed because the suffix-*valaa* is attached to a verb. As *-valaa* can appear on infinitives, the fact that *-valaa* cannot appear on verbs further motivates the analysis of the infinitive constituent as an NP.

(31) a. *laṛkii haar banaatii hai*
girl-F-Nom necklace.(M)-Nom make-Impf.F is
"The girl is making a necklace.'

b. **laṛkii haar banaatii-valii hai*
girl-F-Nom necklace. (M)-Nom make-Impf.F-one-F is
* ' The girl is one making a necklace.'

c. **laṛkii sundar hai-valii*
girl-F-Nom beautiful is-one-F
* ' The girl is a beautiful one.'

As noted above, *-valaa* can also be attached phrasally. Verma (1971:104) describes two uses of *-valaa* in this context. One use is as a marker of immediate future. Another use is in terms of a "adjectivization transformation" in which *-valaa* is attached to an infinitive constituent, and the infinitive constituent then functions as an adjective. Both uses of *-valaa* are demonstrated by (32), taken from Verma (1971:104). As illustrated in (32) whenever-*valaa* indicates the immediate future, it must also attach to an infinitive.

(32) *laṛkaa paṛ*ne-valaa hai*
boy-M-Nom read-Inf. Infl-one-M is
"The boy is the studious type.'
"The boy is about to start studying.'

The descriptions of *-valaa's* function as an adjectivizer by Verma (1971) leave out the question of what the infinitive is before it is transformed into an adjective by *-valaa*. It seems clear that the suffixation of *-valaa* in (32) must occur at a phrasal level, however, it is not clear what phrase *-valaa* is being attached to. The evidence presented so far suggests that the infinitive is actually an NP, that therefore *-valaa* is attaching itself to an NP when it is a phrasal suffix, and that the *parhne* in (32) is therefore an NP as well.

Evidence from coordination shows that the Infinitive+valaa is indeed a case of phrasal, not lexical attachment. Recall that lexical categories cannot be conjoined in Hindi/Urdu (T. Mohanan 1992:10) Since infinitives can be conjoined, as demonstrated in (33), this would suggest that the infinitives represent phrasal, not lexical, categories. Here, two infinitive clauses are conjoined and the case marker-*ko* only appears on the latter. Since case attaches phrasally in Hindi/Urdu, this is as expected. As (33b) shows,-*valaa* behaves like the case marker in that it attaches phrasally and only to the last of the coordinated items.

(33) a. anjum-ne saddaf-se [[haar banaane] aur [xat
Anjum. (F)-Erg Saddaf.(F)-Inst necklace.(M)-Nom make-Inf.Infl and letter.
(M)-Nom
likhne]ko] kahaa
write-Inf.Infl-Acc say-Perf.M
'Anjum told Saddaf to make a necklace and write a letter.'

b. *laṛkaa [[skuul jaane] aur [kaam karne]] valaa hai*
boy-M-Nom school.(M)-Loc go-Inf.Infl and work.(M)-Nom do-Inf.infl-*one-M* is
'The boy is a school going and wook doing type.'
('The boy is a studious and industrious type.')

An infinitive with *-valaa* can function as an NP, as well as an ADJP. This is demonstrated by (34). Here *gʰar jane-vale-ko* 'the one going home' is functioning as an NP and is case-marked with the accusative-*ko*. The pattern exhibited by phrasal *-valaa*, then, is essentially the same as the one already seen for lexical *-valaa* with respect to nouns and adjectives in (27)-(30).

(34) *[gʰar jaane]-vale-ko bulao*
home go-Inf.Infl-one-Obl-Acc call-Imp
'Call the one going home.'

So, in (27)-(30), lexical-*valaa* was seen to attach either to an adjective or a noun, with the result being either an adjective or a noun. The attachment of phrasal *-valaa* can similarly result in either an NP, as in (34), or an ADJP in (32). If the two *-valaas* are parallel in behaviour, as seems to be the case, then logically the infinitive 'clause' that *-valaa* is suffixed to could be either an NP or an ADJP. Recall that evidence from distribution has already shown that the infinitive 'clauses' could not be ADJPs because they do not have the required distribution. Thus, the infinitives *ghar jaane* 'going home' in (34) and paṛhne 'reading' in (32) both must be NPs.

Finally, for the sake of completeness, (35) and (36) demonstrate that *-valaa* cannot be attached to a finite embedded clause or to a nonfinite participial.

(35) * *anjum-ne saddaf-se*$_i$ *kahaa [ke vo*$_i$ *kitaab parʰe]-vale*
Anjum.(F)-Erg Saddaf.(F)-Inst say-Perf. M that Pron-3rd-Sg book. (F)-Nom read-Subj-one-Obl
*'Anjum told Saddaf that she (Saddaf) should read a book.'

(36) *[[rotii huii]-valii baccii-ko] bulao
cry-Impf-F being-F-one-F child-F-Acc call-Imp
*'Call the crying child.'

The *ke* 'that' clause in (35) and the participial in (36) are both headed by verbs. So, *-valaa* cannot be suffixed to a verb. The only verb-like thing it can be attached to is the infinitive, which is essentially a nominalized

form. In summary then, evidence from *-valaa* suffixation provides additional evidence for the view that infinitive constituents are NPs.

3. Verblike Properties

There is, however, a reason why infinitives have been described as 'verbal nouns'. The case for the nominal status of infinitives is not completely water-tight. If it were, the temptation to analyze infinitive 'clauses' as CPs would hardly have been available. Evidence from scrambling and adverbial modification shows that the infinitive as a lexical item does not behave like other nouns. Data from case-marking and agreement furthermore shows that infinitives seem to be ambiguous as to whether they are an N or a V.

3.1. Scrambling

If the infinitive constituents do indeed pattern with noun phrases, one would expect them to be similar in terms of internal scrambling possibilities. This, however, is not the case. World order NP internally is quite fixed.[9] Word order within infinitive constituents, however, seems to be quit free.

As in English, when there are several adjectives in an NP, they can appear in any order. However, as (37) and (38) show, word order otherwise is quite fixed. For example, in (37) the adjective choṭii' 'small' cannot be interchanged with the quantifier *ek* 'one.' Neither can an adjective be interchanged with the noun heading the NP, as is demonstrated by (38).

(37) a. *[ek cʰoṭii laṛkii] bazaar gayii hai*
one small-F girl-F-Nom market.(M)-Loc go-Perf.F is
'A small girl went to the market.'

b. **[cʰoṭii ek laṛkii] bazaar gayii hai*

(38) a. [cʰoṭii laṛkii] bazaar gayii hai
small-F girl-F-Nom market.(M)-Loc go-Perf.F is
'A small girl went to the market.'

b. *[laṛkii cʰoṭii] bazaar gayii hai

As (39) shows, infinitive constituents are not similarly restricted. The arguments of the infinitive *xariidne* 'buy' can be interchanged. The sentence in (39a) represents the canonical word order while (39b) shows a scrambled version.

(39) a. anjum saddaf-ko baazaar-se tofii xariidne] detii hai
Anjum Saddaf. (F)-Dat market from toffee-F-Nom buy-Inf.Infl give-Impf-F is
'Anjum lets Saddaf buy toffee from the market.'

b. anjum saddaf-ko [tofii baazaar se xariidne] detii hai

In terms of scrambling, then, the infinitives are more like an S than an NP. This again suggests that, although infinitive constituents are like NPs with regard to their external behaviour, they cannot be analyzed as NPs internally.

3.1.1. Eventive Readings

Recall that Verma (1971) describes the suffix-*valaa* as a market of immediate future. The relevant example is repeated here in (40). Now, if the *parhne* 'read' here were indeed functioning as an N, it should pattern like a simple noun with regard to-*valaa* 'one'. However, this is not the case. Simple nouns can never take on an aspectual properties through the attachment of -*valaa*. So, while (40) has a sense of imminent action, no such interpretation can be put on (41).

(40) laṛkaa paṛʰne-valaa hai
boy-M-Nom read-Inf.Infl-one-M is
'The boy is about to start studying.'

(41) laṛkii sbzii-valii hai
girl-F-Nom vegetable-F-one-F is
'The girl is a vegetable seller.'
* The girl is about to be a vegetable seller.'

In addition, the infinitive cannot be modified by adjectives, as one would expect if it were an N. The sentence in (42a), for example, is ungrammatical because the adjective *acchaa* 'good'is attempting to modify the infinitive *banaane* 'make'. Infinitives can *only* successfully be modified by adverbials, as in (42b).

(42) a. **anjum-ne saddaf-ko haar acʰaa banaane diyaa*
Anjum. (F)-Erg Saddaf.(F)-Dat necklace.(M)-Nom good-M make-Inf.Infl give-Perf.M.
*'Anjum let Saddaf make a necklace good.'

b. anjum-ne saddaf-ko haar jaldii-se banaane diyaa
Anjum.(F)-Erg Saddaf. (F) Dat necklace.(M) -Nom quickness-Inst make-Inf.Infl give-Perf.M.
'Anjum let Saddaf make a necklace quickly.'

This again suggests that the infinitive itself is not functioning as an N. Is the analysis of infinitives as NPs therefore wrong?

4. Verbal Nouns

In his examination of verbal nouns in Japanese, Sells (1991:1) notes that:

> ...the internal characteristics of the verbal noun are those canonically associated with verbs, such as verbal case marking,... modification by adverbial forms. In contrast to this evidence, the external distribution of these phrases suggests that they are of category NP.

The above description fits the Urdu facts perfectly. It was seen that as far as the matrix clause is concerned, infinitives are NPs. However, 'clause' internal behaviour suggests that the constituent must have a V as a head. Furthermore, Urdu infinitives also pattern like the Japanese verbal nouns in that they can take either 'verbal case' (nominative, accusative, dative) or 'nominal case' (genitive).[10] The arguments of nouns are usually expected to take genitive case. This is illustrated by the English sentence in (43.)

(43) Lynn authorised the making of *the necklace.*

In Japanese, as well as in Hindi/Urdu, the arguments of the verbal noun can appear either in the genitive, or in the appropriate 'verbal' case. This is demonstrated by (44), adapted from Davison (1990:6)

(44) a. adnaan-ko [bijlii kaṛaknii] acchii nahĩĩ lagtii
Adnan.(M)-Dat lightning-F-Nom crackle-Inf-F good-F not attached-Impf-F
'Adnan does not like lightning crackling..'

b. adnaan-ko [bijlii-kaa kaṛaknaa] acchaa nahĩĩ *lagtaa*
Adnan.(M)-Dat lightning-F Gen-M crackle-Inf-M good-M not attached-Impf-M
'Adnan does not like the crackling of lightning.'

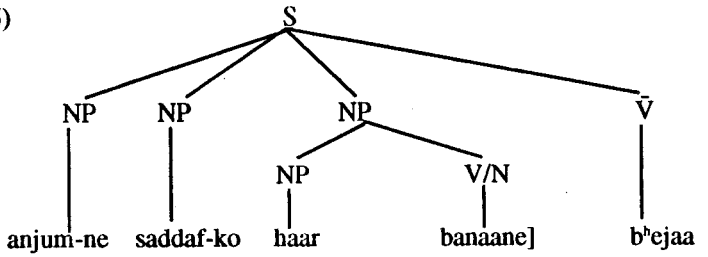
The sentence in (44a) displays verbal case marking as the argument of *karaknii* 'crackling' is the nominative *bijlii* 'lightning'. In (44b), on the other hand, the argument of the infinitive is the genitive *bijlii-kaa*. The alert reader will notice a change in agreement patterns as well, this issue will be addressed a little further on.

Essentially, the same confict displayed by verbal nouns in Japanese is also in evidence for the Hindi/Urdu infinitive. Sells (1991) concludes that the contradictory behaviour of the Japanese verbal nouns cannot be captured by category information only. Manning (1992) proposes that verbal nouns be categorially underspecified and that the concept of category be divided into two parts: categorial information and combinatoric information. That is, the verbal noun can either function as an N or a V, but specifies that it must be the sister of a verb. The latter specification has the effect that verbal nouns will appear as arguments of verbs.

Although it is clear that something along the lines of the solution proposed by Manning (1992) is needed, it is not clear that his approach

is completely satisfactory. However, as it is well beyond the scope of this paper to propose a well-motivated phrase structure representation of verbal nouns, I will for the moment confine myself to representing verbal nouns as having category V/N.

(45)



(46) anjum-ne saddaf-ko [haar banaane] bhejaa
Anjum.(F)-Erg Saddaf. (F)-Dat necklace.(M)-Nom make-Inf.Infl send-Perf.M
'Anjum sent Saddaf to make a necklace.'

Recall that I assume Urdu is flat. The structure in (45) thus shows that the sentence in (46) consists of a V̄ and three NPs. One of these NPs is an infinitive NP which is headed by a V/N.

5. Agreement

Even though it is not quite clear how both the V and N properties of an infinitive should be represented at phrase structure, the agreement facts for Hindi/Urdu can be explained under the view that infinitives have the external distribution of NPs and yet function either as Vs or Ns internally. I do not have the space here to develop a full account of the agreement data for Hindi/Urdu infinitives, however, I will outline the approach that could be taken.

The basic kind of long distance agreement Davison (1988,1990 1991a, 1991b) provides an account for is illustrated in (47).

(47) a. *mujhe [gaaṛii calaanii] aatii hai*
I-Dat car-F-Nom drive-Inf-F come-Impf-F is
'I know how to drive a car.'

b. *mujhe [ṭãgaa calaanaa] aataa hai*
I-Dat tonga-M-Nom drive-Inf-M come-Impf-M is
'I know how to drive a tonga.'

Here the finite verb and the infinitive both agree with the object of the infinitive. In (47a) *gaarii* 'car' is feminine, and so are *calaanii* 'drive' and aatii 'know'. In (47b) *ṭãgaa* 'tonga' is masculine and so are *calaanaa*

and *aataa*. I propose that what is happening here is simply that the usual agreement rules of Hindi/Urdu apply: the verb agrees with the highest nominative argument. In (47) the infinitive acts as a verb 'clause' internally, so it agrees with its nominative argument. As far as the finite verb aa-'know' is concerned, the entire infinitive constituent is an NP and is also the highest nominative argument. Thus, aa-'know' agrees with the head of the nominative NP. In. (48), on the other hand, the infinitive NP is an accusative argument, so the finite verb does not agree with the infinitive.

(48) *anjum-ne saddaf-se [haar banaane]-ko kahaa*
Anjum.(F)-Erg Saddaf.(F)-Inst necklace.(M)-Nom make-Inf.Infl.Acc say-Perf.M
'Anjum told Saddaf to make a necklace.'

Davison (1990:3) also observes that agreement is always optional in nonfinite clauses. this is illustrated by (49). Here the infinitive *calaanaa* does not agree with its feminine object *gaarii* 'car'.

(49) *majʰe [gaaṛii calaanaa] aataa hai*
I-Dat car-F-Nom drive-Inf-F come-Impf-M is
'I know how to drive a car.'

Exactly how this example should be accounted for is beyond the scope of this paper, but it would seem reasonable that, as a verbal noun, the infinitive should be able to display the alternation observed in (47a) and (49).[11]

With the alternation seen for 'nominal' versus 'verbal' case, repeated here in (52), the explanation under an NP analysis is again quite straightforward.

(52) a. *adnaan-ko [bijlii kaṛaknii] acchii nahīī lagtii*
Adnan. (M)-Dat lightning-F-Nom crackle-F good-F not attached-Impf-F
Adnan does not like lightning crackling.'

b. *adnaan-ko [bijlii-kaa kaṛaknaa] acchaa nahii lagtaa*
Adnan.(M)-Dat lightning-F-Gen-M crackle-Inf-M good-M not attached-Impf-M
'Adnan does not like the crackling of lightning.'

In (52a) the infinitive is acting as a verb 'clause' internally and therefore agrees with *bijlii* 'lightning'. The finite verb agrees with the infinitive NP. In (52b), on the other hand, something quite different is taking place. I suggest that the infinitive here is behaving like a 'real' noun rather than as a verbal noun. Since the *kaṛaknaa* 'crackling' in (52b) does not have any verbal properties, its arguments must show up in the genitive. The contrast illustrated in (53) lends further support to this theory. Here the

verbal noun in (53a) cannot, as was observed earlier, be modified by an adjective. For the infinitive noun in (53b), on the other hand, an adjectival modifier seems to be felicitous.

(53) a. * adnaan-ko [bijlii ūūcii kaṛaknii] acchii nahīī lagtii
Adnan.(M)-Dat lightning-F-Nom high-F crackle-Inf-F good-F not attached-Impf-F

*'Adnan does not like lightning crackling loud.'

b. adnaan-ko [bijlii-kaa ūūcaa kaṛaknaa] acchaa nahīī lagtaa
Adnan. (M)-Dat lightning-F-Gen-M high-M crackle-Inf-M good-M not attached-Imp-M

'Adnan does not like the loud crackling of lightning.'

Although this section is very brief and does not cover the range of interesting data analysed by Davison, it has provided some further evidence for the fundamental idea that infinitives in Hindi and Urdu must be NPs. An appealing advantage of the NP analysis for infinitives is that, if explored and formulated properly, nothing extra should need to be stipulated about agreement in Hindi/Urdu beyond the basic generalization for simple clauses: the verb agrees with its highest nominative argument.

6. Conclusion

This paper has sought to present several different kinds of evidence which support the view that Hindi/Urdu infinitives have the external distribution of NPs. They do not pattern as complement clauses (CPs) in any instance. Although it is clear that the entire infinitive constituent must be an NP, the infinitive heading the NP has both nominal and verbal properties. This dual behaviour, which is found in verbal nouns of other languages as well, presents a theoretical challenge as it is not clear how to integrate a category that reflects both nominal and verbal properties into current conceptions of phrase structure. However, if the internal nominal and verbal properties of the infinitive are taken together with its external distribution as an NP, much of the agreement data with regard to infinitives can be accounted for with the regular generalization for agreement in simple Hindi/Urdu clauses.

NOTES

1. Abbreviations used in this paper are as follows. F = feminine; M = masculine; Erg = ergative; Nom = nominative; Gen = genitive; Dat = dative; Acc = accusative; Inst = instrumental; Loc = locative; Inf = infinitive; Inft = inflected; Obl = oblique; Perf = perfect; Impf =

imperfect; Imp = imperative; Subj = subjunctive; Stat = stative; Pl = plural; Sg = Singular; Pron = pronoun.

2. I will address the issue of agreement later in the paper.
3. The dialect this author is familiar with is the Urdu spoken in Lahore, Pakistan. As far as the issues in this paper are concerned, however, there does not seem to be a substantial difference between the Lahore dialect and the Hindi data cited in the literature.
4. What counts as being 'highest' must be determined according to a hierarchy of grammatical functions.
5. A tonga is two-wheeled horse-drawn carriage. It is used for transporting goods or functions as a taxi.
6. They may appear on adjectives, however, I would argue that the adjectives in these cases are really functioning as nouns.
7. Davision assumes Hindi/Urdu is a configuration language with a VP at D-structure.
8. Mahajan (1990), on the other hand, argues for a biorarchical structure. Since nothing in my analysis bings crucially on this issue, I shall continue to follow T.Mohanan (1990)
9. When the partitive -saa is suffixed onto adjectives, they can be scrambled around within and outside of the NP. Scrambling within an NP thus may take place under some restricted circumstances.
10. The Japanese verbal nouns actually display 'mixed case' as well: a combination of 'nominal' and 'verbal' case. I have as yet to determine whether this is possible in Urdu as well.
11. A more problematic case is the example in (50), observed by Davison (1988:48). Here the finite verb agrees with the embedded object but the infinitive does not.

    (50) mujhe [gaarii calaanaa] aatii hai
    I-Dat car-F-Nom drive-Inf-F come-Impf-F is
    'I know how to drive a car.'

    As the example in (50) differs from the above examples in terms of scrambling possibilites, it could be the case that (50) must be analyzed as having a differrent structure. Some of the pertinent scrambling data is shown in (51).

    (51) a. * gaaṛii mujje calaanaa aatii hai
    b. gaaṛii mujhe calaanii aatii hai
    c. gaaṛii mujhe calaanaa aataa hai

    This issue obviously needs to be explored in detail.

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