An Experimental Study on the Meaning of Urdu Universal Quantifiers*

Saima Hassan

National University of Modern Languages, Pakistan
saima_h@cantab.net

The virtually universal opinion of semanticists is that the collective or distributive construal of English quantified statements results from the collective and distributive properties of different quantifiers with necessarily collective or distributive predicate types. The evidence adduced to support such analyses is based almost exclusively on previous research on English quantifiers (Vendler, 1967; Hogg, 1977; Dowty, 1987; Szabolcsi, 1997; Beghelli and Stowell, 1997; Kearns, 2000; Tunstall, 1998 among many others). It is generally assumed that adults are essentially error-free in their comprehension of sentences containing universal quantifiers, although they are not as sensitive to semantic anomalies as they are to syntactic violations or do not consider them as serious (Ni et al., 1998; Pearlmutter et al., 1999; Braze et al., 2002; Angrilli et al., 2002; Hagoort, 2003; Sorace and Keller, 2005). The aim of this paper is to subject these beliefs to cross-linguistic scrutiny. I begin by reviewing the evidence that the English universal quantifier all has a bias towards a collective interpretation, while each/every is biased towards a distributive interpretation. Pursuing this idea for the analysis of Urdu, I present a simple questionnaire study carried out on native speakers of Urdu. The questionnaire was designed to explore whether native speakers of Urdu are sensitive to the collective/distributive properties of Urdu universal quantifiers, and whether they are differentially sensitive to semantic/syntactic anomalies in quantified statements. I discuss the implications of this for the cross-linguistic analysis of universal quantifiers.

Keywords: Collective and Distributive Quantifiers, Semantic and Syntactic Anomalies/Violations

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1. Introduction

Natural language quantification is one means that language puts at our disposal for making general statements. Quantification has been a crucial topic in the development of logic, but has also provided a great deal of evidence for general theories about the syntax and semantics of natural language (Bach et al., 1995). The term ‘quantifier’ is used by logicians to refer to particular operators, especially the operators of existential and universal quantification, whose function is to bind the variables that come in their scope (Lyons 1977:454). Universal quantification is an attempt to formalize the notion that something is true for everything or every relevant thing in the universe, while an existential quantifier refers to a property or relation true of at least one member of the domain.

My aim in this paper is to explore how the positive universal quantifiers of English and Urdu\(^1\) differ in terms of their collectivity and distributivity. The objective is to discover whether quantifiers are analyzed the same way by native speakers of Urdu as by native speakers of English in their respective languages. To achieve this, I review evidence on the treatment of English quantifiers, and present new empirical data for the Urdu quantifiers. This empirical study puts the following hypotheses to test:

H1: People are sensitive to the collective or distributive nature of a universal quantifier, as well as to its syntax.

H2: Violations of syntax are more serious than violations of semantics.

These hypotheses are based on the evidence from psycholinguistic studies (e.g. Ni et al., 1998; Pearlmutter et al., 1999; Braze et al., 2002; Angrilli et al., 2002; Hagoort, 2003; Sorace and Keller, 2005). This essay is the first attempt to provide an analysis of Urdu universal quantifiers supported by

\(^1\) Urdu is spoken primarily in Pakistan and northern parts of India. It is structurally almost identical to Hindi, one of the official languages of India. The two languages are closely related and some researchers refer to them as Hindi-Urdu (Butt, 1995).
psycholinguistic data. To begin with, I will classify the different quantifiers, evaluating their syntactic and semantic structures and how they take scope over their variables and generate different interpretations. I present an overview of the semantic and syntactic violations connected with these quantifiers, and how these violations are interpreted. Next I analyse English universal quantifiers and map these to their Urdu counterparts. The final section of the paper presents and discusses empirical findings that native speakers of Urdu are sensitive to the collective/distributive properties of the Urdu universal quantifiers and, in varying degrees, to semantic and syntactic anomalies in quantificational contexts.

2. Establishing a Taxonomy of Quantification.

2.1. D- and A-quantification
Since the work of Lewis (1975), Heim (1982), and Kamp (1981), it has been accepted that natural languages express quantification in two different ways: through determiners normally forming a constituent with a projection of Noun (N) in the Determiner Phrase (DP) (e.g., every child, all boys), and through adverbial-type words and morphemes forming a constituent with some projection of the verb. The terms D- and A-quantification were first introduced in Partee et al. (1987). As explained by Bach et al. (1995: 8), “‘D’ is mnemonic for Determiner, ‘A’ for the cluster of Adverbs, Auxiliaries, Affixes, and Argument-structure Adjustors, all of which can be thought of as alternative ways of introducing quantification in a more ‘constructional’ way (Carlson, 1983).” The present study is primarily limited to D-quantification, though A-quantification will be briefly touched upon in distinguishing the collective quantifiers of Urdu.

2.2. Syntax and Semantics of Quantifiers
The distributive/collective nature of quantifiers can be understood in terms of the semantic and syntactic structures of a quantifier phrase (QP). For instance, the QP every girl smiled has the syntactic structure shown in Fig. 1:
Syntactically, a QP has scope over everything it c-commands. In *every girl smiled*, *every girl* scopes over *smiled*. Semantically, quantifiers are said to occupy the operator position in a tripartite structure (developed by Heim (1982), cited in Crain et al. (1996)), graphically represented in Fig. 2. From this position they bind two one-place predicates denoting sets of individuals.

The QPs headed by *each*, *every* and *all* quantify over all the members of the set from the operator position shown above in Fig. 2. They give rise to a rich set of inferences and therefore play a central role in deductive reasoning (Brooks and Braine, 1996). They also give subtly different shades of meaning to the sentences in which they feature, with respect to their collectivity/distributivity and generality/specificity. This paper focuses chiefly on these semantic differences, and main effects of semantics will be tested for

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2 A phrase X c-commands a phrase Y if and only if neither of X or Y dominates the other and the first branching node dominating X also dominates Y. For instance, in Fig. 1, NP c-commands Det but does not command VP (Tunstall, 1998).
in the empirical portion of the paper.

2.3. Distributivity Vs Collectivity.

Many studies (including Vendler, 1967: 72-76; Hogg, 1977: 105-40; Alridge, 1982: 212-35; Gil, 1995: 321-62; Tunstall, 1998) have documented semantic distinctions between the universal quantifiers. In English, perhaps the most evident difference between the universal quantifiers is that *each* and *every* collocate with singular nouns only, thus proving to be syntactically singular, while *all* collocates with plural nouns. This is generally regarded as a purely surface fact which reflects the underlying distributive nature of *each* and *every*. It has been claimed that the semantic feature of distributivity is realized by a late transformation, which changes the collocating noun from (+plural) to (-plural) (Hogg, 1977: 132). Consequently, the quantifier *all* permits a collective interpretation, whereas *each* and *every* are usually assigned a distributive meaning. This distinction can be explored by testing the behavior in predicative contexts (that is, the combination of a quantifier with collective or distributive predicates).

2.4. Predicate Types and Collectivity/Distributivity.

The collectivity/distributivity of universal quantifiers is associated with the predicate types they accept (Vendler, 1967; Hogg, 1977; Dowty, 1987; Szabolcsi, 1997; Beghelli and Stowell, 1997; Kearns, 2000). For instance, *each* and *every* require distributive predicates and cannot occur with collective predicates (those which apply to groups) such as are shown in (1).

(1) a. The group agreed on a decision.
   b. Liz and Jane met for lunch.
   c.* Liz met for lunch.
   d.* A tree surrounded the castle.
   e. The crowd dispersed/scattered in the field.
   f. Sand gathered in the corners of the courtyard.

Two kinds of collective predicate are presented here. The first kind, group collectives such as (1a-c), describe some kind of interaction or relationship among individual members of a group. The second kind, shown in
(1d-f), apply mainly to substances, and to entities which are composed of a substance or an agglomeration. Substances are often formed of separable individual parts, such as the grains in sugar, and a crowd could be described as an amount of the substance formed by people (Kearns 2000: 125). However, these kinds of collective predicate can not apply directly to an ordinary individual, or to an isolated individual taken from the larger group. The predicate *gather* combines with *all*, in (2a), but not with *every/each*, as in (2b-c), indicating that collective predicates make sense only in non-distributive constructions.

(2) a. All the boys gathered in the hall.
   b.* Each boy gathered in the hall.
   c.* Every boy gathered in the hall.

(2a) does not entail that each boy gathered in the hall individually, but does require each boy to be in the hall at the same time to be considered as a member of the group. *Surround* is also a collective predicate that requires a semantically plural agent (Beghelli and Stowell, 1997: 88) as in (3c). However, there may be exceptions to this: for instance, Szabolcsi (1997) observes that a single entity may surround something by forming a circle on its own. In (4) a single theme like *estate* can allow *each* and *every* to quantify even with a collective predicate such as *surround*. (3) and (4) are based on examples and discussion in Beghelli and Stowell (1997: 88).

(3) a.* Each boy surrounded the school.
   b.* Every boy surrounded the school.
   c. All the boys surrounded the school.

(4) a. Each estate surrounds the castle.
   b. Every estate surrounds the castle.

Thus, there are a number of predicates which make sense only on a non-distributive construction. These include the intransitive verbs, called “covert reciprocals” by Langendoen (1978), such as *to agree, to meet, to marry, to collide, to combine, to match, to interleave, to interlock*, etc.; verb phrases
of the same type, e.g. *to play tennis, to look alike, to be numerous, to be friends/colleagues/sisters/roommates/spouses*; and verbs of configuration, e.g. *to assemble, to gather, to disperse, to surround*. The contrast between collective and distributive construal is evinced by a number of predicates as shown above. With predicates which are not strictly collective or distributive, an *each NP* or *every NP* subject or object forces a distributive event structure.

In contrast to the previous examples, *each* and *every* occur with lexically distributive predicates which only apply to individuals in (5). Therefore, when predicated of groups, they require distributive predicates for individual members of the group. For instance, (5a) can only be true if every single member of the group is asleep. Similarly, (5b) could be asserted truthfully only if Kim sharpens each and every one of the pencils.

(5)  a. Each/every girl fell asleep.  
    b. Kim sharpened each/every pencil.

The set of objects quantified by *all* may function as a unified group; for instance (6a) could plausibly refer to a situation in which a collection of cookies is in a single jar. On the other hand, the quantifier *each* is intrinsically singular and implies a pairing between the quantified objects and the predicate. The distributive nature of *each* allows each member of the quantified set of entities to function independently; for example (6b) probably refers to a situation in which each cookie is in its own unique jar (Brooks and Braine, 1996).

(6)  a. All the cookies are in a jar.  
    b. Each/Every cookie is in a jar.

Matters are further complicated if two or more quantifiers are present in a single sentence, such as (6-7), which includes an indefinite noun phrase as an existential quantifier along with the universal *all*. Cases such as this are inherently ambiguous, as the quantifiers can take different scope with respect to each other (Pylkkänen and McElree, 2006).
(7) A boy drew every sketch.
   a. There exists an x such that x is a boy and x drew a sketch. \((a > every)\).
      ‘A particular boy drew every sketch.’
   b. For all x, such that x is a sketch, there exists an individual y, such that y is a boy and y drew x. \((every > a)\).
      ‘Every sketch is drawn by a boy but not necessarily the same boy.’

For the interpretation in (7a) a boy takes scope over every sketch; for (7b) every sketch takes scope over a boy. A major problem is how to resolve the scope ambiguity in doubly-quantified sentences. Ioup’s (1975) work suggests that distributive interpretations are assigned to the sentences containing each/every and collective interpretations are usually assigned to sentences with all. However, the syntactic position of the quantifier also plays a role in interpretation of doubly-quantified sentences: if a noun phrase with wide scope is modified by the universal quantifier then a distributive interpretation is assigned. On the other hand, if the existential quantifier a modifies the noun phrase with wide scope, then a collective reading is assigned (Ioup, 1975). Consider the following example.

(8) a. Every man played a game.
   b. A game was played by every man.

There are two distinct interpretations that could be assigned to (8a). The first is that every man played the same game; i.e. all of the men individually played a particular game, like soccer, at different places and at different times. The second is that all the men played a game collectively as a group, at the same place, time, etc. Hence, the preference for a collective or distributive interpretation of a universal quantifier may vary depending upon the context. It may also depend on whether the sentence is in the active or passive voice. In an active voice sentence with a universal quantifier modifying the subject NP, a distributive reading is likely to be preferred, by comparison to a passive construction with an indefinite article modifying the subject (Brooks and Braine, 1996). The passive form (8b) gives a collec-
tive interpretation as compared to the active (8a). Which reading is obtained ultimately depends on the relative position of the quantifier phrases *a game* and *every man* at LF (the level of representation at which semantic structures are built). How scope ambiguities are resolved thus depends in part on how LF structures are constructed.

### 2.5. Distributivity of *each* and *every*

Although *each* and *every* appear similar, they differ in a number of ways. Tunstall (1998: 90) points out two differences in respect of distributivity. Consider the following examples:

(9) a. All cookies are placed in a jar.
   b. Each cookie is placed in a jar.
   c. Every cookie is placed in a jar.

In (9b) it can be plausibly construed that *each cookie* was separately placed in the jar and there was an individual sub-event $e$ for each cookie. The predicate is understood to be applied to each member of the group individually within the group rather than a set as a whole. By contrast, in (9c) it is possible that some of the cookies were placed together, e.g. in pairs, and shared a single sub-event. Thus making *every* partially distributive. *Each* has a stronger preference for a wider scope than *every* because of its event distributivity and differentiation of sub-events. However, (9a) describes all the cookies being placed in one go, resulting in no sub-events but one collective event.

The distinction between *partial distributivity* and *complete distributivity*, as defined by Lasersohn (1995) and Tunstall (1998), is further exemplified in (10).

(10) a. Liz lifted all the parcels.
    b. Liz lifted every parcel.
    c. Liz lifted each parcel.

(10a) projects a collective interpretation where the event of lifting took place as one event, whereas (10b) can be understood as *partially distribu-*
tive where a couple of parcels may have been picked together. (10c) on the other hand, gives a completely distributive reading where Liz lifts each parcel separately. Thus, each being more distributive and specific in nature needs individual unique sub-events for all the members of the set.

In summary, we can draw a distinction not only between the collective all and the distributive every and each, but also between every and each depending on strength of distributivity. Each must be contextually determined, while every can be free. Each is more uniformly distributive, but has the further conceptual requirement that the individuals modified by each be successively scanned as in The boys arrived each with his mother or The boys each lifted the chair (Langacker, 1991; Roeper et al., 2005).

3. Evaluating Linguistic Violations

There is a small but growing literature that suggests that people are sensitive to linguistic anomalies of sentences to varying degrees (e.g. Ni et al., 1998; Pearlmutter et al., 1999; Sorace, 2000; Bresnan et al., 2001; Braze et al., 2002; Angrilli et al., 2002; Hagoort, 2003; Sorace and Keller, 2005 etc.). They appear to judge sentences on a continuum ranging from ‘perfectly acceptable’ to ‘totally unacceptable,’ their judgment being determined by the type of anomaly. Sorace and Keller (2005) suggest that all violations of grammar are not of the same type. They believe that violations of syntax are always ‘core’ or ‘hard’ violations, while violations of interpretation are softer, or peripheral.

There are apparently purely formal requirements for the well-formedness of sentences. For example, lack of subject-verb agreement turns a well-formed sentence (11a) into an ill-formed construction (11b), even though this does not seem to contribute to the meaning of (11).

(11) a. Every girl smiles.
   b.* Every girl smile.

Conversely, there are sentences that are syntactically well-formed, but make no sense. Chomsky’s (1957: 15) famous example (12) makes this point.
(12) *Colorless green ideas sleep furiously.

It is anticipated that (11b) will be found objectionable on an acceptability judgment task, as people show little tolerance to grammatically defective sentences; however, they are also predicted not to accept the well-formed but semantically anomalous sentence in (12). The question that arises is whether they consider all these violations to be equally serious. Following Sorace (2000) and Sorace and Keller (2005), we expect core violations to be regarded as more serious than peripheral violations. Furthermore, their observations support the hypothesis that the status of a constraint is cross-linguistically stable: hard constraints are hard across languages, while soft constraints are soft across languages (Bresnan et al., 2001). Later we will discuss the findings concerning Urdu quantifiers in terms of this hypothesis.

A particular locus of interest for semanticists is the semantic/syntactic incongruity of quantificational expressions. If a quantifier is combined with an inappropriate predicate (i.e. a collective quantifier with a distributive predicate type, or vice versa), it will yield a semantically anomalous sentence. For instance, the sentence all boys lifted a piano alone is syntactically well-formed, but semantically anomalous, since all is a collective quantifier while alone is a distributive predicate. This phenomenon will be explored in the sections below.

Psycholinguists have obtained empirical evidence concerning people’s sensitivity to linguistic anomalies. Their results indicate that people are more sensitive to form-based than meaning-based anomalies, and do not consider semantic anomalies as grave as syntactic ones (Ni et al., 1998; Pearlmutter et al., 1999; Braze et al., 2002; Angrilli et al., 2002; Hagoort, 2003; Sorace and Keller, 2005 among others).

The present study explores the responses of Urdu speakers to such anomalies. In order to position these findings within the existing literature, we first consider the nature of positive universal quantifiers in Urdu, comparing these with their English analogues, and clarifying what makes a quantified statement semantically anomalous in either case.
4. Analysis of Urdu Quantifiers

Ioup (1975) noted that all the world’s languages tend to have quantifiers whose meanings roughly correspond to the English quantifiers all, each and every respectively. She argues that languages have at least a universal quantifier with a bias towards a collective interpretation and another which tends towards a distributive interpretation. Gil (1995: 321) considers that some universal quantifiers are marked for distributivity while others are unmarked and thus non-distributive.

This tendency is manifest in the Urdu quantifier system. Urdu has four positive universal quantifiers roughly corresponding to their English counterparts. These are saray, tamam, sub (which correspond to all) and har which corresponds to every/each. It is generally assumed that each quantifier has distinct properties of syntactic distribution and there is also cross-linguistic variation in the constraints on sites that host quantifiers, like DP. Similarly to English, these Urdu quantifiers occur pre-nominally both in subject and object positions. Despite the fact that the word order of Urdu is SOV, it appears that semantic and syntactic constraints on D-quantifiers are similar to those prevailing in English. In the examples below, the Urdu quantifiers appear basically to pattern with their English counterparts; sub/tamam/saray are compatible with plural morphology on the noun, whereas har requires a singular morphology:

(13)

a. Har larkay ke pas ghora hay.

Every boy-Nom Obl has horse-Acc be-Pres.3.Sg.
‘Every boy has a horse.’

b. Sub/ Tamam/ Saray larkon ke pas ghora hay.

3 The abbreviations used are as follows: Nom= nominative; Acc= accusative; Obl= oblique; Erg= ergative; Dat= dative; Inst= instrumental; Loc= locative; Gen= genitive; Inf= infinitive; Perf= perfect; Pres= present; Sg= singular; Pl= plural.

4 The verb ‘pas’ (=has/have) is not marked for number, unlike English. In (15), number marking is expressed on the noun; ‘larkon’ =boys(plural) and ‘larkay’ = boy (singular).
An Experimental Study on the Meaning of Urdu Universal Quantifiers

All boys-**Nom** Obl have horse-**Acc** be-**Pres.3.Sg.**
‘All boys have a horse.’

c. Har larkay ke pas ghora hay.
Each boy-**Nom** Obl has horse-**Acc** be-**Pres.3.Sg.**
‘Each boy has a horse.’

Their distributivity across the relevant scope is the same as their English equivalents. Similarly to English, *sub/tamam/saray* permit a variety of scope relations to obtain. However, *har* forces the subject NP to have wide scope, as the subjects may only have acted individually (similarly to the case of *each* in English).

### 4.1. Event Readings with Urdu Quantifiers.

We obtain the same scope ambiguities with doubly quantified Urdu sentences as with English. (14) has three possible readings, generated by the two possible relative scopings of the quantifiers *sub/tamam/saray* (‘all’) and *eik* (‘a’) (Ioup, 1975; Catlin and Micham, 1975 and Micham et al., 1980):

(14) Sub/ tamam/ saray larkoon ne eik tasveer banaii.
All the boys-Erg a sketch-**Nom** drew.
‘All the boys drew a sketch.’

Firstly, (14) can convey that all the boys drew the same sketch (e.g. a very large sketch and everybody did his share) and that the drawing occurred as one event, i.e. all the boys drew at the same time. Secondly, the same sketch could be drawn by all the boys but different boys could draw the sketch at different times, resulting in many drawing events. Thirdly, different sketches could be drawn by different boys at different times, again yielding many drawing events.

### 4.2. Predicate Types in Urdu

In brief, the distributive and collective predicate types behave the same way in Urdu as we saw in English. The distributivity or collectivity of *sub/saray/tamam* (‘all’) and *har* (‘each/every’) is evident in the predicate types
that they take. For instance, collective predicates like jama (= ‘gather’) combine with sub/saray/tamam (= ‘all’), as in (15a), but not with har (= ‘each/every’) as in (15b-c), paralleling the English case.

• Collective predicate jama (=gather).

(15) a. Sub/Tamam/Saray larkay hall mê jama ho gayay.
   All boys-Nom hall-Acc in-Loc gathered go-Perf.Sg.
   ‘All the boys gathered in the hall.’

   b.* Har larka hall mê jama ho gaya.
   Each boy-Nom hall-Acc in-Loc gathered go-Perf.Sg.
   ‘*Each boy gathered in the hall.’

   c.* Har larka hall mê jama ho gaya.
   Every boy-Nom hall-Acc in-Loc gathered go-Perf.Sg.
   ‘*Every boy gathered in the hall.’

• Collective predicate gher (= ‘surround’).

(16) a. *Har larkay ne school ko gher liyaa.
   Each boy-Erg school-Dat surround take-Perf.Sg.
   ‘*Each boy surrounded the school.’

   b. *Har larkay ne school ko gher liyaa.
   Every boy-Erg school-Dat surround take-Perf.Sg.
   ‘*Every boy surrounded the school.’

   c. Saray/ sub/ tamam larkoon ne school ko gher liyaa.
   All boys- Erg school-Dat surround take-Perf.Sg.
   ‘All the boys surrounded the school.’

• Single theme quantifying a collective predicate like gird (= ‘surround’).

5 Gher and gird are both equal to English ‘surround.’ The former used with ani-
(17) Har riyasat qilay ke gird hay.
Each/every estate-Nom castle-Gen surrounds be-Pres.3.Sg.
‘Each/every estate surrounds the castle.’

Thus, the contrast between collective and distributive construal is evinced by a number of predicates. Urdu quantifiers behave in a similar manner to their English counterparts and correspond in their interpretation to the matching English sentences.

(18) a. Sub/ tamam/ saree auratoon ne (ikathay/ akelay) suitcase othaya.
All women-Erg (together/individually) suitcase-Acc lifted.
‘All women lifted the suitcase (together/individually).’

b. Har aurat ne (*ikathay/ akelay) suitcase othaya.
Each/every woman-Erg (*together/individually) suitcase-Acc lifted.
‘Each/every woman lifted the suitcase (*together/individually).’

Because Urdu uses one universal quantifier *har* as *each* and *every*, *har* sometimes gives a completely distributive and sometimes a partially distributive reading. Consider the following example. There are two possible readings of (19) in Urdu similar to English as we saw in (10); the event of placing might have a few sub-events as for *every* in (10b) or a completely distributive construal as for *each* in (10c).

(19) Har biscuit aik martaban mē rakha hay.
Every/each cookie-Nom a jar-Acc in placed be-Pres.3.Sg.
‘Every/each cookie is placed in a jar.’

4.3. Differences between the Collective Quantifiers of Urdu

Urdu quantifiers *saray, tamam* and *sub* seem superficially equivalent to the English quantifier *all* in that they are all collective in nature, require a plural NP to collocate with and generate collective readings. However, they exhibit subtle differences, especially in the way they select their subjects

mate N while the latter with inanimate.
and objects, akin to the English existential quantifiers *much* and *many*. Specifically, sub seems to collocate with only animate subjects and objects as in (20), while the other two collective quantifiers readily accept both animate and inanimate subjects. Thus, (20a) is ill-formed but (20b) fully grammatical. These differences are not directly related to the subject under consideration in this paper (i.e. the distributivity and collectivity of quantifiers) but awareness of these differences is necessary in order to ensure that the most prototypical Urdu collective quantifiers are used in the questionnaire.

(20) a. Saray/ Tamam/*?Sub maiz kalay hein.
   All desks-Nom black be-Pres.3.Pl.
   ‘All desks are black.’

   b. Saray/ Tamam/ Sub larkay so rahay hein.
   All boys-Nom asleep stay-Perf.Pl. be-Pres.3.Pl.
   ‘All boys are asleep.’

As mentioned in the introduction, the category of A-quantifiers is syntactically different from the D-quantifiers. Hogg (1977) argues that the most striking feature of *all* is perhaps its ability to occur in positions other than those immediately preceding the NP with which it putatively collocates. Consider the following examples where the collective quantifiers occur in a different position other than those immediately preceding the NP:

(21) a. Hum sub/saray/*tamam khosh hein.
   We all-Nom happy be-Pres.3.Pl.
   ‘We all are happy.’

   b. *Hum har khoosh hein.
   We each/every-Nom happy be-Pres.3.Pl.
   ‘*We each/every are happy.’

The substitution of collective quantifier(s) (*all*=sub/saray/tamam) with the distributive quantifier(s) (*each* and *every*=har) does not result in grammatically correct sentences either in English or in Urdu. (20) and (21) show that
the three collective quantifiers of Urdu are not syntactically alike; sub and saray tend to exhibit dissimilar properties from the third collective quantifier tamam. According to Brisson’s claim (cited in Matthewson, 2001) all and both are not true quantifiers as they can float, while every and most are classified as true quantifiers because of their inability to float. Thus, in a similar vein, saray and sub are floating quantifiers\(^6\) while tamam is not. We can conclude that saray seems to be the most similar in behaviour to English all.

A speaker must have a reason for choosing to use each rather than every; for example, to indicate that the differentiation is important, that the individual objects are of interest, etc. (Tunstall, 1998) In Urdu there is no corresponding choice, as the quantifier har subsumed both meanings. However, a speaker must make a choice as to whether to use sub, saray or tamam.

In summary, we can assume that saray/tamam/sub and har in Urdu are analyzed as all and every/each respectively in English. Saray seems to be the most prototypical of all the Urdu collective quantifiers, judged against all. Also, Urdu does not clearly make a distinction between every and each. Therefore, har vacillates between partial and complete distributive interpretations depending upon the context in which it appears or the predicate type it is combined with. To conclude, a collective quantifier, if combined with a distributive predicate type, will usually yield semantically flawed constructions, as will a distributive quantifier if combined with a collective predicate.

5. Empirical Studies of Quantifiers

Semantic studies to quantification have examined exactly what range of interpretations people have for quantifiers. The domain most extensively researched is the scope preferences of quantifiers. There is ample evidence (e.g. from Ioup, 1975; Catlin and Micham, 1975; VanLehn, 1978; Micham et al., 1980; Fodor, 1982; Gillen, 1991; and Kurtzman and MacDonald, 1993) that individual quantifiers have an effect on scope preferences. Exactly why

\(^6\) The term ‘floating’ is meant to indicate that its position is not necessarily fixed, but variable (Hoeksema, 1984)
certain quantifiers seem to want wide scope more than others and how this interacts with other factors has yet to be determined (Tunstall, 1998). Berent et al. (2009) report very similar experiments to the ones used in the present study with hearing native speakers, deaf students, and second language learners of English. They addressed the collective or distributive meaning of ‘all,’ ‘each’ and ‘every’ in detail, but did not compare semantic violations to syntactic ones.

The present study aims to explore people’s analysis and interpretation of syntax as well as semantics of universal quantifiers. It is generally assumed that adults are essentially error-free in their comprehension of basic sentences containing universal quantifiers, and sensitive to linguistic anomalies (Kang, 2001; Philip, 1996; Roeper et al., 2005). The experiment included in the present study tests a group of adults to evaluate their ability to detect syntactic and semantic anomalies, as well as which violations they consider ‘core.’ The participants were presented with semantically and syntactically anomalous sentences and were asked to judge them accordingly.

The discussion in the preceding sections concerning the universal quantifiers of Urdu is based on reflective intuition, and conceptual argumentation. No real research (theoretical or empirical) has yet been carried out to classify them in any psychologically real categories on the basis of their collectivity and distributivity. In order to test this taxonomy empirically, a simple questionnaire was designed to assess whether the native speakers were aware of these differences and assigned interpretations in this way.

5.1. Experiment: Questionnaire on Urdu Quantifiers

The questionnaire7 explores the native speakers’ sensitivity to semantic and syntactic anomalies in quantified statements. It also aims to reveal which violations, if any, they find worse (i.e. semantic or syntactic). Two quantifiers were used: a collective saray (the most prototypical such quantifier, as discussed earlier) and a distributive har. Sentences were presented in which the distributive and the collective Urdu quantifiers had six collective and six distributive predicates respectively. The informants’ choice of distributive versus collective interpretations was controlled by using collective

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7 See Appendix A. Note: The word order had no affect on the interpretation.
An Experimental Study on the Meaning of Urdu Universal Quantifiers and distributive predicate types, which were only possible with their respective collective and distributive universal quantifiers.

To avoid ambiguous sentences which could generate distinct readings for a single sentence, collective and distributive predicate types were carefully selected.

Four conditions were created to test the participants’ sensitivity to syntax and semantics. The first condition had no semantic or syntactic violations; the second condition had sentences with correct syntax but semantic violations; the third condition incorporated semantically correct but syntactically incorrect sentences; and the fourth condition consisted of both semantically and syntactically incorrect sentences. Semantic violation here refers to sentences carrying a collective quantifier with a distributive predicate type, or vice versa, while the syntactic violation refers to a morphosyntactic flaw (i.e. sentences having incorrect number agreement). It was predicted that the performance of the participants would be to thoroughly accept or reject the semantically and syntactically correct and incorrect sentences respectively (the first and last condition explained above). The main goal was to determine whether the informants are sensitive to the quantified statements which were syntactically correct but semantically incorrect, and to the sentences with correct semantics but incorrect syntax, and to establish which they considered worse.

5.1.1. Subjects
A group of 18 adult Urdu native speakers were asked to fill out the questionnaires. Their ages ranged from 25-35 years. All participants had a master’s degree from different Pakistani universities. An equal number of male and female participants participated in the study.

5.1.2. Methodology
Each participant received the questionnaire\(^8\) which comprised 60 sentences. The questionnaire was written in Urdu, with instructions printed on the front cover. Six different collective predicate types (see (22)) were used with each quantifier and the same was repeated with the six distribu-

\(^8\) See Appendix: A
tive predicate types (see (23)). Apart for condition one, they all had either semantic or syntactic anomalies or both; each condition had six sentences with collective predicates and six with distributive predicates with each quantifier respectively. This gave a total of 48 critical sentences \((4 \times 6 \times 2 = 48)\). Another 12 fillers carried an Urdu existential quantifier *kuch* which is roughly equivalent to the English existential quantifier *some*. Half of the filler items were correct while the rest were incorrect morphosyntactically in terms of agreement (*kuch* requires an NP restrictor in plural). Participants were expected to rate the fillers with correct morphosyntax better than the fillers with incorrect morphosyntax.

Below are the six collective predicates used. Urdu sentences used in the questionnaire are translated here in English.

\[(23)\]

i. QUANTIFIER NP gathered in the hall.
ii. QUANTIFIER NP surrounded the fort.
iii. QUANTIFIER NP dispersed when they heard gunshots.
iv. QUANTIFIER NP scattered on the floor.
v. QUANTIFIER NP sang a song together.
vi. QUANTIFIER NP picked up the suitcases simultaneously.

These predicates were repeated with both the quantifiers i.e. the collective and the distributive, to explore the subjects’ sensitivity to semantically anomalous sentences. The distributive predicates employed were:

\[(24)\]

i. QUANTIFIER NP delivered the package separately.
ii. QUANTIFIER NP picked up the suitcase individually.
iii. QUANTIFIER NP lifted the chair by him/herself.
iv. QUANTIFIER NP baked a cake on his/her own.
v. QUANTIFIER NP pushed the wagon alone.
vi. QUANTIFIER NP carried the parcel independently.

Semantically ill-formed sentences carried a collective quantifier with a distributive predicate type, or vice versa, while the syntactically anomalous
sentences had incorrect number agreement. Subjects were asked to read the sentences and were informed that some of the sentences were completely correct while some were incorrect. They were asked to score the sentences on a 7-point rate-scale from -3 to +3 (-3 for a very bad and +3 for a very good sentence) as they thought appropriate.

5.1.3. Results
The participants’ performance on syntactically and semantically correct and incorrect sentences was good, as expected. Given the hypothesis that the performance of the participants might be better in assessing sentences in conditions 1 and 4, in which sentences were either perfectly well-formed or totally ill-formed (semantically and syntactically), rather than in conditions 2 and 3 where sentences had either semantic or syntactic violation, the collective and distributive universal quantifier were analyzed separately (see Table 1 and Fig. 1).

The data were subjected to a Friedman’s ANOVA (a non-parametric analysis, suitable for non-normally distributed categorical data of the type elicited in this experiment). Two analyses were done, using participants or items as random variables, condition (1-4) as the independent variable and rating (+3 to -3) as the dependent variable. The first analysis was by-participant, using the means for each participant per condition (e.g. the mean

<table>
<thead>
<tr>
<th></th>
<th>Condition 1</th>
<th>Condition 2</th>
<th>Condition 3</th>
<th>Condition 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Universal ‘saray’</td>
<td>2.90 (0.19)</td>
<td>-0.87 (1.02)</td>
<td>-2.29 (0.80)</td>
<td>-2.74 (0.48)</td>
</tr>
<tr>
<td>Universal ‘har’</td>
<td>2.66 (0.26)</td>
<td>-1.03 (0.81)</td>
<td>-2.41 (0.71)</td>
<td>-2.53 (0.69)</td>
</tr>
<tr>
<td>Existential</td>
<td>1.67 (0.79)</td>
<td>-2.16 (0.88)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 1. mean ratings for each quantifier per condition. The maximum rating is +3 and the minimum -3. Standard Deviation is presented in brackets. Key for conditions: 1= correct semantics and correct syntax, 2= incorrect semantics and correct syntax, 3= correct semantics and incorrect syntax, 4= incorrect semantics and incorrect syntax.
of the six items for conditions 1, 2, 3, and 4 for each of the 18 participants); and second one was by-item, using the means for each item per condition (e.g. the mean of the 18 participant scores for each item in conditions 1, 2, 3 and 4).

In the by-participant analysis, for saray, there was a highly significant main effect of Condition, $\chi^2(3) = 49.08$, $p < .001$, which indicates that there were significant differences between the four conditions, without yet telling us which conditions differed from which. To examine this, further comparisons between pairs of conditions were performed by means of Wilcoxon’s Signed Ranks tests. These pair-wise comparisons revealed that Condition-1 (correct semantics and correct syntax) was rated significantly higher than each of the other three conditions (Condition-2: incorrect semantics and correct syntax; Condition-3= correct semantics and incorrect syntax; Condition-4= incorrect semantics and incorrect syntax). These differences were

**Figure 1.** Ratings for each quantifier per condition.

Key: ‘S’ = ‘saray,’ ‘H’ = ‘har’; ‘E’ = existential quantifier, ‘kuch.’ 1= correct semantics and correct syntax, 2= incorrect semantics and correct syntax, 3= correct semantics and incorrect syntax, 4= incorrect semantics and incorrect syntax. ‘Er’ = existential quantifier right syntax; ‘Ew’ = existential quantifier wrong syntax.
significant (all $ps < .001$), even if we lower the significance level from .05 to .008 in accordance with the Bonferroni correction for chance capitalisation. This was expected as Condition-1 is the only condition in which there is no semantic or syntactic violation. Critically Condition-2 was rated as significantly lower than Condition-1 but higher than Conditions-3 and -4 (again, all $ps < .001$), which shows that participants did penalise semantic violations relative to sentences with correct semantics (Condition-1), but they penalised them less than syntactic violations (Conditions-3 and -4). Moreover, Conditions-3 and -4 were not rated significantly different, taking into account the Bonferroni correction ($Z = -1.96$ $p = .049$). This suggests that it is mainly the syntactic violation in Conditions -3 and -4 that drives the strong penalisation of these utterances.

A similar analysis was performed for har. A Friedman’s ANOVA revealed a main effect of Condition, $\chi^2(3) = 45.92$, $p < .001$, which again documents that there were significant differences between the four conditions without yet revealing which condition(s) differed from which. Further comparisons between pairs of conditions were performed by means of Wilcoxon’s Signed Ranks tests. These comparisons revealed the exact same pattern, where Condition-1 is rated higher than all the rest, Condition-2 is rated lower than Condition-1 but higher than -3 and -4 (all $ps < .001$), while -3 and -4 do not differ significantly from each other ($Z = 1.01$, n.s.).

The same pattern, Condition-1 rated higher than the rest, with Condition-2 rated higher than -3 and -4, emerged in the by-item analyses as well.

Overall, these results pattern exactly as predicted, namely that native speakers are sensitive to semantic violations, but they penalize the syntactic ones more harshly and are equally sensitive to these violations for each of the two universal quantifiers. This finding is relevant for the first research hypothesis, concerning whether participants are sensitive to the fact that saray is a collective universal quantifier that needs to be combined with collective predicates, and har is a distributive universal quantifier that needs to be combined with distributive predicates. The results also indicate that participants treat semantic violations of the type that were investigated in this experiment as ‘softer’ than violations of morphosyntactic agreement, which are known to be ‘hard’ violations (see Sorace and Keller, 2005). This finding is relevant to the second research hypothesis, on whether semantic
violations of collectivity and distributivity are treated as strictly as a core morphosyntactic violation, that of number agreement.

5.1.4. Discussion
The results confirmed that adult native speakers are sensitive to syntactic and semantic anomalies of quantified statements in Urdu. Although subjects detected the ill-formedness of a sentence, there was a difference in the degree of their sensitivity on a seven point scale rating, which established that they were more responsive to syntactic than to semantic incongruities. In the questionnaire the informants consistently penalized the syntactically anomalous sentences as graver violations when compared to the semantically flawed sentences. The fact that they were less responsive to semantically anomalous sentences does not suggest that adults’ semantics is imperfect, but rather that adults may judge a violation of semantics as less dire than a violation of syntax. This is in line with the distinction raised by Sorace & Keller (2005) between soft and hard constraints in grammar.

6. Conclusion
As discussed in the introduction to this paper, English and Urdu universal quantifiers differ in terms of their collectivity/distributivity. The Urdu quantifiers sub/tamam/saray roughly correspond in meaning to the properties of the English quantifier all, while har vacillates between each and every depending upon the context (i.e. it sometimes renders properties of being partially distributive while other times completely distributive). These observations, arising from the traditional linguistic methodologies of reflective intuition and conceptual argumentation, are given psycholinguistic empirical support for the first time in this paper.

The empirical data gathered here also addressed the sensitivity of native Urdu speakers to the collective/distributive properties of the universal quantifiers and to semantic/syntactic anomalies in quantified statements. The second motivation to do a test was to discover whether violation of collectivity/distributivity gives rise to a ‘soft’ or a ‘hard’ violation, and to explore whether participants consider semantic or syntactic violations more serious. The empirical evidence demonstrated that participants were indeed sensi-
tive to the collective/distributive properties of Urdu universal quantifiers as well as to the linguistic anomalies, as predicted. Subjects graded the syntactic violations as hard, or ‘core’ scoring syntactically anomalous sentences on the farther end of the continuum towards incorrectness. They found semantic violations to be less grave and scored them as relatively acceptable.

These results provide a first insight into the quantifier system of Urdu, with respect to the broad crosslinguistic debate on the nature of quantification and speakers’ reactions to semantic versus syntactic incongruency in quantified statements. Future research could explore—both theoretically and experimentally—other widely discussed areas e.g. generality and specificity, scope ambiguities, spreading errors etc. which will provide useful documentation of the quantification system of Urdu and of native speakers’ interpretations of Urdu quantifiers.

References


Brooks, P. and Braine M. (1996). What do children know about the universal
quantifiers all and each? *Cognition*, (60)3, 235-268.
California: Stanford University Press.
Appendix A.

The questionnaire used in the experiment. The items are presented in the order in which they were used. The rate scale was given under each sentence to be marked by the participant but it is omitted from all but the first sentence for reasons of brevity. A gloss and the English translation are presented under each sentence but were not part of the original questionnaire.

1. Saray larkay hall mê jama ho gayay.
   All boys-Nom hall-Acc in-Loc gathered go-Perf.Sg.
   ‘All boys gathered in the hall.’
   Correct incorrect
   -3 -2 -1 0 +1 +2 +3

2. Har larkay ne qilay ko gher liyaa.
   Each/every boy- Erg fort-Dat surround take-Perf.Sg.
   ‘Each/every boy surrounded the fort.’

   Some boys-Nom gunshots-Gen sound heard dispersed go-Perf.Pl.
   ‘Some boys dispersed when they heard gunshots.’

4. Saray larka hall mê jama ho gaya.
   All boy-Nom hall-Acc in-Loc gathered go-Perf.Sg.
   ‘All boy gathered in the hall.’

5. Kuch aurtoon ne tanha cake banaya.
   Some women -Erg on their own cake -Acc baked.
   ‘Some women baked a cake on their own.’

6. Saray admi ne tanha sandooq uthaya.
   All man-Erg on their own box -Acc lifted.
   ‘All man lifted the box on their own.’
   Each/every boys-Nom hall-Acc in-Loc gathered go-Perf.Pl.
   ‘Each/every boys gathered in the hall.’

8. Saray larkoon ne qilay ko gher liyaa.
   All boys- Erg fort-Acc surround take-Perf.Sg.
   ‘All boys surrounded the fort.’

9. Har admi ne tanha sandooq uthaya.
   Each/every man-Erg on their own box-Acc lifted.
   ‘Each/every man lifted the box on their own.’

10. Kuch larka hall mē jama ho gaya.
    Some boy -Nom hall-Acc in-Loc gathered go-Perf.Sg.
    ‘Some boy gathered in the hall.’

11. Har larki ne ikathay gana gaya.
    Each/every girl- Erg together song-Nom sang.
    ‘Each/every girl sang a song together.’

    All boys-Nom gunshots-Gen sound heard dispersed go-Perf.Pl.
    ‘All boys dispersed when they heard the gunshot.’

13. Har larka hall mē jama ho gaya.
    Each/every boy -Nom hall-Acc in-Loc gathered go-Perf.Sg.
    ‘Each/every boy gathered in the hall.’

14. Kuch admi ne eik sath suitcase uthaya.
    Some man- Erg simultaneously suitcase-Acc picked.
    ‘Some man picked up the suitcase simultaneously.’

15. Har larka goleon kii awaz sun kar muntashir ho gaya.
    Each/every boy-Nom gunshots-Gen sound heard dispersed go-Perf.Sg.
    ‘Each/every boy dispersed when they heard the gunshot.’
16. Sari larkeon ne ikathay gana gaya.
   All girls - **Erg** together song-**Nom** sang.
   ‘All girls sang a song together.’

17. Kuch admeon ne wagon ko akelay dhaka diya.
   Some men- **Erg** wagon-**Acc** alone pushed give.
   ‘Some men pushed the wagon alone.’

18. Saray admeon ne eik sath suitcase uthaya.
   All men- **Erg** simultaneously suitcase-**Acc** picked up.
   ‘All men picked up the suitcase simultaneously.’

19. Kuch larkeon ne bazate khud parcel uthaya.
   Some girls- **Erg** independently parcel-**Acc** carried
   ‘Some girls carried the parcel independently.’

20. Har admi ne eik sath suitcase uthaya.
    Each/every man- **Erg** simultaneously suitcase-**Acc** picked.
    ‘Each man picked up the suitcase simultaneously.’

21. Saray larkay ne qilay ko gher liyaa.
    All boy- **Erg** fort-**Acc** surround take-**Perf.Sg**.
    ‘All boy surrounded the fort.’

22. Har admeon ne eik sath suitcase uthaya.
    Each/every men- **Erg** simultaneously suitcase-**Acc** picked.
    ‘Each men picked up the suitcase simultaneously.

23. Kuch danay zameen par bhikar gayay.
    Some beads-**Nom** floor-**Nom** on scattered go-**Perf.Pl**.
    ‘Some beads scattered on the floor.’

24. Saray admi ne eik sath suitcase uthaya.
    All man- **Erg** simultaneously suitcase-**Acc** picked.
    ‘All man picked up the suitcase simultaneously.’
25. Har admeon ne tanha sandooq uthaya.
   Each/every men-**Erg** on their own box-**Acc** lifted.
   ‘Each/every men lifted the box on their own.’

   Some girls - **Erg** together song-**Nom** sang.
   ‘Some girls sang a song together.’

27. Har larkoon ne qilay ko gher liyaa.
   Each/every boys- **Erg** fort-**Dat** surround take-**Perf.Sg**.
   ‘Each/every boys surrounded the fort.’

28. Saray dana zameen par bhikar gayay.
   All bead - **Erg** floor-**Nom** on scattered go-**Perf.Pl**.
   ‘All bead scattered on the floor.’

29. Har larkeon ne ikathay gana gaya.
   Each/every girls - **Erg** together song-**Nom** sang.
   Each/every girls sang a song together.

30. Sara dana zameen par bhikar gayay.
   All bead-**Nom** floor-**Nom** on scattered go-**Perf.Sg**.
   ‘All bead scattered on the floor.’

31. Har aurat ne packet alehda tor par phonchaya.
   Each/every woman- **Erg** package-**Acc** separately delivered.
   ‘Each/every woman delivered the package separately.’

32. Sari larki ne ikathay gana gaya.
   All girl - **Erg** together song-**Nom** sang.
   ‘All girl sang a song together.’

33. Kuch larkoon ne qilay ko gher liyaa.
   Some boys- **Erg** fort-**Acc** surround take-**Perf.Sg**.
   ‘Some boys surrounded the fort.’
34. Har larki ne apne aap he kursi uthai.
   Each/Every girl- Erg by herself chair-Acc lifted
   Each/Every girl lifted the chair by herself.

35. Sari auratone ne packet alehda tor par phonchaya.
   All women - Erg package-Acc separately delivered.
   ‘All women delivered the package separately.’

36. Har larkay goleen kii awaz sun kar muntashir ho gayay.
   Each boys-Nom gunshots-Gen sound heard dispersed go-Perf.Sg.
   ‘Each boys dispersed when they heard the gunshot.’

37. Sari auratone ne wagon ko akalay dhaka diya.
   ‘All women- Erg wagon-Dat alone pushed give-Perf.Sg.
   ‘All women pushed the wagon alone.’

38. Har larkeon ne apne aap he kursi uthai.
   Each/Every girls- Erg by themselves chair-Acc lifted
   Each/Every girls lifted the chair by themselves.

   All woman- Erg package-Acc separately delivered.
   ‘All woman delivered the package seperately.’

40. Har admi ne infaradi tor par parcel uthya.
   Each/every man- Erg individually the parcel-Acc carried.
   ‘Each/every man carried the parcel individually.’

41. Sari larkeon ne bazate-khud cake banaya.
   All girls- Erg independently cake-Acc baked.
   ‘All girls baked a cake independently.’

42. Har auratone ne wagon ko akalay dhaka lagaya.
   Each/every women- Erg wagon-Dat alone pushed to be attached-Perf.Sg.
   ‘Each/every women pushed the wagon alone.’
43. Sari larki ne  apne aap he kursi  uthai.
   All girl- **Erg** by herself  **chair-Acc** lifted
   All girl lifted the chair by herself.

44. Har admeeon ne           infiradi tor par parcel         uthaya.
   Each/every men- **Erg** individually  **parcel-Acc** lifted.
   ‘Each/every men carried the parcel individually.’

45. Sari larki ne bazate-khud cake banaya.
   All girl- **Erg** independently  **cake-Acc** baked.
   ‘All girl baked a cake independently.’

46. Har dana                      zameen      par bhikar      gaya.
   Each/every bead- **Nom**  floor- **Nom**  on scattered  go- **Perf.Sg**.
   ‘Each/every bead scattered on the floor.’

47. Sari aurat ne         wagon ko   akalay dhaka diya.
   All woman- **Erg**  **wagon-Dat** alone  pushed give- **Perf.Sg**.
   ‘All woman pushed the wagon alone.’

48. Kuch larkoon ne qilay ko        gher          liyaa.
    Some boys- **Erg**  **fort-Acc** surround  take- **Perf.Sg**.
    ‘Some boys surrounded the fort.’

49. Saray larka goleen kii           awaz  sun kar muntashir ho gayay.
   All boy- **Nom**  **gunshots-Gen**  sound heard  dispersed go- **Perf.Sg**.
   ‘All boy dispersed when they heard the gunshot.’

50. Har larki ne                bazate-khud    cake         banaya.
    Each/every girl- **Erg** independently  **cake-Acc** baked.
    ‘Each girl baked a cake independently.’

51. Saray admeeon ne infiradi tor par parcel  uthaya.
    All men- **Erg** individually  **parcel-Acc** lifted.
    ‘All men carried the parcel individually.’
52. Har aurat ne wagon ko akalay dhaka diya.
   ‘Each/every woman- Erg wagon-Dat alone pushed give-Perf.Sg.
   ‘Each/every woman pushed the wagon alone.

53. Sari larkeon ne apne aap he kursi uthai.
   All girls- Erg by herself chair-Acc lifted
   All girls lifted the chair by themselves.

54. Har admeeon ne infiradi tor par parcel uthaya.
   Each/every men- Erg individually parcel-Acc lifted.
   ‘Each/every men carried the parcel individually.’

55. Saray admeon ne tanha sandooq uthaya.
   All men-Erg on their own box-Acc lifted.
   ‘All men lifted the box on their own.’

56. Har larkeon ne bazate-khud cake banaya.
   Each/every girls- Erg independently cake-Acc baked.
   ‘Each/every girls baked a cake independently.’

57. Saray admi ne infiradi tor par parcel uthaya.
   All man- Erg individually parcel-Acc lifted.
   ‘All man carried the parcel individually.’

58. Har danay zameen par bhikar gayay.
   Each/every beads-Nom floor-Nom on scattered go-Perf.Pl.
   ‘Each/every beads scattered on the floor.’

59. Kuch admi ne eik sath suitcase uthaya.
   Kuch man- Erg simultaneously suitcase-Acc picked.
   ‘Some man picked up the suitcases simultaneously.’

60. Saray danay zameen par bhikar gayay.
   All beads- Erg floor-Nom on scattered go-Perf.Pl.
   ‘All beads scattered on the floor.’