

Differential Recipient Marking in the Bangla GIVE Construction

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Abstract This study investigates differential recipient marking (DRM) in Bangla ditransitive constructions employing the verb ‘give’. Bangla DRM exhibits a split-fluid system, where animate recipients receive dative marking, while inanimate recipients alternate between dative and locative marking. Based on both quantitative and qualitative analyses, this paper argues that Bangla DRM primarily serves an identifying function in which the extended animacy hierarchy and event semantics play a central role as determining factors. An inanimate recipient receives dative marking when higher on the extended animacy hierarchy or when the event is conceptualized as caused possession. Conversely, it receives locative marking when lower on the hierarchy or when the event semantics deviates from caused possession. These findings highlight the gradience of the inanimate category in Bangla, reflecting how speakers conceptualize events and referents of arguments.

Keywords Differential recipient marking. Ditransitive construction. GIVE construction. New Indo-Aryan languages. Bangla. Bengali.

Summary 1 Introduction. – 2 Background: T and R Marking in Bangla. – 3 Methods. – 4 Results. – 5 R’s Extended Animacy Hierarchy is Identified by Bangla DRM’s Identifying Function. – 6 Event Semantics Is Identified by Bangla DRM’s Identifying Function. – 7 Conclusions.



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1 Introduction

1.1 The Ditransitive Constructions and Differential Recipient Marking

The ditransitive construction has attracted much research in linguistic typology, given that the world's languages exhibit variations in both its form and function (Haspelmath 2007; 2015; Malchukov, Haspelmath, Comrie 2010). A ditransitive construction is defined here as “a construction consisting of a (ditransitive) verb, an agent argument (A), a recipient-like argument (R), and a theme argument (T)” (Malchukov, Haspelmath, Comrie 2010, 1). Among the variations of ditransitive constructions, differential R marking (DRM) is an interesting phenomenon, in which a language shows variations in how R may be coded, depending on factors other than the argument role itself and diathesis, following the definition provided by Witzlack-Makarevich and Seržant (2018, 3). A well-known example is the English ditransitive alternation, exemplified by *Kim gave Lee a box* versus *Kim gave a box to Lee* (Haspelmath 2015, 20). While differences in event semantics, specifically caused possession versus caused motion, are recognized as key factors in the English alternation (Haspelmath 2015, 26), languages show variation in both the factors and morphosyntactic behaviors of DRM.

In Bangla (or Bengali), the language of focus in this study, R¹ is marked by either the dative (or dative-accusative)² or the locative. Bangla ditransitive constructions are exemplified in (1)-(3) below.

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1 Note that the R behaves as an indirect object and the T behaves as a direct object in terms of grammatical relations, as also analyzed by Bhattacharya and Simpson (2011). This paper, however, refers to the arguments as R and T, as it analyzes the phenomenon in the framework of differential argument marking.

2 I use the term ‘dative’ for the marker *-ke* throughout this paper. This marker has also been called ‘objective’ (Bhattacharya, Simpson 2011; David 2015; Klaiman, Lahiri 2018; Thompson 2010, among others), ‘accusative’ (Ramchand 2008; Subbarao 2012), or ‘accusative-dative’ (Dasgupta 2003; Smith 1997). This marker has historically been a dative marker (Chatterji [1926] 1985, 739, 759), which later acquired the accusative marking function (for discussion of the equivalent Hindi marker *-ko*, see Masica 1982; Montaut 2018).

- | | | | | |
|-----|---|----------------------------|----------------------|------------|
| (1) | ami | [mini-ke] _R | [mɔʃla] _T | di-l-am |
| | 1SG.NOM | Mini-DAT | spice | give-PST-1 |
| | 'I gave Mini the spices.' ³ | | | |
| | | | | |
| (2) | ami | [biɾal-ʈi-ke] _R | [pani] _T | di-l-am |
| | 1SG.NOM | cat-CLF-DAT | water | give-PST-1 |
| | 'I gave the cat water.' | | | |
| | | | | |
| (3) | ami | [ɖal-e] _R | [mɔʃla] _T | di-l-am |
| | 1SG.NOM | bean-LOC | spice | give-PST-1 |
| | 'I added the spices to the bean soup.' | | | |
| | (Lit.: 'I gave the spices to the bean soup.') | | | |

In (1), the R is human and is marked by the dative. In (2), the R is an animal, which also receives dative marking. In (3), however, the R is inanimate and is marked by the locative.⁴ As these examples illustrate, the animate-inanimate distinction has been identified as a primary factor in Bangla DRM. Specifically, the animate Rs receive the dative, while inanimate Rs receive the locative (Bhattacharya, Simpson 2011, 1071-2; Dasgupta 2004, Section 4).⁵

In Bangla, however, inanimate Rs occasionally receive dative marking, contrary to the prediction based on the animate-inanimate distinction. Consider the following examples.

- | | | | | |
|-----|--|--------------------------|-----------------------|------------|
| (4) | tɔbe | e=i | prothom | gaɾi-ʈi |
| | then | this=EMPH | first | car-CLF |
| | [onno | gaɾi-ʈi-ke] _R | [dhakka] _T | di-l-o |
| | other | car-CLF-DAT | shove | give-PST-3 |
| | 'Then this first car hit the other car.' | | | |
| | (techshohor.com) | | | |

³ Sentences with a URL were taken from the Sketch Engine (bnTenTen17), and sentences with the description *ben_newscrawl_2017_1M* were taken from the Leipzig Collection (see Section 3.2 for details on the data source). Unless otherwise indicated, examples were constructed by the present author and verified by a native speaker of Bangla.

⁴ This paper considers the dative/locative marked arguments of the GIVE Construction to be arguments rather than adjuncts. The R elements exhibit the characteristics of arguments, such as semantic obligatoriness, latency, and co-occurrence restrictions (Forker 2014). Note that the dative/locative-marked temporal/stative locational referents (e.g., *dupur-e* afternoon-LOC 'in the afternoon', *ghor-e* room-LOC 'in the room' rather than '(in)to the room') are not considered R arguments.

⁵ The locative is associated with inanimates in Bangla (Dasgupta 2004, Section 4). Dasgupta (2004, 133) notes that there is "no Locative declension for animate nominals".

-
- (5) *śudhu.matro [nij-er iccha-ṭa-ke]_R [gurutto]_T den*
 only own-GEN desire-CLF-DAT importance give.HON
 ‘You give importance only to your desire.’
 (bissoy.com)

In (4)⁶ and (5), the inanimate Rs, *garīṭi* ‘the car’ and *icchaṭa* ‘the desire’, receive the dative instead of the locative. These examples indicate that the factors other than the animate-inanimate distinction influence R marking in Bangla.

DRM is a part of the broader phenomenon of differential argument marking (DAM). This field has been marked by a growing interest, with various facets of DAM being elucidated through the exploration of various languages (Aissen 2003; Malchukov 2008; Witzlack-Makarevich, Seržant 2018, among others). Indo-Aryan languages, in particular, have provided significant insights in this regard. For instance, Hindi exhibits differential object marking (Butt 1993; de Hoop, Narasimhan 2009; Verbeke 2013; Subbarao 2016; Montaut 2018, to name a few) and differential agent marking (de Hoop, Narasimhan 2009; 2013; Verbeke 2013; Dahl, Stroński 2016; Butt, Deo 2017, to name a few). In DAM typology, marking systems are distinguished by whether the marking is obligatory or optional (Witzlack-Makarevich, Seržant 2018, 28). When marking is obligatory, it is termed a split system. For instance, Hindi exhibits a grammatical split in differential agent marking: an agent obligatorily receives the ergative marker *-ne* in perfective constructions; otherwise, it takes the nominative (Dahl, Stroński 2016, 12). Conversely, when the marking is optional and probabilistic, it is classified as a fluid system. A case in point is the Nepali postposition *le*, which is used for agent marking in perfective constructions but can also appear optionally in imperfective constructions (Verbeke 2013, ch. 4.2). Indo-Aryan languages exhibit significant variation in DAM systems across different argument types.

DAM typology also distinguishes between two functional types of DAM: the distinguishing function and the identifying function (Witzlack-Makarevich, Seržant 2018, 30). Under the former, an argument is marked to differentiate it from other arguments within the same clause. Under the latter, an argument is marked to identify a property of the argument. Hindi transitive clauses provide an illustrative case in this regard. Object marking with the

⁶ One of the reviewers pointed out that the construction *dhakka de* ‘give a shove’ is a ‘conjunct verb’. Although semantically it may behave like a single unit, it syntactically behaves as a ditransitive construction in that the R requires a marking, either dative or locative. Thus, this paper considers this instance to be a ditransitive construction.

dative/accusative *-ko* can be explained through the distinguishing function: the marker appears when the patient becomes more ‘agent-like’, thereby requiring differentiation from the agent (de Hoop, Narasimhan 2005). In contrast, differential agent marking with the ergative *-ne* is driven by the agent’s high degree of agency, reflecting the identifying function (de Hoop, Narasimhan 2005; 2009). Thus, a single clause may employ markers serving two distinct functions simultaneously. While modern Hindi agent marking has an identifying function according to this analysis, it is noteworthy that the distinguishing function also played a prominent role in its early diachronic development (Drocco 2016).

When viewed through the lens of DAM typology, the Bangla data shown above in (1)-(5) present an intriguing case. Bangla exhibits what can be described as a split-fluid system of DRM. While animate Rs consistently receive the dative, inanimate Rs exhibit fluidity, receiving either the dative or the locative (see Figure 1). It is evident that the identifying function operates within this system, specifically in the identification of animate Rs. However, specific factors determining the fluid marking of inanimate Rs remain to be elucidated; this paper aims to explore these underlying mechanisms and their functional motivations.

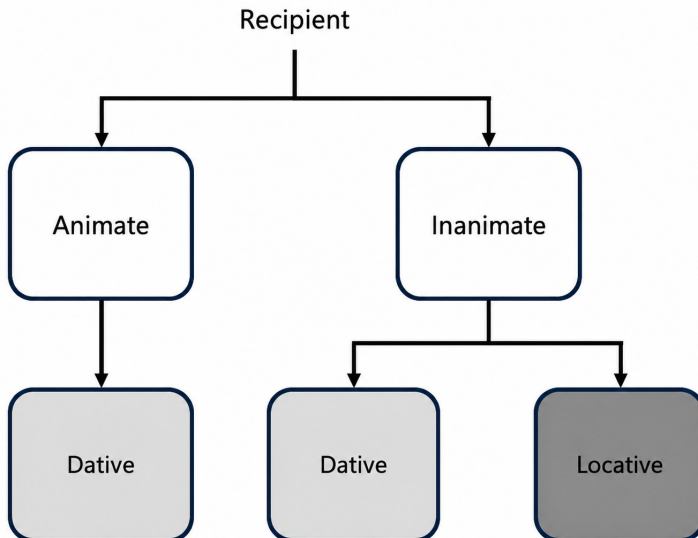


Figure 1 The split-fluid system of Bangla DRM

1.2 The Aim of This Paper

This paper investigates the factors influencing the alternation between locative and dative marking for inanimate Rs in Bangla through a corpus-based approach. To address this question, this study focuses on ditransitive constructions employing the verb *de*⁷ ‘give’ (hereafter the GIVE Construction). The verb ‘give’ is considered the most typical ditransitive verb cross-linguistically (Kittilä 2006) and is recognized as the most frequent ditransitive verb across the world’s languages (Haspelmath 2013). Consequently, examining the Bangla GIVE Construction provides significant insights into the broader characteristics of DRM in the language.

To address the factors influencing DRM in Bangla, Section 2 first provides an overview of the argument marking patterns relevant to this study. Section 3 then introduces the methods for the corpus survey. The fluidity and alternation of linguistic phenomena, including DAM, have been effectively analyzed through corpus-based approaches (e.g., Bresnan et al. 2007; Bresnan, Nikitina 2009 for English ditransitive alternation). A corpus survey is beneficial for elucidating the nature of Bangla DRM. Utilizing corpus data, this study conducts two types of investigations: (i) an analysis of the correlation between T and R markings within a clause, and (ii) an examination of the distribution of R markings in relation to variables of the extended animacy hierarchy – namely, animacy, referentiality, and person.

The results of investigation (i) demonstrate that the two types of R marking exhibit nearly equal distributions regardless of the consistency of T marking (Section 4.1). This indicates that T marking does not influence the determination of R marking. Furthermore, the results of investigation (ii) reveal that the distribution of inanimate R marking varies according to the referentiality of R (Section 4.2). These patterns of inanimate R marking are accounted for when R’s referentiality is taken into consideration.

Based on these results, this paper discusses three points regarding Bangla DRM. First, Bangla DRM is characterized by an identifying function rather than a distinguishing function (Section 5.1). Second, through this identifying function, DRM identifies the position of inanimate Rs within the extended animacy hierarchy (Section 5.2). More specifically, when an inanimate R is perceived as being higher in the hierarchy, it receives the dative; otherwise, it receives the locative. This distribution suggests that the category of inanimate nouns in Bangla is gradient in nature. Finally, upon

⁷ In this paper, I consistently refer to verbs in the form of verbal stem/lemma. This type of convention is also followed in Onishi 2001 and Klaiman, Lahiri 2018.

closer examination of inanimate Rs marked with the dative, I argue that event semantics also plays a crucial role in determining their markings (Section 6). An inanimate R receives the dative in a prototypical GIVE event, specifically a caused possession event, whereas it receives the locative when an event deviates from this prototype. Section 7 concludes this paper.

2 Background: T and R Marking in Bangla

This section provides an overview of the T and R marking patterns in Bangla, drawing upon findings from previous studies. Table 1 summarizes these marking patterns. The shaded cells represent the core focus of the current investigation, which the following sections will explore in detail.

Table 1 T and R markings in Bangla

Animacy	Other properties	T	R
Animate	Personal pronoun	Dative	Dative / Locative
	Specific	Dative	Dative
	Other	Zero	Dative
Inanimate		Zero	Dative
			Locative

2.1 Characteristics of T Marking

T marking exhibits an asymmetric pattern between the dative (or dative-accusative) *-ke* and no marking, a distribution determined by animacy, referentiality, and specificity. When T is a personal pronoun, it consistently receives dative marking, regardless of person.

- (6) First person singular pronoun T
- | | | | |
|------------------------------|-------------------|--------------|-----------------------------|
| <i>hæto</i> | <i>tini</i> | <i>[ta-r</i> | <i>skul-e]</i> _R |
| probably | 3SG.HON.NOM | 3.OBL-GEN | school-LOC |
| <i>[ama-ke]</i> _T | <i>paṭha-b-en</i> | | |
| 1.OBL-DAT | send-FUT-HON | | |
- ‘He will probably send me to his school.’
(somewhereinblog.net)

- (7) Second person singular pronoun T
kintu *śe* *hɔeto*
 but 3SG.NOM probably
[nirdišto *dayagnoštik.sențar-e]*_R *[apna-ke]*_T *paṭha-cch-e*
 particular diagnostic.center-LOC 2HON.OBL-DAT send-PROG-3
 ‘He/she probably is sending you to a particular diagnostic center.’
 (somerwhereinblog.net)
- (8) Third person singular pronoun T
*[šekhan-e]*_R=i *[ta-ke]*_T *paṭha-b-en*
 there-LOC=EMPH 3.OBL-DAT send-FUT-HON
 ‘He will send him there.’
 (currentnews.com.bd)

As shown in (6)-(8), the first, second, and third person pronouns all receive the dative when they appear as T. In Bangla, personal pronouns require mandatory case marking.

When an animate T, including personal pronouns, is marked by the plural genitive *-der*, the dative marker *-ke* becomes optional (Thompson 2010, 129). See example (9) below.

- (9) Personal pronoun / animate common noun T with the plural genitive *-der*
[o-r *kach-e]*_R *{toma-der(-ke)}* /
 3-GEN near-LOC 2.OBL-PL.GEN(-DAT) /
*chatro-der(-ke)]*_T *paṭhi-echil-am*
 student-PL.GEN(-DAT) send-PST.PRF-1
 ‘I sent {them/the students} to him.’

In (9), both the personal pronoun T and the human common noun T receive the plural genitive *-der*. As indicated by the parentheses, the dative marker *-ke* may optionally follow the plural genitive *-der*.

In animate T marking, T’s specificity serves as a primary factor in the selection of the marker. An animate T receives the dative when it is specific; otherwise, it is zero-marked. This contrast is illustrated in examples (10) and (11) below.

(10) Indefinite specific animate T

<i>tumi</i>	<i>[ama-r</i>	<i>kach-e]</i> _R		
2SG.NOM	1.OBL-GEN	near-LOC		
<i>[toma-r</i>	<i>biśśasto</i>	<i>æk-jɔn</i>	<i>kaj-er</i>	<i>lok-ke]</i> _T
2OBL-GEN	faithful	one-CLF.HUMAN	work-GEN	person-DAT

paṭha-o
send-IMP
'Send a faithful domestic servant of yours to me.'
(istishon.com)

(11) Indefinite non-specific animate T

<i>ami</i>	<i>[ram-er</i>	<i>baṛi-te]</i> _R		
1SG.NOM	Ram-GEN	house-LOC		
<i>[æk-jɔn</i>	<i>kaj-er</i>	<i>lok]</i> _T	<i>paṭha-l-am</i>	
one-CLF.HUMAN	work-GEN	person	send-PST-1	

'I sent a domestic servant to Ram's house.'
(Bhattacharya, Simpson 2011, 1072; glosses modified by the present author)

In (10), the animate T, *ækjɔn kajer lok* 'a domestic servant', receives the dative, while in (11), a similar animate T receives no marking. The combination of the numeral and the classifier, *ækjɔn* 'one', indicates indefiniteness (Thompson 2010, 97). When marked with the dative suffix *-ke*, an indefinite T is interpreted as specific; otherwise, it is interpreted as non-specific (Thompson 2010, 576). Consequently, the dative-marked indefinite animate T in (10) is interpreted as specific, while the zero-marked indefinite animate T in (11) is interpreted as non-specific. These examples demonstrate that an animate T's specificity conditions the selection of T marking in Bangla.

While an animate T may alternate between dative and zero marking, depending on its specificity, an inanimate T receives no marking. This pattern is exemplified in (12).

(12) *ami* *[apna-der]*_R *[æk-ʈa* *udahɔron]*_T *di-cch-i*
1SG.NOM 2HON.OBL-PL.GEN one-CLF example give-PROG-1
'I will give you an example.'
(banglatribune.com)

In (12), the inanimate T, *ækṭa udahɔron* 'an example', receives no marking. Even in the context where the speaker likely has a specific referent in mind, as in (12), the inanimate T does not take the dative marker, contrasting with the behavior of an animate T. Consequently, inanimateness also serves as a primary factor in the selection of T's zero marking.

2.2 Characteristics of R Marking

R marking exhibits a symmetric pattern, alternating between the dative *-ke* and the locative *-(t)e*.⁸ As introduced in Section 1, the distribution of the R marking pattern primarily aligns with the animate-inanimate distinction of R (Bhattacharya, Simpson 2011, 1071-2).

- (13) *ami* [*mini-ke*]_R [*mɔʃla*]_T *di-l-am* = (1)
1SG.NOM Mini-DAT spice give-PST-1
'I gave Mini the spices.'
- (14) *ami* [*ḍal-e*]_R [*mɔʃla*]_T *di-l-am* = (3)
1SG.NOM bean-LOC spice give-PST-1
'I added the spices to the bean soup.'
(Lit.: 'I gave the spices to the bean soup.')

In (13), the animate R, *mini* 'Mini', receives the dative, whereas in (14), the inanimate R, *ḍal* 'bean', receives the locative. However, as pointed out in Section 1, inanimate Rs may also occasionally be marked by the dative.

When it comes to singular personal pronouns, the R marking pattern is influenced by the person distinction. The first and second singular pronouns may receive either the dative or the locative marking (Dasgupta 2004, 132), while the other singular pronouns receive the dative marking. Compare the examples of singular personal pronouns in (15)-(17).

⁸ While a place name R occasionally appears without marking (Thompson 2010, 584), as shown in the example below, the present study focuses specifically on the alternation between the dative and the locative. Consequently, such zero-marked instances are not analyzed in further detail in this paper.

- (a) *e* *bɔʃchor=ɔ* *amra* [*25-jɔn-er*] *æk-ʈa*
this year=also 1PL.NOM 25-CLF.HUMAN-GEN one-CLF
dɔl-ke]_T [*baŋgladeʃ*]_R *paʈha-cch-i* *pujo-r* *ʃɔmoe*
group-DAT Bangladesh send-PROG-1 puja-GEN time
'We will send a group of 25 people to Bangladesh on the occasion of puja this year, too.'
(bangladesh24online.com)

- (15) First person singular pronoun R

<i>tumi</i>	<i>[ama-e / ama-ke]_R</i>	<i>[taka]_T</i>	<i>de-b-e</i>
2SG.NOM	1.OBL-LOC / 1.OBL-DAT	Taka	give-FUT-2

‘You will give me money.’
(Dasgupta 2004, 132; glosses modified by the present author)

- (16) Second person singular pronoun R

<i>ami</i>	<i>[toma-e / toma-ke]_R</i>	<i>[taka]_T</i>	<i>de-b-o</i>
1SG.NOM	2.OBL-LOC / 2.OBL-DAT	Taka	give-FUT-1

‘I will give you money.’
(Dasgupta 2004, 132; glosses modified by the present author)

- (17) Third person singular pronoun R

<i>[ta-ke]_R</i>	<i>[ama-r</i>	<i>thikana]_T</i>	<i>diyo</i>	<i>na</i>
3.OBL-DAT	1.OBL-GEN	address	give.FUT.IMP	NEG

‘Don’t give him my address.’
(Thompson 2010, 473; glosses modified by the present author)

As shown in examples (15) and (16), the first and second singular pronouns may receive either the locative or the dative.⁹ However, in (17), the third singular personal pronoun receives the dative when functioning as R. Thus, the person distinction also influences the R marking pattern.

Parallel to T marking, animate Rs may be marked solely by the plural genitive *-der*. In such instances, the dative marker *-ke* is optional.

- (18) Personal pronoun / animate common noun R with the plural genitive *-der*

<i>amra</i>	<i>{o-der(-ke) / chatro-der(-ke)}_R</i>	<i>[boi]_T</i>	<i>di-i</i>
1PL.NOM	3-PL.GEN(-DAT) / student-PL.GEN(-DAT)	book	give-1

‘We give books to them/the students.’

In (18), both the personal pronoun R and the human common noun R receive the plural genitive marker *-der*. As indicated by the parentheses in the example, the dative marker *-ke* may optionally follow the plural genitive marker.

⁹ Historically, the marker *-e* has been used as an oblique marker, covering both accusative and dative since the period of Old Bangla (Chatterji [1926] 1985, 747). While the use of the marker *-e* for accusative and dative marking persists in modern Bangla, it is synchronically restricted to specific registers and styles.

A fundamental distinction between R marking and T marking is that the former is not influenced by the specificity of the argument. R is mandatorily marked regardless of its specificity (Bhattacharya, Simpson 2011, 1071). See example (19) below.

- (19) *ami* *[e=i* *boi-ta]*_T *[æk-jɔn* *chatro-ke]*_R
 1SG.NOM this=EMPH book-CLF one-CLF.HUMAN student-DAT
di-te *ca-i*
 give-INF want-1
 ‘I want to give this book to a (specific) student.’ (Her name is Mini.)
 ‘I want to give this book to some student or other.’ (Any student will do.)
 (Bhattacharya, Simpson 2011, 1071; glosses modified by the present author)

In (19), the human R, *ækjɔn chatro* ‘one student’, mandatorily receives the dative marker. As the two translations indicate, there are two possible interpretations for R here: specific or non-specific. Unlike T marking, the alternation of R marking is not determined by R’s specificity.

2.3 Characteristics of Ditransitive Constructions

Building on the characteristics of T and R, detailed in Sections 2.1 and 2.2, this subsection addresses features pertaining to the interaction of both types of marking. First, word order does not affect the marking patterns of T and R. This is demonstrated in the following examples.

- (20) a. *ami* *[robi-ke]*_R *[bagh]*_T *di-l-am*
 1SG.NOM Robi-DAT tiger give-PST-1
 ‘I gave a tiger to Robi.’
 (Bhattacharya, Simpson 2011, 1071; glosses modified by the present author)
- b. *ami* *[bagh]*_T *[robi-ke]*_R *di-l-am*
 1SG.NOM tiger Robi-DAT give-PST-1
 ‘I gave a tiger to Robi.’
 (Bhattacharya, Simpson 2011, 1071; glosses modified by the present author)

In (20), the marking patterns of T and R remain identical even when their word order is interchanged.

Since both T and R employ the dative for their differential markings, it is possible for both arguments within the same clause to be marked by the dative. Consider example (21) below.

- (21) *ami* [*mini-ke*]_R [*bacca-ṭa-ke*]_T *di-l-am*
 1SG.NOM Mini-DAT child-CLF-DAT give-PST-1
 ‘I gave the child to Mini.’
 (Bhattacharya, Simpson 2011, 1071; glosses modified by the present author)

Although example (21) is considered grammatical, it has also been noted that the use of dative marking for both T and R within a single clause is typically avoided in Bangla (David 2015, 70-1). See example (22) below.

- (22) **raśel* [*e-ṭa-ke*]_T=*i* [*o-ṭa-ke*]_R=*i* *di-l-en*
 Rassel this-CLF-DAT=EMPH that-CLF-DAT=EMPH give-PST-HON
 Intended: ‘Rassel gave this one to that one.’
 (David 2015, 71; glosses modified by the present author)

In (22), both T and R are marked by the dative. According to David (2015, 70-1), marking both T and R in this manner is not allowed in Bangla. If T appeared without marking, the sentence would be grammatical (David 2015, 71). This observation suggests that marking in Bangla may serve a distinguishing function. If dative marking on R is avoided due to the presence of a dative-marked T, this implies that the marking is selected to disambiguate T and R.

2.4 Summary

To sum up, T and R marking patterns exhibit differences in their structural and functional properties. While T marking exhibits an asymmetric pattern between the dative and the zero, R marking exhibits a symmetric pattern between the dative and the locative. Animacy and referentiality, specifically regarding personal pronouns, are known to be factors for the differential marking of T and R; however, specificity uniquely influences the selection of T marking.

3 Methods

This section details the methods employed for the corpus survey and analysis. Section 3.1 introduces the primary target of this investigation, the Bangla verb *de* ‘give’, which is followed by a description of the data preprocessing procedures in Section 3.2. Finally, Section 3.3 outlines the specific methods and criteria used for data annotation.

3.1 The Target of the Study: The Verb *de* ‘give’

This study focuses exclusively on the GIVE Construction in Bangla. This choice is motivated by the fact that the verb ‘give’ is recognized as the most typical ditransitive verb cross-linguistically (Kittilä 2006) and the most frequent ditransitive verb across the world’s languages (Haspelmath 2013). In Bangla, the verb *de* ‘give’ is used in a wide range of ditransitive contexts, including events involving animate R and inanimate R. While there are other ditransitive verbs, such as *paṭha* ‘send’ and *dækha* ‘show’, in Bangla, their usage contexts are relatively restricted. Specifically, these verbs tend to take an animate R in most occurrences. In contrast, the verb *de* ‘give’ is more appropriate for a corpus-based survey, as its high frequency allows for the collection of a quantitatively sufficient dataset involving a diverse range of Rs.

The analysis is restricted exclusively to instances where the verb *de* ‘give’ functions as a standalone full verb. Verb-verb complex predicates involving the verb *de* ‘give’ were excluded from the dataset. In Bangla, complex predicates can be formed from two verbs, in which a preceding verb expresses an event, and a succeeding verb expresses additional meanings such as perfectivity, benefactive, modality, etc. (Kageyama, Hook, Pardeshi 2021). Because a succeeding verb may determine the argument structure in such complex predicates (e.g., Dasgupta 1977; Ramchand 2008, 144), such instances were omitted to ensure that the findings reflect the inherent properties of the ditransitive verb *de* ‘give’.

3.2 Data Preprocessing

The data for this study were sourced from the *ben_newscrawl_2017_1M* news article corpus, part of the Leipzig Collection (Goldhahn, Eckart, Quasthoff 2012). From this corpus, 2,000 sentences containing the verb *de* ‘give’ were randomly extracted. Since this initial sample included several instances outside the scope of the current analysis, a preprocessing phase was conducted to refine the dataset. The preprocessing involved five exclusion criteria. First, instances of verb-verb complex predicates were excluded, as discussed in Section 3.1. Such complex predicate constructions were occasionally captured in the initial results; however, this study focuses exclusively on the use of the verb *de* ‘give’ as a standalone full verb.

Second, sentences including an animate R marked with the plural genitive *-der* were excluded. As discussed in Section 2.2, an animate R can be marked by the plural genitive *-der*. However, it can be problematic to determine whether such an argument functions as a recipient or a possessor in certain contexts. To eliminate this

potential ambiguity, 79 instances involving plural genitive-marked Rs were excluded from the analysis.

Third, sentences in which R or an R-like participant is marked by a postposition were omitted. These postpositions include the following: *upor/opor* ‘on’, *bhitor* ‘inside’, *śamne* ‘in front’, *moddhe* ‘in the middle’, *kache* ‘near’, *proti* ‘toward’, *śonge/śathe* ‘with’, *jonno* ‘for’, *dike* ‘toward’, and *uddeśe* ‘toward’. Most of these postpositions originated from nouns and can be marked in the same manner as other nouns (Thompson 2010, 228). For instance, *bhitor* ‘inside’ can take locative marking to become *bhitor-e* (inside-LOC) ‘inside’. However, as these postpositions have undergone grammaticalization, they may exhibit syntactic behaviors distinct from those of typical nouns. Consequently, 74 instances involving these postpositions were excluded from the present investigation.

Fourth, instances involving a bare R were excluded. Certain sentences in the corpus contain a bare R, which possibly occurs when the T is incorporated into the verbal structure, shifting the status of the R to that of P status. These data points fall outside the scope of this paper, since the primary focus of this investigation is the DRM alternation between the dative and the locative.

Last, instances with a covert R were excluded. Bangla allows for the omission of arguments when the context is sufficiently clear (Simpson, Choudhury, Menon 2013). This resulted in 911 instances with a covert R.

Following these five types of data exclusions, the initial 2,000 sentences yielded a total of 606 valid instances. These 606 instances – all including an overt R marked with either the dative or the locative – serve as the empirical basis for the subsequent investigations in this study.

3.3 Data Annotation

After the data preprocessing, I annotated the data for two types of investigations: (i) the correlation between T and R marking (Section 3.3.1), and (ii) the distribution of R markings with respect to the extended animacy hierarchy (Section 3.3.2).

3.3.1 Correlation between T and R Marking

In order to investigate a potential correlation between the T and R marking, I annotated the T (i.e., dative vs. zero vs. covert) and R (i.e., dative vs. locative) marking for each item obtained from the corpus.

- (23) Variables used to investigate the correlation between T and R marking
- a. T marking: dative / zero / covert
 - b. R marking: dative / locative

As mentioned in Section 2, R marking follows a symmetric marking pattern (dative vs. locative), while T marking has an asymmetric marking pattern (dative vs. zero). Additionally, a ‘covert’ label was assigned to T marking in instances where the GIVE Construction lacked an overt T.

As introduced in Section 1, DAM cross-linguistically serves two distinct functions: identifying and distinguishing (Witzlack-Makarevich, Seržant 2018, 30). If T marking and R marking exhibit a correlation, this would suggest that DRM performs a distinguishing function, such that these markers are selected to disambiguate the two arguments. On the other hand, if R marking is selected irrespective of T marking within the same clause, this would suggest an identifying function, where the marking is determined solely by the properties of the R itself.

3.3.2 R Marking with Respect to the Extended Animacy Hierarchy

To examine the factors influencing the selection of R marking, I also annotated the properties of the Rs based on the extended animacy hierarchy. An overview of this hierarchy is presented in (24) below.

- (24) Extended animacy hierarchy (Croft 2002, 130)
- First/second person pronoun > third person pronoun > proper name >
human common noun > nonhuman animate common noun > inanimate
common noun

This hierarchy involves three functional dimensions: person, referentiality, and animacy (Croft 2002, 130). These dimensions are detailed in (25).

- (25) a. Person first, second > third
 b. Referentiality pronoun > proper name > common noun
 c. Animacy human > animate > inanimate
 (Croft 2002, 130)

Within the person dimension, the first and second person are followed by the third person. In the referentiality dimension, pronouns, proper names, and common nouns are listed in that order. Last, the animacy dimension includes human, animate, and inanimate, in that order.

The variables of the extended animacy hierarchy were included in this investigation for two reasons. First, as illustrated in examples (1)-(3), Bangla data confirm that animacy is a significant factor in argument marking. Typologically, animacy is often characterized as a “complex intertwining” that is closely related to other parameters (Comrie 1989, 199). There is a strong relationship between animacy, referentiality, and person, which the extended animacy hierarchy generalizes. Incorporating the variables of the extended animacy hierarchy may shed light on the distribution of Bangla DRM.

Second, the variables of the extended animacy hierarchy play an important role in DAM cross-linguistically (Witzlack-Makarevich, Seržant 2018, 5). This is also applicable to the Indo-Aryan languages. For instance, in Hindi, the referentiality of P influences its marking both synchronically and diachronically. Synchronically, the personal pronouns are mandated to receive the dative-accusative in Hindi (Kachru 2006, 175). Diachronically, while first and second person pronouns are required to take the dative from an earlier stage, the third person pronouns and proper names subsequently developed dative marking (Montaut 2018). Given these facts, these variables may also be relevant to Bangla DRM.

In addition to the variables of the extended animacy hierarchy, I annotated any quantifier phrases, such as those expressed by the numeral *tin-jon* (three-CLF.HUMAN) ‘three (people)’ or the collective noun *śokol* ‘everyone’. This is because such phrases may exhibit characteristics different from both pronouns and common nouns. From the perspective of referentiality, quantifier phrases can function anaphorically, similar to personal pronouns. Although they are not formal pronouns, their referentiality is higher than that of common nouns. Hence, quantifier referents were annotated as a separate category, distinguishing them from both pronouns/demonstratives and common nouns.

The following variables were included in the annotation to investigate the factors influencing the DRM, as summarized in (26).

(26) The variables (properties of R)

Person:	first/second, third
Pronoun:	pronoun, non-pronoun
Proper name:	proper name, non-proper name
Quantifier:	quantifier, non-quantifier
Animatenesss:	animate, inanimate
Humanness:	human, nonhuman

4 Results

This section presents the results of the corpus survey. Section 4.1 provides the results of R marking in relation to T marking, which indicates that the choice of R marking is not correlated with the type of T marking. Section 4.2 presents the results of R marking with respect to variables of the extended animacy hierarchy, indicating that both animacy and referentiality play essential roles in understanding the distribution of Bangla DRM.

4.1 The Correlation between T and R Marking

This subsection presents the results of the R marking in relation to the T marking. Table 2 summarizes the distributions found in the survey.

Table 2 R marking with respect to T marking

		R					
		Dative		Locative		Total	
		N	%	N	%	N	%
T	Zero	318	52,9%	283	47,1%	601	100,0%
	Dative	0	0,0%	1	100,0%	1	100,0%
	Covert	0	0,0%	4	100,0%	4	100,0%
	Total	318	52,5%	288	47,5%	606	100,0%

Out of the total of 606 occurrences, 602 instances have an overt T, with 601 of those zero-marked. When T appears without a marker, R is marked by the dative in 318 instances (52.9%) and by the locative in 283 instances (47.1%). The distribution of these two R markers is thus nearly equal. See examples (27) and (28), in which T occurs without marking and R is marked by the dative and the locative, respectively.

(27) R: Dative, T: Zero

<i>æk</i>	<i>eljepi</i>	<i>bidhayɔk=o</i>
one	LJP	assembly.member=also
<i>[bijepi-ke]_R</i> =i	<i>[šmorthon]_T</i>	<i>den</i>
BJP-DAT=EMPH	support	give.HON

‘An assembly member of LJP also gives support to the BJP.’
(ben_newscrawl_2017_1M)

(28) R: Locative, T: Zero

<i>tɔbe</i>	<i>[onno</i>	<i>æk-ʈa</i>	<i>kaj-e</i> _R	<i>[hat]</i> _T	<i>di-cch-i</i>
then	other	one-CLF	work-LOC	hand	give-PROG-1

‘Then I am lending a hand to other work.’

(ben_newscrawl_2017_1M)

Example (27) illustrates a dative-marked R in a context where T is zero-marked.¹⁰ In (28), R receives locative marking while T remains zero-marked. These examples demonstrate that R can be marked by either the dative or the locative even when T marking is constant. This provides empirical evidence that the alternation in R marking is not correlated with T marking.

The independence of R marking from T marking is further confirmed by data where R marking alternates despite the constancy of the type of T (for example, an inanimate common noun). See examples (29) and (30).

(29) R: Dative, T: Zero

<i>ta-der</i>	<i>pɔchondo.mɔtɔ</i>	<i>[lok-ke]</i> _R	<i>ta-ra</i>
3.OBL-PL.GEN	like.as	person-DAT	3.OBL-PL.NOM

<i>[bhot]</i> _T	<i>de-b-e</i>
vote	give-FUT-3

‘They will vote for the person as their choice.’

(ben_newscrawl_2017_1M)

(30) R: Locative, T: Zero

<i>[kongres-e]</i> _R	<i>530-jɔn</i>	<i>protinidhi</i>	<i>[bhot]</i> _T	<i>den</i>
Congress-LOC	530-CLF.HUMAN	representative	vote	give.HON

‘530 representatives will vote for the Congress Party.’

(ben_newscrawl_2017_1M)

¹⁰ While one of the reviewers pointed out that the expression, *śomorthon de* ‘give support’, exhibits properties of noun incorporation, this study treats it as a ditransitive construction. This is evidenced by the fact that the noun *śomorthon* ‘support’ is not necessarily syntactically adjacent to the verb *de* ‘give’. In addition, the noun can be modified by other elements such as an adjective. However, this expression exhibits properties of pseudo-noun incorporation (cf. Dayal 2011). Nevertheless, this study treats this particular case, *śomorthon de* ‘give support’, as a ditransitive construction based on the empirical observation that the corpus data utilized for this study contains no instances where the recipient of this particular expression appears without marking. For the purposes of this analysis, predicates are categorized as part of the ditransitive construction unless zero-marking is observed in the corpus (see also Section 3.2).

In both examples (29) and (30), T is the same inanimate common noun without marking, *bhoṭ* ‘vote’. Nevertheless, R marking alternates between the dative in (29) and the locative in (30). These examples demonstrate that the selection of R marking is determined by factors other than T type or T marking.

Among the total occurrences, only one instance has a T marked by the dative. In this particular case, R is marked by the locative.

(31) R: Locative, T: Dative

<i>[apna-r</i>	<i>chele-ke]</i> _T	<i>[arṭ.skul-e]</i> _R	
2HON.OBL-GEN	boy-DAT	art.school-LOC	
<i>di-le</i>	<i>o</i>	<i>bhalo</i>	<i>kor-b-e</i>
give-COND	3	good	do-FUT-3
‘If you enroll your son in an art school, he will be successful.’			
(ben_newscrawl_2017_1M)			

In (31), T is a human common noun marked by the dative, and R is an inanimate common noun marked by the locative. Due to the extremely limited frequency of this construction in the current corpus, a larger dataset involving the GIVE Construction with marked Ts would be required to assess whether the presence of a dative-marked T influences R marking.

4.2 The Distribution of R Marking with Respect to the Extended Animacy Hierarchy

The results from the corpus survey indicate that the distribution of R marking aligns with the extended animacy hierarchy, particularly regarding the dimensions of animacy and referentiality. Table 3 and Figure 2 provide a summary of the R marking distribution categorized by animateness,¹¹ referentiality, and person.

¹¹ I use the labels ‘animate’ and ‘inanimate’ throughout this paper. With the label ‘animate’, I intend to include humans and animals, while ‘inanimate’ includes inanimate entities. Logically, a referent of any animacy type – that is, human, nonhuman animate, or inanimate – may function as the R of a GIVE Construction in Bangla. However, in the current dataset of 606 instances, only one instance of a nonhuman animate (animal) R was identified. This scarcity is likely attributable to the nature of the news article corpus. Although the current corpus does not have sufficient data with animal recipients for discussion, I use ‘animate’ and ‘inanimate’ labels rather than ‘human’ and ‘nonhuman’ labels, based on observations made in previous studies. In Bangla, animal Rs generally receive the dative marking, in the same way that human Rs do (Thompson 2010, 573).

Table 3 R marking with respect to the extended animacy hierarchy

		R					
		Dative		Locative		Total	
		N	%	N	%	N	%
Animate	1st/2nd person pronoun	31	93,9%	2	6,1%	33	100,0%
	3rd person pronoun	53	100,0%	0	0,0%	53	100,0%
	Quantifier	11	100,0%	0	0,0%	11	100,0%
	Proper name	52	100,0%	0	0,0%	52	100,0%
	Common noun	91	98,8%	1	1,1%	92	100,0%
Total		238	98,8%	3	1,2%	241	100,0%
Inanimate	Demonstrative	3	25,0%	9	75,0%	12	100,0%
	Quantifier	1	50,0%	1	50,0%	2	100,0%
	Proper name	31	46,3%	36	53,7%	67	100,0%
	Common noun	45	15,8%	239	84,2%	284	100,0%
Total		80	21,9%	285	78,1%	365	100,0%
Total		318	52,48%	288	47,52%	606	100,0%

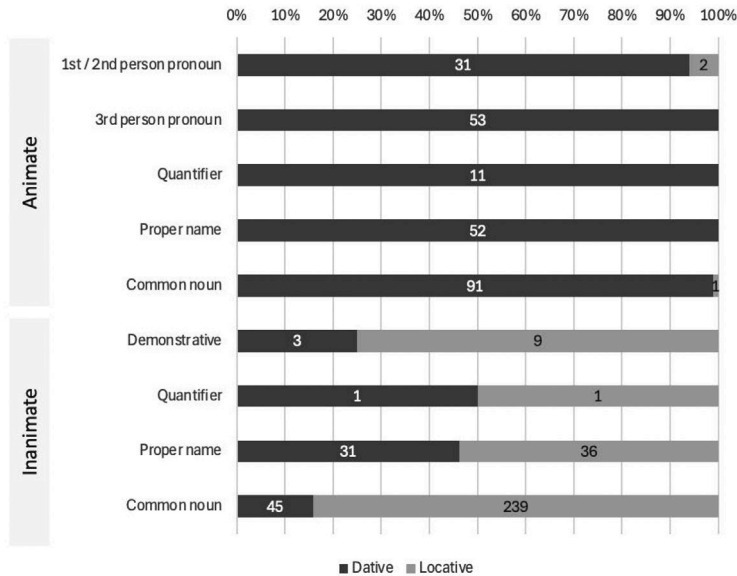


Figure 2 R marking with respect to the extended animacy hierarchy

First, let's look at the overall distribution of R marking with regard to R animateness. Among the animate Rs, 238 instances (98.8%) are marked by the dative, and only three instances (1.2%) are marked by the locative. In contrast, among the inanimate Rs, 80 instances

(21.9%) are marked by the dative, and 285 (78.1%) are marked by the locative. These findings indicate a strong tendency for animate Rs to receive dative marking, whereas inanimate Rs typically receive locative marking. These results confirm previous descriptions of Bangla R marking, specifically regarding the animate-inanimate distinction, as noted by Bhattacharya and Simpson (2011).

Next, let's consider the distribution of R marking with respect to person and referentiality in addition to animateness (also given in Table 3). When the R is animate, it receives dative marking in nearly all instances (98.8%), irrespective of person and referentiality. However, two instances constitute exceptions in which first and second person pronoun Rs are marked by the locative rather than the dative. Example (32) is one such instance.

(32) Personal pronoun R (locative-marked)

<i>tumi</i>	<i>[ama-e]_R</i>	<i>[badha]_T</i>	<i>di-l-e</i>
2SG.NOM	1.OBL-LOC	obstruction	give-PST-2
'You obstructed me.'			
(ben_newscrawl_2017_1M)			

In (32), the personal pronoun R is marked by the locative. As mentioned in Section 2.2, the first and second singular personal pronoun R occasionally takes locative marking in Bangla. For instance, the first person pronoun takes *ama-e* (1.OBL-LOC) instead of *ama-ke* (1.OBL-DAT) to express the R referent. Given the marginal frequency of the locative-marked personal pronoun R in the written corpus analyzed here, this study does not provide a detailed investigation of this specific marking pattern.

Turning to inanimate Rs, as shown in Table 3 above, 21.9% are marked by the dative, and 78.1% are marked by the locative. Interestingly, the proportions vary with respect to R's referentiality. First, out of a total of twelve occurrences of inanimate demonstrative Rs, three are marked by the dative, and the remaining nine are marked by the locative.

(33) Demonstrative R (dative-marked)

<i>tɔkhon</i>	<i>[še-ʈa-ke]_R=i</i>	<i>amra</i>	<i>[mannota]_T</i>	<i>di-i</i>
then	that-CLF-DAT=EMPH	1PL.NOM	acknowledgment	give-1
'We give acknowledgment to it.'				
(ben_newscrawl_2017_1M)				

(34) Demonstrative R (locative-marked)

mee-ti-r *ma* [*ta-te*]_R [*badha*]_T *den*
daughter-CLF-GEN mother that-LOC obstruction give.HON
'The daughter's mother obstructs that.'
(ben_newscrawl_2017_1M)

Example (33) illustrates an inanimate demonstrative R marked by the dative, while example (34) shows an inanimate demonstrative R receiving locative marking. Within the current dataset, locative marking is the predominant strategy for inanimate demonstrative Rs.

Next, among inanimate proper name Rs, 31 instances (46.3%) are marked by the dative, and 36 instances (53.7%) are marked by the locative. The frequency of dative marking is notably higher for inanimate proper name Rs compared to other inanimate categories within this dataset. The sentences in (35) and (36) exemplify the dative-marked inanimate proper name R, whereas (37) and (38) show those marked with the locative.

(35) Inanimate proper name R (dative-marked)

[*e-gulo*]_T *amra* [*bharot-ke*]_R *di-cch-i*
this-CLF.PL 1PL.NOM India-DAT give-PROG-1
'We will give these to India.'
(ben_newscrawl_2017_1M)

(36) Inanimate proper name R (dative-marked)

[*śiaie-ke*]_R [*ḍron* *hamla-r* *onumoti*]_T *di-l-en* *ṭramp*
CIA-DAT drone attack-GEN permission give-PST-HON Trump
'Trump gave permission to the CIA for the drone attack.'
(ben_newscrawl_2017_1M)

(37) Inanimate proper name R (locative-marked)

ar [*nij-er* *tol-a* *śe* *śob* *chobi*]_T
and own-GEN take-PTCP that all picture
prae=i [*fesbuk-e*]_R *den* *tini*
often=EMPH Facebook-LOC give.HON 3SG.HON.NOM
'He often uploads all the pictures that he takes to Facebook.'
(ben_newscrawl_2017_1M)

(38) Inanimate proper name R (locative-marked)

[*rajuk-e*]_R [*śomoe*]_T *den* *śoptah-e* *du* *tin* *ghoṇṭa*
RAJUK-LOC time give.HON week-LOC two three hour
'They give two to three hours a week to RAJUK.'
(ben_newscrawl_2017_1M)

In (35) and (36), the inanimate proper names, *bharot* ‘India’ and *śiaie* ‘CIA’, receive dative marking. In contrast, in (37) and (38), the inanimate proper names, *fesbuk* ‘Facebook’ and *rajuk* ‘RAJUK’ (an abbreviation for Rajdhani Unnayan Kartripakkha) take locative marking.

Last, among inanimate common noun Rs, 45 instances (15.8%) are marked by the dative, and 239 (84.2%) are marked by the locative. For the inanimate common noun Rs, the frequency of locative marking considerably exceeds that of dative marking. The sentences in (39) and (40) exemplify the dative-marked R, while examples (41) and (42) show instances of the locative-marked R.

(39) Inanimate common noun R (dative-marked)

<i>filipain-er</i>	<i>ain.proneta-ra</i>	<i>gɔto</i>	<i>kɔek</i>
Philippines-GEN	legislator-PL.NOM	past	some
<i>maś-e</i>	[biśe-ti-ke]_R	<i>tæmɔn</i>	<i>æk-ta</i>
month-LOC	subject-CLF-DAT	thusly	one-CLF
<i>[gurutto]_T</i>	<i>di-cch-en</i>	<i>na</i>	
importance	give-PROG-HON	NEG	

‘The legislators of the Philippines have not given importance to the matter for a few months.’

(ben_newscrawl_2017_1M)

(40) Inanimate common noun R (dative-marked)

<i>ṭrafik</i>	<i>puliś</i>	<i>bikɔlpo</i>	<i>rasta</i>
traffic	police	alternative	way
<i>bebohar</i>	<i>kor-te</i>	[praibheṭ]_R	[janbahon-ke]_R
use	do-INF	private	transportation-DAT
<i>[pɔramɔrśo]_T</i>	<i>di-cch-en</i>		
advice	give-PROG-HON		

‘The traffic police give advice to the private transportation regarding an alternative route.’

(ben_newscrawl_2017_1M)

(41) Inanimate common noun R (locative-marked)

<i>śɔŋg-e</i>	<i>śɔŋg-e=i</i>	[baśa-e]_R	<i>[fon]_T</i>	<i>di-l-am</i>
together-LOC	together-LOC=EMPH	house-LOC	phone	give-PST-1

‘I called home immediately.’

(ben_newscrawl_2017_1M)

(42) Inanimate common noun R (locative-marked)

[e **gan-ṭi-te**]_R notun kor-e [konṭho]_T de-b-en nociketa
this song-CLF-LOC new do-CVB voice give-FUT-HON Nachiketa
'Nachiketa will provide a new playback for this song.'
(ben_newscrawl_2017_1M)

In examples (39)¹² and (40), the inanimate common noun Rs, *biśœṭi* 'the subject' and *praibheṭ janbahon* 'private transportation', are marked by the dative. In (41) and (42), the inanimate common noun Rs, *baśa* 'house' and *ganṭi* 'the song', receive locative marking.

To conclude, the corpus survey demonstrates that while the vast majority of animate Rs receive dative marking, the inanimate Rs alternate between dative and locative marking. Furthermore, the distribution of this inanimate R marking varies significantly based on the R's referentiality.

5 R's Extended Animacy Hierarchy is Identified by Bangla DRM's Identifying Function

The results presented in Section 4 demonstrate that the T marking does not account for the selection of R marking in Bangla DRM, and that the distribution of marking for inanimate Rs varies depending on R's referentiality. These results indicate that both the animacy and referentiality of R influence the distribution of R marking. Based on these findings from the corpus investigation, this section discusses the identifying function of Bangla DRM (Section 5.1), which serves to identify the position of R on the extended animacy hierarchy (Section 5.2).

5.1 Bangla DRM has an Identifying Function

Section 4.1 investigated the correlation between T and R marking, and the results indicate that R marking is not correlated with T marking in Bangla DRM. With the T marking held constant, R receives both dative and locative markings. Quantitatively, dative-marked R and locative-marked R occur with nearly equal frequency

¹² As pointed out by one of the reviewers, the zero-marking is a grammatical possibility for the recipient argument *biśœ* 'subject' of the construction *gurutto de* 'give importance'. However, no such instances were attested in the corpus used for this study. This suggests that while the marker may be optional, the marked variants (-*ke* or -(*t*)*e*) constitute the predominant pattern in the analyzed data. I recognize that this optionality is an important aspect of Bangla, and its distribution warrants further investigation in larger-scale studies.

when T receives no marking.

The observation that R marking lacks a direct correlation with T marking suggests that the primary role of Bangla DRM is not to serve a distinguishing function. If the motivation of R marking were primarily to distinguish R from T, then a single marking strategy for R would suffice whenever the marking of T remained constant. The employment of two distinct R markers in the presence of an identically marked T suggests that the system operates according to principles other than the need to disambiguate arguments.

However, this result does not entirely preclude the possibility that Bangla DRM also performs a distinguishing function. David (2015, 70-1) posits that dative marking for both T and R is avoided. To accurately assess R marking patterns in contexts where T is dative-marked, a more extensive dataset containing a higher frequency of marked Ts would be required.¹³

Nevertheless, the results presented in Section 4.2 highlight the identifying function of Bangla DRM. Animacy and referentiality were found to influence the distribution of the R marking pattern, which indicates that R marking is determined by the properties of the R argument itself. When the marking of an argument is determined by its properties rather than its relationship to other arguments in the clause, it is characterized as having an identifying function (Witzlack-Makarevic, Seržant 2018, 30). This finding aligns with cross-linguistic analyses of differential R and P marking functions, which suggests that the identifying function is more predominant than the distinguishing function (Kittilä 2008).

5.2 R's Extended Animacy Hierarchy is Identified

Given that Bangla DRM has an identifying function, what properties does the R marking identify? Previous research has attributed the distribution of R marking to the animate-inanimate distinction of the R argument. This is further confirmed by the present corpus survey, as demonstrated in Section 4.2. Specifically, animate Rs receive dative marking, while the majority of inanimate Rs receive locative marking. This animacy-based differential marking aligns with cross-linguistic tendencies, as animacy plays an important role in split and alternation of DAM across various languages (Haspelmath 2007; Kittilä 2008).

13 As pointed out by one of the reviewers as well as by previous studies (Bhattacharya, Simpson 2011, 1071), both T and R may receive dative marking in the same clause, as exemplified in (21). Whereas the corpus that the present study is based on does not include a sentence in which both T and R receive dative marking, this observation also supports the identifying function of R marking in Bangla.

However, interestingly, for inanimate Rs, the marking distribution varies significantly based on R's referentiality. The contrast between R marking for proper names and common nouns is particularly pronounced. While proper name Rs exhibit a nearly equal distribution between the dative and locative marking, locative marking significantly predominates among common noun Rs. Consequently, the pattern of Bangla DRM is more accurately described by incorporating the extended animacy hierarchy. In other words, both the animacy and the referentiality of the R are integral to understanding the R marking patterns in Bangla.

The findings of the present study suggest a gradient within the inanimate category in Bangla. While animacy is a biological dichotomy, not all inanimate nouns are identically conceptualized from a cognitive perspective. Rather, the inanimate category itself constitutes a hierarchy. The results of this study demonstrate that within this hierarchy, proper names occupy a higher position than common nouns in Bangla. This distinction results in distinct behaviors regarding R marking.

The hierarchy within inanimate nouns can be explained by human cognitive perception. Inanimate entities may be conceptualized as animates through conceptual mappings such as metonymy or metaphor (Dahl, Fraurud 1996, 62; Ji, Liang 2018). Specifically, collective and spatial nouns, such as an organizations and countries, often evoke the people associated with them through metonymy (Lakoff, Johnson 1980, ch. 8; Ji, Liang 2018). This conceptualization allows inanimate nouns to exhibit linguistic behaviors typically associated with animate nouns. The Bangla data support this, showing that nearly half of the inanimate proper names are marked by the dative. This is exemplified by (43).

- (43) *proyojon-e* **[bihar-ke]_R** *[śob* *rɔkom* *śahajjo]_T*
necessity-LOC Bihar-DAT all type support
de-b-e *kendro*
give-FUT-3 center
‘The central government will provide all forms of support to the state of Bihar in times of need.’
(ben_newscrawl_2017_1M)

In (43), the R is a proper name, the Indian state of Bihar, marked by the dative. In this context, although R is formally an inanimate place name, it metonymically evokes the people of that place. Such proper names readily evoke the people relevant to the noun, which accounts for the higher frequency of dative-marked inanimate proper names in Bangla.

In contrast, when an inanimate noun does not metonymically evoke the people associated with it, it typically receives locative marking in Bangla. See the example of an organization name in (44).

- (44) *tini* *je* [*trinomul-e*]_R [*jog*]_T *di-ech-en*
 3SG.HON.NOM REL Trinamool-LOC union give-PRF-HON
 ‘He joined the Trinamool party.’
 (ben_newscrawl_2017_1M)

In (44), the inanimate proper name R, the political party *trinomul* ‘Trinamool’, receives locative marking. In this specific event, members of the political party are not metonymically evoked by using the proper name *trinomul* ‘Trinamool’. Instead, this R argument is conceptualized as the organization that the subject joined. Although the Rs in both (43) and (44) are inanimate proper names, Bangla speakers linguistically differentiate these entities based on cognitive perception.

Compared to proper names, common nouns occupy a lower position within the hierarchy of inanimates. In particular, abstract common nouns are less likely to metonymically evoke human referents. This conceptual distance results in a lower frequency of the dative-marked inanimate common nouns compared to proper names, as observed in the present study.

To sum up, Bangla DRM identifies R’s properties based on the extended animacy hierarchy.¹⁴ While animate Rs are marked by the dative, inanimate Rs exhibit a gradient marking pattern that depends on the speaker’s cognitive interpretation of the properties of R.¹⁵

¹⁴ This finding also aligns with the cross-linguistic discussion provided by Aristar (1996), who demonstrates that dative marking is oriented towards animacy, while locative marking is orientated towards inanimacy.

¹⁵ The use of the dative *-ke* based on speakers’ cognition is also evident in P marking. The use of the dative on a word can “bring the animate reading of the word” (Lahiri 2021, 66). As illustrated in the following examples, the presence of the dative marker shifts the interpretation of the P from inanimate to animate.

- (a) *robi* *bostu-ti-ke* *dekh-l-o*
 Robi thing-CLF-DAT see-PST-3
 ‘Robi saw him/her.’
 (Lahiri 2021, 66; glosses modified by the present author)
- (b) *robi* *bostu-ti* *dekh-l-o*
 Robi thing-CLF see-PST-3
 ‘Robi saw the thing.’
 (Lahiri 2021, 66; glosses modified by the present author)

As also suggested by one of the reviewers, combining the analyses of P and R marking in Bangla will enhance our understanding of the behavior of the marker *-ke*.

Within this extended animacy hierarchy, dative marking is more probable when R occupies a higher position, whereas locative marking is more likely when R is situated lower.

6 Event Semantics Is Identified by Bangla DRM's Identifying Function

When an inanimate R is cognitively situated higher on the extended animacy hierarchy, it is typically marked by the dative. These cases usually involve collective nouns or place nouns, as they readily evoke the human referents through metonymy. However, the current study identifies instances where certain abstract common nouns – which occupy the lowest position on the extended animacy hierarchy, and do not metonymically evoke human referents – also receive dative marking. These data suggest that the extended animacy hierarchy alone is insufficient to explain the distribution of Bangla DRM. See example (45) below, repeated from (39).

- (45) Inanimate common noun R
- | | | | | |
|------------------------------|----------------------------------|--------------|--------------|--------|
| <i>filipain-er</i> | <i>ain.proneta-ra</i> | <i>gto</i> | <i>kcek</i> | = (39) |
| Philippines-GEN | legislator-PL.NOM | past | some | |
| <i>maś-e</i> | <i>[biśce-ṭi-ke]_R</i> | <i>tæmɔn</i> | <i>æk-ṭa</i> | |
| month-LOC | subject-CLF-DAT | thusly | one-CLF | |
| <i>[gurutto]_T</i> | <i>di-cch-en</i> | <i>na</i> | | |
| importance | give-PROG-HON | NEG | | |
- 'The legislators of the Philippines have not given importance to the matter for a few months.'
- (ben_newscrawl_2017_1M)

In (45), the inanimate abstract common noun R, *biśceṭi* 'the subject', receives the dative. Abstract nouns of this type are typically regarded as occupying the lowest tier of the hierarchy. Furthermore, this specific noun does not metonymically evoke human referents relevant to the R. Nevertheless, it receives dative marking, indicating that an additional factor beyond animacy and referentiality is at work.

A detailed examination of the corpus data indicates that event semantics also influences R marking. More specifically, when a GIVE event represents the prototypical GIVE event, characterized as a caused possession event (Shibatani 1996, 173-4; Malchukov, Haspelmath, Comrie 2010, 2), the inanimate R receives dative marking rather than locative marking. In example (45), the GIVE event is perceived as a caused possession event, where the inanimate R, *biśceṭi* 'the subject', possesses the T *gurutto* 'importance' as a result of the T's transfer to R. This view is also supported by the fact that

this relationship can be expressed through a possessive construction: *biśce-r gurutto ro-ech-e* ‘The subject has the importance’. In such instances, the T often represents a property attributed to the R, such as *gurutto* ‘importance’. Because inanimate entities can also possess an abstract property, they can appropriately receive dative marking in these semantic contexts.

The perspective involving event semantics thus remains consistent with the identifying function of Bangla DRM, which identifies the position of the R within the extended animacy hierarchy, as discussed in Section 5. In a prototypical GIVE event, the R typically has an animate referent that receives an inanimate T, resulting in the possession of T. For instance, in the sentence *Mary gave Tom a book*, Tom ends up possessing the book given to him by Mary. R arguments that are situated higher on the animacy hierarchy are more likely to function as the prototypical R due to their animate status. Consequently, such Rs receive dative marking.

The patterning of Bangla DRM with regard to event semantics follows the cross-linguistic tendencies. Cross-linguistically, beyond the argument properties, event semantics is recognized as a factor influencing DAM. Specifically, features such as agentivity, control, volitionality, affectedness, and resultativity are related to DAM in various languages (Witzlack-Makarevich, Seržant 2018). For example, it is well established that the English ditransitive alternation is triggered by the distinction between a caused possession and a caused motion (Haspelmath 2015, 26). Hebrew similarly exhibits DRM based on these semantic distinctions (Francez 2006, cited in Haspelmath 2015, 27). In Bangla DRM, too, the event semantics, specifically whether the event is conceptualized as a caused possession, influences the R marking. In spite of typological and structural differences, similar semantic factors contribute to R marking patterns across languages.

7 Conclusions

The present study has analyzed the factors influencing Bangla DRM through a corpus-based approach. First, it has demonstrated that the primary role of Bangla DRM is an identifying function – which marks R with either the dative or the locative based on the properties of R – rather than a distinguishing function. Second, Bangla DRM exhibits a distribution based on R’s animacy and referentiality. Specifically, while the majority of the animate Rs are marked by the dative, the inanimate R marking patterns vary depending on R’s referentiality. Inanimate Rs positioned higher on the extended animacy hierarchy, such as proper names, frequently receive dative marking, whereas those lower on the hierarchy typically receive the

locative marking. This suggests that the inanimate Rs constitute a gradient category rather than a uniform one. Third, a detailed qualitative analysis of the inanimate R data has revealed that event semantics also serves as a critical factor for the marking selection. When an event is conceptualized as caused possession, R receives dative marking. Figure 3 summarizes the key factors that determine the R marking patterns in Bangla.

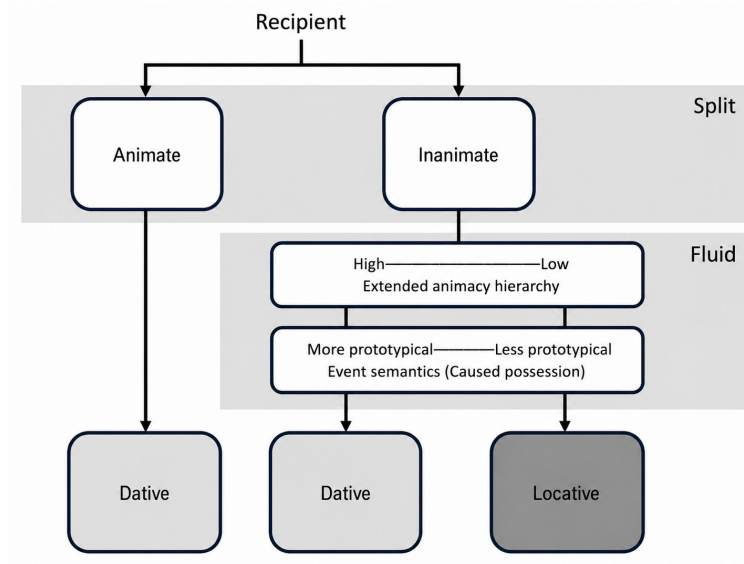


Figure 3 The factors influencing Bangla DRM

The identifying function of Bangla DRM exhibits complexity, incorporating both the extended animacy hierarchy and event semantics. Analyzing the phenomenon from the perspective of DAM clarifies the specific factors that contribute to the DRM in Bangla. The findings of this study provide insights not only for Bangla linguistics but also for typological research on DRM, by offering new empirical data on the factors influencing DRM.

Abbreviations

1	first person
2	second person
3	third person
CLF	classifier

COND	conditional
CVB	converb
DAT	dative
EMPH	emphatic
FUT	future
GEN	genitive
HON	honorific
HUMAN	human
IMP	imperative
INF	infinitive
LOC	locative
NEG	negative
NOM	nominative
OBL	oblique
PL	plural
PRF	perfect
PROG	progressive
PST	past
PTCP	participle
REL	relative clause
SG	singular

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