A lot of people helped me, whether directly or indirectly, in getting this thesis finished.

First, to my advisor, Emily Gasser: I am indebted to you for putting up with me, for all your good advice, and for encouraging me to keep writing every day. I sometimes didn’t do too well, but without you and your willingness to meet weekly, I would never have finished this paper. Thank you also for having the patience to forgive me my occasional anxiety-driven lapses in communication.

Second, a huge thank you to Paroma Nandwani for answering all those questions and devoting so much of your time to the Field Methods class. Another huge thank you to Harsha Sen, also for answering all those questions and spending your time with the Field Methods class, and again for taking even more time out of your schedule this semester to consult with me specifically for this thesis. This thesis is only possible through the two of you.

Finally, to Sal Little and Sam Gray, for being my student readers; to Shizhe Huang, for being my second faculty reader, and for offering me encouragement; to Hannah Penner, for commiserating with me over the thesis process; and to Aja Ould, for letting me subject you to incoherent linguistics rambling all semester while I figured out what I was trying to say here. (Next semester, you won’t be able to act smug because you don’t have to write a thesis.)
Abstract

In this thesis, I provide a mid-level descriptive analysis of the Bangla suffix /-ta/. I provide a discussion of the distribution of the affix in regards to other nominal markers of the language, the different meanings which it marks and how those manifest, and provide some basic analyses of its functions in the language. -ta is used as a semantically bleached component of numeral phrases, as in ek-ta mach 'one fish'. It marks definiteness as well as singularity on nouns, demonstrated with contrastive examples such as boi ‘a book, books’ versus boi-ta ‘the book’. There is a brief discussion of -ti, the marginal, honorific variant of -ta. I discuss how -ta interacts with other systems of the language, such as the demonstratives ei and oi, which carry no innate denotation of number and must be assigned number by the presence of either -ta 'sg' or -gulo 'pl'. -ta also participates in the nominative-accusative, partially animacy-based case marking system of Bangla, co-occurring with the accusative clitic -ke to mark less animate patients such as mach ‘fish’. I also discuss information structure in Bangla, and demonstrate that, while -ta shows a correlation with topic in Bangla, it does not do so in a consistent, obviously principled way. I then outline future lines of research which will provide a greater understanding of -ta and its history.
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1 Introduction

The Bangla language has a population of over 150 million speakers in its home country of Bangladesh (Thompson 2012:1), with over 80 million additional speakers in West Bengal, India, where it is spoken by a portion of the population great enough to warrant its recognition as one of the official languages of India. There are also substantial communities of Bangla speakers dispersed across the rest of the world, notably in the United States, Europe, Australia, and the Middle East. Taken together, this vast speaker population places Bangla in 5th or 6th place among the world’s major languages in terms of speaker number.

While the language is commonly known as Bengali in much of the world, Bangla is the term preferred by speakers of the language, and was predominantly used by my consultants when discussing the language. The term ‘Bengali’ itself hails from the period of British colonial occupation in the Indian subcontinent, and was a term given to the language by European foreigners. Herein, I refer to the language exclusively as Bangla, in deference to the habits and opinions of Bangla speakers.

Bangla is one of the numerous Indo-European languages descended from Sanskrit, which was spoken in the area of India around 1500-1000 BCE. Three major branches of Sanskrit developed in the next thousand years, called Sauraseni, Magadhi, and Maharashtri. Bangla, along with its close relatives Assamese, Oriya, and Bhojpuri (or Bihari), is descended from the Magadhi branch of Sanskrit (Thompson 2012:2).

The Bangla language has a rich literary and cultural tradition, which has historically been afforded a great deal of prestige (Thompson 2012:4). However, there are many distinctive differences between the literary language and the more colloquial Bangla spoken in day to day life. Thompson points out in the introduction to her Bengali reference grammar that the majority of the linguistic studies into Bangla were, up into the 1970s, largely studying the written language over the spoken, colloquial version (2012:10).

All data given in this paper were gathered from recordings made by the Field Methods class of fall 2015, of which I was a part, or on my own time. The consultants for the Field Methods class were HS and PN, and I have continued to work with HS and gather additional data. Data were in all cases
collected on location at Swarthmore College campus, usually in Pearson 115. Cited examples given in the paper are written in a standardized orthography developed by the Field Methods class specifically for Bangla. This orthography and some relevant notes are given in Appendix A.

2 Nominal Affixes in Bangla

Bangla morphology falls somewhere in the middle of the spectrum between agglutinative and fusional. It shows its heaviest degree of fusion in the personal endings of verbs in various tenses. We are here concerned with -ta, which marks nouns, as well as its interaction with the other affixes commonly found on nouns: =ke, the accusative clitic; -er, the possessive or genitive suffix; and -e, the locative suffix. These markers behave agglutinatively.

Of these affixes, -e does not co-occur with -ta, and thus will not be discussed. -er may co-occur if a noun marked with -ta is a possessor, in which case, they are ordered -ta-er. This always results in a normal vowel-deletion process which affects the /e/ of the -er suffix whenever it follows another vowel, producing the surface form -tar. This relationship is semantically decomposable into its component parts wherever it occurs, and neither affix appears to overlap in meaning with the other. As the two affixes are therefore independent, their co-occurrence is not otherwise noteworthy.

On the other hand, the accusative =ke interacts extensively with -ta in the domain of specificity and animacy. This relationship is discussed further in section 4.3. When they appear together, they form a string -ta=ke. There is, further, evidence that =ke is a phrase-final clitic, given in (1).

(1) a. ami Bríśti eboŋ Raja=ke porcbundo khor-i.
   1.SG.NOM Brishti and Raja=ACC do-PRES like 'I like Brishti and Raja.'

b. kukur arh mack=ke kena ko-lo.
   dog and fish=ACC buy happen-3.PAST-3SG
   'The dog and the fish were bought.'

(Example (1b), despite being translated passively in English, is not a true passive construction in Bangla.)

Though in (1a) Raja and Brishti are both the objects of porcbundo kbori, and in (1b) the dog
and the fish are both the objects of *kena bolo, the =ke in both cases attaches only to the second noun, despite having a semantic scope over the entire phrase. To say *Bristi=ke eboy Raja=ke would be ungrammatical. This is a common behavior of clitics, which may mark entire phrases rather than single words. As Bangla is very consistently head-final in noun phrases, the presence of =ke only once argues fairly convincingly for its status as a clitic, not as a standard suffix. -ta, on the other hand, displays the behavior of a suffix, and is treated as such, as shown in (2).

(2)   *Bristi=ke eboy Raja=ke

Finally, a brief note must be made of the third-person pronoun fe. Bangla displays nominative-accusative alignment, discussed in more detail in section 4.2, and its pronouns all have accusative forms. fe’s accusative form is ta. This ta shows no evidence of being related to the suffix -ta, discussed further in section 4.4, and occurs only in contexts where the pronoun fe would appear in the accusative case. However, it is a homophony that is worth noting in order to avoid confusion.

3 Uses of -ta

Two major functions of the -ta suffix can be isolated with certainty; that of definiteness and specificity, and that of counting. The two uses may be found in complementary distribution – the counting -ta marks only numerals and quantifiers, and only in contexts of counting or otherwise quantifying some noun, while the definite singular -ta marks only nouns.

3.1 Counting

-ta’s most limited usage, and also the one that is easiest to describe, is the counting -ta, used to quantify a noun. (3) provides a basic example of the counting -ta.

(3) ek-ta kukur
    one-TA dog
    ‘one dog’
The counting -\textit{ta} may take two variant forms, as well, depending on the numeral that is used. While \textit{ek} 'one' takes the usual -\textit{ta} marking, both \textit{du} 'two', \textit{tin} 'three', and \textit{char} 'four' take different forms of the suffix when they are used in this construction, shown in (4a-c).

\begin{enumerate}
  \item \textit{du-\text{\text{\text{\_\text{}}}ta} kukur
     \begin{itemize}
       \item two-\textit{ta} dog
       \item 'two dogs'
     \end{itemize}
  \item \textit{tin-\text{\text{\text{\_\text{}}}je} kukur
     \begin{itemize}
       \item three-\textit{ta} dog
       \item 'three dogs'
     \end{itemize}
  \item \textit{char-\text{\text{\text{\_\text{}}}je} kukur
     \begin{itemize}
       \item four-\textit{ta} dog
       \item 'four dogs'
     \end{itemize}
  \item \textit{bac-\textit{ta} kukur
     \begin{itemize}
       \item five-\textit{ta} dog
       \item 'five dogs'
     \end{itemize}
\end{enumerate}

\textit{du}, \textit{tin}, and \textit{char} are the only numerals that display a variant surface form of -\textit{ta}. All other numerals five and above return to using the basic -\textit{ta} for the counting construction, shown in (4d).

A variant form of \textit{du} 'two', \textit{qui}, takes -\textit{ta} rather than -\textit{ta}, shown in (5). This form appeared only in PN's idiolect, not in HS's, but within PN's idiolect there is no reliable way to predict which form will appear.

\begin{enumerate}
  \item \textit{dui-\textit{ta} jinif
     \begin{itemize}
       \item two-\textit{ta} thing
       \item 'two things'
     \end{itemize}
\end{enumerate}

While the counting construction is extremely common in Bangla, it is not obligatory when counting nouns. Though rare, examples such as (6) have been given by consultants.

\begin{enumerate}
  \item \textit{du} kukur
     \begin{itemize}
       \item two dog
       \item 'two dogs'
     \end{itemize}
  \item \textit{bac} kukur
     \begin{itemize}
       \item five dog
       \item 'five dogs'
     \end{itemize}
\end{enumerate}
The -ta construction equivalents of (6) have been given previously in (4a) and (4d). Though these translate roughly equivalently in English, in Bangla the pairs imply slightly different meanings. The unmarked numeral implies that the dogs being spoken of are all either similar dogs, or exactly the same kind of dog. Conversely, when the -ta version of the construction is used, it is implied that the dogs are all different kinds of types of dogs. This may also be related to the function of -ta as a marker of specificity, discussed further in future sections. By marking the numeral with -ta, the meaning is effectively changed from 'two items' to 'two kinds of the item'.

Counting a noun with an unmarked numeral is not always possible, and appears to be lexically determined to some degree. While *ek botol 'one bottle' is acceptable, *ek drink is not, and *dhu bacha 'two children' is not grammatical, while dhu-to bacha 'two children' is fine. These distinctions may well be related to semantics, as it is possible to have two of the same kind of bottle, or two of the same kind of drink, but rather difficult to have two of the same child.

Counting -ta also marks quantifiers that are not numerals. In (7), kœk 'some, a few' is marked with -ta, occurring in the same place in the sentence that a numeral might. kœk indicates discrete quantities, which might be counted. Indiscrete quantities are indicated with ektu 'some, a little', which may be contrasted with kœk as shown in (8-9), and does not take -ta.

(7) o kœk-ta keik bana-lo.
   3.sg some-TA cake make-3.PAST
   'She made some cakes.'

(8) o ama-ke kœk-ta mach di-lo.
   3.sg 1.sg-acc some-TA fish give-3.PAST
   'She gave me some fish.'

(9) o ama-ke ektu mach di-lo.
   3.sg 1.sg-acc some fish give-3.PAST
   'She gave me some fish.'

In (8), 'some fish' refers to a discrete number of whole fish. 'She', the subject, is most likely to be interpreted as a fishmonger. In contrast, 'some fish' in (9) refers to a portion of fish, likely given as part of a cooked meal. kœk may occur without -ta in the case of quantity expressions involving time, shown in (10).
(10) *bek din*
  some minute
  'a few minutes'

The *-tu* portion of *ektu* is unlikely to be another variant of *-ta*. *ektu* was encountered a couple of times in my data, each time translated specifically into 'little'. Examples are given in (11).

(11) a. *ektu kon tore*
    little moment for
    'for a short time'

b. *fekane ektu ba-dike gbure...*
    there little left-direction having.turned
    'Having turned slightly left there...'

The form *ek* has not been observed alone, and a form such as *ektu-*ta has not been observed at all. Therefore, I conclude that *ektu* is a separate lexical item.

The counting *-ta*'s relationship with the definite *-ta* is unclear. It is possible that the two hold some common origin, considering the similarities of their form and function, but a diachronic investigation of Bangla to determine that origin is beyond the scope of the current paper. Furthermore, a primary meaning of the nominal-marking *-ta* is singularity (discussed below in section 3.3). This seems somewhat counterintuitive to the use of *-ta* in counting constructions, which are inherently plural, if we presume the two morphemes to be related. Should we continue to say that the two morphemes are related, I propose that *-ta*'s grammaticality in numeral expressions hails from its use as roughly meaning 'kinds of'. When *-ta* is used in numeral constructions, by specifying '(number of) kinds of', it creates a singular meaning that applies to the kinds -- only a single one of each kind -- not to the number of each item that is ultimately present.

3.2 Definiteness

The most common use of *-ta* in Bangla is as a marker of definiteness. Under semantic and pragmatic theory, a definite entity is one which is identifiable to the listener – that is “the speaker treats the participants in question as identifiable given the information the speaker assumes the addressee has
available” (Payne 1997:263). One major property of definiteness is the uniqueness of the entity so marked, at least within the contextual scope of the discussion (Payne 1997:263).

All languages must deal with definiteness in some way. English’s main strategy is to use the. In Bangla, -ta is generally associated with definiteness and uniqueness, or specificity as my consultants described it, as shown in (12a). A noun not marked with -ta is unspecified for definiteness, as shown in (12b).

(12) a. boi -ta
    book-ta
    'the book; a specific book'

b. boi
    book
    'a book, the book'

Bangla is less insistent on consistent, explicit marking of identifiable arguments than English is. In English, once we introduce an identifiable participant and continue to speak about them, we must continue to use the. The cat can never become simply cat once we have introduced it, and still retain its identifiability. In Bangla, however, this is possible.

It is also possible for an argument to be optionally marked for definiteness. In example (13), the marking of dorca ‘door’ with -ta is not obligatory, because the information is not salient enough to require specification. The speaker knows that Raja has opened a door, and the specific identity of the door is likely to be pragmatically recoverable from the context of the statement. Therefore, while it is possible to attach -ta to dorca in (13), it is not required.

(13) Raja dorca(-ta) khul-lo.
    Raja door-(TA) open-3.PAsT
    'Raka opened the door.'

Definiteness induced by -ta can also carry throughout a sentence, affecting nouns other than the original definite or specific noun. In contrast to (13), (14) requires that dorca be marked with -ta.

(14) ei chabi-ta dorca-ta khul-lo.
    this key-(TA) door-TA open-3.PAsT
    'This key opened the door.'
This requirement is caused by the definite, specific nature of *ei chabi-†a* 'this key'. (Refer to section 4.1 for a discussion of how demonstratives are assigned their number by determiners.) With *ei chabi-†a*, a specific key is being made a referent. Keys are, by their nature, made to open specific doors – that is, a specific key, unlike Raja, cannot be expected to open every door it is used on, but is meant to be used on only one door. The indication of a specific key entails the assumption that the door in the sentence also has a specific identity, and so †a must mark *dorca* in (14) in order to fulfill this entailment requirement.

### 3.3 Singular Number

†a is not only a definite marker, but interacts in distinctive patterns with the plural marker †gulo ‘PL’ and the plural modifier *nek* ‘many, lots of’. †a appears in complementary distribution with †gulo, shown in (15).

\[(15)\]
\[
a. \textit{kukur-†a dak-che.} \\
\quad \text{dog-†A bark-3.PROG} \\
\quad \text{‘The dog is barking.’}
\]
\[b. \textit{kukur-gulo dak-che.} \\
\quad \text{dog-PL bark-3.PROG} \\
\quad \text{‘The dogs are barking.’}
\]

When †a or †gulo marks a noun which is also being marked with the accusative =ke, they again appear in the complimentary distribution given in (16).

\[(16)\]
\[
a. \textit{kukur-†a mach-†a=ke kha-†i.} \\
\quad \text{dog-†A fish-†A=ACC eat-PRES} \\
\quad \text{‘The dog eats the fish(sG).’}
\]
\[b. \textit{kukur-†a mach-gulo=ke kha-†i.} \\
\quad \text{dog-†A fish-PL=ACC eat-PRES} \\
\quad \text{‘The dog eats the fish(PL).’}
\]

†a and †gulo also cannot mark the same noun at once, regardless of the order they are placed in, shown in (17).
(17) a. *kukur-\textit{ta}-gulo mach kha-i.
    \text{dog-\textit{ta}-PL fish eat-PRES}
    \text{*ungrammatical}

b. *kukur-gulo-\textit{ta} mach kha-i.
    \text{dog-PL-\textit{ta} fish eat-PRES}
    \text{*ungrammatical}

Due to this complementary distribution, I analyse -\textit{ta} and -\textit{gulo} as members of the same syntactic class, which I will henceforth refer to as determiners.

Immediately a challenge to this analysis arises in \textit{mek} 'many, lots of', which can occur in a noun phrase with -\textit{gulo}, shown in (18a), but cannot occur with -\textit{ta}, shown in (18b).

(18) a. \textit{mek} kukur-gulo mach kha-i.
    \text{many dog-PL fish eat-PRES}
    'Many dogs eat fish.'

b. *\textit{mek} kukur-\textit{ta} mach kha-i.
    \text{many dog-\textit{ta} fish eat-PRES}
    \text{*ungrammatical}

\textit{mek} is best described as an adjective, as it can occur in the same syntactic position as adjectives such as \textit{lal} 'red', a comparison shown in (19).

(19) a. \textit{mek} kukur
    \text{many dog}
    'many dogs'

b. \textit{lal} kukur
    \text{red dog}
    'a red dog, red dogs'

Bangla nouns are far less marked for plurality in their 'bare' form than nouns in English. In English, the unmarked noun \textit{book} is interpreted as definitely singular, and must be made plural by the addition of the plural morpheme -\textit{s}, creating \textit{book-s}. In Bangla, the unmarked noun \textit{boi} 'book' is not so definitely singular, and may be interpreted as either plural or a generic when it is used in a sentence and receives no clarification otherwise.
In (20), there are two possible readings of the sentence. The first assumes that *boi* indicates a plural, and translates the sentence as ‘She gave me books’. The second reading assumes that *boi* may indicate either a plural, or a single book, but further extends the sentence as a habitual. In effect, it would be read as ‘She gives me books (in general, habitually)’. The first reading holds *boi* to be plural, while the second reading holds *boi* to be part of a recurring phenomenon. In the first case, there are multiple instances of a book – in the second, there may on occasion be an instance of the speaker receiving only one book, but when the whole of the phenomenon is taken together, there will certainly be more than one book involved in the habitual giving.

This interpretation is the same as the one seen in the English translation of (20), *She gave me books*. By saying this sentence in English, there was either one instance of past giving in which multiple books were transferred, or there were numerous instances of past giving which were habitual, and which eventually resulted in multiple books being cumulatively transferred. In the face of these two readings, I argue that the bare noun in Bangla is inherently unspecified for number, tending towards a plural interpretation.

The generic reading can, of course, be removed with elaboration, shown in (21).

(21)  a. *ama-ke ōmek boi di-lo.*
    3.SG 1.SG=ACC many book give-3.PAST
    'She gave me many books.'

b. *ama-ke boi-tra di-lo.*
    3.SG 1.SG=ACC book-TA give-3.PAST
    'She gave me books.'

(21a) specifies for plurality, while (21b) specifies for singularity. In (21a), *mek* ‘many’ inherently denotes a plurality, and so when it modifies a noun, in this case *boi*, that noun can be assumed to be only plural. Modifying a noun with *mek* also appears to limit the scope of the entire event, removing the possibility of recurrence and habituality. Conversely, in (21b), modifying the noun *boi* with *-tra* removes the possibility of a plural interpretation, limiting *boi* to denoting a single book in this one
instance, as the English singular noun *book* does, but multiple giving events. Therefore, *-ta* marks singular number, as well as definiteness.

The analysis of *-ta* as a marker of singular number also holds across living nouns as well as nonliving nouns such as *boi*, as shown in (22) with the noun *kukur* 'dog'.

(22) a. *je kukur lal*
        REL dog red
        'the dog that is red, the dogs that are red'

b. *je kukur- *ta lal*
        REL dog-*ta* red
        'the dog that is red'

c. *je kukur- gulo lal*
        REL dog-*pl* red
        'the dogs that are red'

PN interpreted (22a) as an ambiguous number of dogs, but also assumed that the intended meaning was almost certain to be plural. Both (22b) and (22c) left no ambiguity as to the intended number of dogs.

With this analysis in mind, *-ta*'s inability to co-occur with *mek* becomes clear. A noun cannot be simultaneously marked for both plurality and singularity, as it creates a paradox of meaning, and results in the failure of the listener to interpret the meaning.

3.4  *-ti*

The definite and singular *-ta* has a variant form, *-ti*. This form has been alternately translated by PN as the feminine version of *-ta*, or as a more respectful version of *-ta*. When presented with the words *me* 'girl' and *chele* 'boy', PN preferred to use *-ti* with *me* and *-ta* with *chele*. HS had no opinion, and consistently used *-ta* for persons of all genders. *-ti* was also used by PN to mark respected professions, such as a teacher or professor, regardless of the gender of the individual, shown in (23).

---

2 As a side note, the ungrammaticality of marking *mek* with *-ta*, whereas quantifiers with plural implicatures such as *keek* 'some', which may grammatically take *-ta*, indicates that *mek* is not the same part of speech as the quantifiers, and therefore implies that quantifiers are not treated as members of the lexical class of adjectives in Bangla.
(23) *ticher-{i me-ji=ke phora-len.*
  teacher-ta girl-ta=acc made.study-form.past
  'The teacher taught the girl.'

Bangla possesses a formal-informal distinction in the second- and third-person, and the conjugation of *phora* ‘teach, study’ here is the formal version of the past tense. As Bangla verbs must agree with their subjects in person and number (a high degree of syncretism notwithstanding), this provides some grammatical evidence for PN’s interpretation of -{i as an honorific.

-{i has also been observed in a free discourse context. During an elicitation session in the Field Methods class, HS and PN were playing Twenty Questions in Bangla.

(24) a. *ei bk-{i chele na me?*
    this person-ta boy or girl
    'Is this person a boy or a girl?' (PN)

b. *ei bk-{i chele.*
    this person-ta boy
    'This person is a boy.' (HS)

c. *ei chele-{i ei khor-e bese a-che?*
    this boy-ta this room-loc having.sat cop-3.prog
    'Is this boy sitting in this room?' (PN)

d. *na.*
    neg
    'No.' (HS)

Here, though HS does use *bk-{i in (24b), he only uses it after being prompted by PN’s marking of *bk with -{i in (24a). His use of -{i may therefore be nothing more than a function of pragmatics, ensuring that he was clear that the person he answered for was the same as the one PN had previously asked him about. Besides that, PN’s use of -{i does not hold with either of the explanations she proposed for it in separate elicitation sessions from the Twenty Questions session. In (24a), there is no overt verb on which to mark a grammatical honorific, so it is not possible to determine whether the use of -{i has anything to do with the level of formality in the sentence. (24c) also leads us to reject the hypothesis of gender, as *chele-{i was a form previously rejected by PN.

The next question in the discourse may provide some clarification on the issue.
Immediately preceding example (25), it was established that the person in question was not present in the room at the time. Once this fact is established, the use of 

\[-\textit{ti}\]

drops, and 

\[-\textit{ta}\]

is used instead. Now, it is possible for us to return to our honorific theory. Let us imagine that PN prefers to be respectful when speaking of third parties present for a speech event. Thus, the honorific marker 

\[-\textit{ti}\]

is used until it has been explicitly denied that the subject of discussion is currently present, and from then on the usual marker 

\[-\textit{ta}\]

is used. This explanation also provides a suitable reason for 

\[-\textit{ti}\]

to appear on 

\textit{chele}

in (24c).

All this, of course, must be taken with some skepticism, as I am only basing my analysis on one discourse context, and no great study of 

\[-\textit{ti}\]'s marginal distribution has occurred. However, at this moment, analysing 

\[-\textit{ti}\]

as an honorific marker seems most profitable. The gender aspect of 

\[-\textit{ti}\]

appears very limited, and is restricted to only a few nouns even in PN's speech, not all of which are consistently marked with 

\[-\textit{ti}\]. For example, PN has produced both 

\textit{me-\textit{ti}} 'girl' and 

\textit{me-\textit{ta}} 'girl' within elicitation sessions.

Overall, an assertion that 

\[-\textit{ti}\]

is distinctive from 

\[-\textit{ta}\]

is not justified. It must therefore be characterized as a marginal variant of 

\[-\textit{ta}\]

that is not productive or obligatory.

4 \textit{\textit{-ta}} Interacting with Other Aspects of the Language

4.1 Demonstratives

\textit{-ta} and 

\textit{-gulo}

often arise in the same noun phrase as the Bangla demonstrative 

\textit{ei} 'this' and 

\textit{oi} 'that', shown in (26-27).

(26) a. \textit{ei kukur-\textit{ta} ak-\textit{ta} mach kba-\textit{che} na, am kba-\textit{che}.}

\textit{this dog-\textit{ta} one-\textit{ta} fish eat-3.PROG NEG mango eat-3.PROG}

'This dog is not eating a fish, it is eating a mango.'
b.  
\[\text{+}\] \[\text{\textit{lal} kukur-\textit{t}\textit{a}}\]  
\text{that red dog-\textit{t}\textit{a}}  
\text{'that red dog'}

(27) 
\[\begin{align*}
\text{a. } \text{\textit{me-gulo boi-gulo kin-che}.} \\
\text{this girl-PL book-PL buy-3.PROG} \\
\text{\textit{Those girls are buying the books.'}}
\end{align*}\]

\[\begin{align*}
\text{b. } \text{\textit{me-gulo boi-gulo kin-che}.} \\
\text{that girl-PL book-PL buy-3.PROG} \\
\text{\textit{Those girls are buying the books.'}}
\end{align*}\]

Both \textit{ei} and \textit{oi} do not change form when plurality is changed, but the plurality of the noun phrase depends on the presence of either \textit{-t\textit{a}} or \textit{-gulo}. This suggests an analysis where \textit{ei} and \textit{oi} are unspecified for number (Gasser p.c.). Because they do not specify either way, the determiners \textit{-t\textit{a}} and \textit{-gulo} are free to appear in the same noun phrase as \textit{ei} and \textit{oi}.

### 4.2 Grammatical Role and Case Alignment

In discussing the grammatical role of Bangla, we must first establish the system the language uses for case alignment. Example (28) represents intransitive verbs where \textit{ami} 'I' is the semantic patient, while example (29) represents intransitive verbs where the \textit{ami} is the semantic agent. Such verbs are sometimes called unaccusative (28) and unergative (29), and they are often used to help determine a language’s primary case-alignment system.

(28) 
\[\begin{align*}
\text{a. } \text{\textit{ami} bhoreja-i.} \\
\text{1.SG.NOM fall-PRES} \\
\text{\textit{I fall.'}} \\
\text{b. } \text{\textit{ami} moreja-i.} \\
\text{1.SG.NOM die-PRES} \\
\text{\textit{I die.'}}
\end{align*}\]

(29) 
\[\begin{align*}
\text{a. } \text{\textit{ami} fatarkhat-i.} \\
\text{1.sg.nom swim-PRES} \\
\text{\textit{I swim.'}} \\
\text{b. } \text{\textit{ami} ganga-i.} \\
\text{1.sg.nom sing-PRES} \\
\text{\textit{I sing.'}}
\end{align*}\]
In each case, *ami* remains in the same form, despite its shifting between the semantic roles of patient in (28) and agent in (29). This is one mark of a nominative-accusative system.

*Raja Brishti=ACC hit-3.PAST*  
'Raja hit Brishti.'

b. *Raja Brishti-ke joriedhor-lo.*  
*Raja Brishti=ACC hug-3.PAST*  
'Raja hugged Brishti.'

c. *kukur-†a ama-ke kbamra-i.*  
dog-TA l.SG-ACC bite-PRES  
'The dog bites me.'

(30a-b) provide transitive verbs which indicate the unmarked *Raja* as the agent, while the patient *Brishti* is in each case marked with *-ke*. In (30c), *kukur* ‘dog’ is the unmarked agent, while *ama-ke ‘I’ is the marked patient. (*ama* is a suppletive form of *ami* which appears regularly when the first singular pronoun is not nominative, or when it is being marked by affixes.) The identical methods of marking intransitive patients and transitive agents, or subjects, with a different marking for transitive patients, or objects, confirms the hypothesis of Bangla as a language with nominative-accusative alignment.

(31) a. *ami kukur-†a ke baddi di-lam.*  
l.SG.NOM dog-TA=ACC bone give-1.PAST  
'I gave bones to the dog; I gave the dog bones.'

b. *ami baddi-†a kukur-ke di-lam.*  
l.SG.NOM bone-TA dog=ACC give-1.PAST  
'I gave the bone to the dog; I have a dog the bone.'

*-ke* is also used to mark the indirect objects of ditransitive phrases, shown in (31). Bangla makes no distinction between the double-object method of ditransitives, and the prepositional-indirect object method which English can choose between. The basic Bangla formula is [Subject Indirect=*ke* Object Verb], as seen in (31), and it may be translated into either English construction. It is possible to foreground the patient, shown in (32). In this case the patient is still clearly indicated by *-ke* marking, although the fronting of *mach* ‘fish’ indicates topicalization of the patient.
(32)  
\[ \text{mach-ke kukur kba-i.} \]
\[ \text{fish=ACC dog eat-PRES} \]
\[ 'As for the fish, it is eaten by the dog.' \]

=ke cannot appear without a corresponding subject. Sentences such as (33) are ungrammatical.

(33)  
\[ ^*\text{kukur-}ta-ke \text{ mach-ke kba-i.} \]
\[ \text{dog-TA=ACC fish=ACC eat-PRES} \]
\[ ^*\text{ungrammatical/ unparsable} \]

With both nouns marked as accusatives, there is no indication of the agent, or subject, who is performing the eating act. This renders the sentence unparsable.

4.3 Animacy with the Accusative Marker and -ta

=ke is not required to be present on patients. In fact, its presence may be seen as unnatural in some situations. Generally, nouns with higher agency (such as a human person) will be marked with =ke in the object position of a transitive sentence, as examples (30a-b), while nouns with less agency will resist being marked with =ke, as example (34).

(34)  
\[ \text{lkukur-}ta \text{ mach-ke kba-i.} \]
\[ \text{dog-TA fish=ACC eat-PRES} \]
\[ '? The dog eats a fish.' \]

HS hesitantly accepted (34) as a grammatical sentence, but was always insistant that it was a strange sentence. When -ke is used on mach without any fronting, the fish must be interpreted as in some way personified to an usual degree. HS proposed that you might use it in the context of a story in which the fish has, up to now, been a significant character with a personality, and that in such a case it would make sense, but out of that context it is not very good.

In fact, nouns of lesser animacy are preferentially unmarked in the object position, and if they are marked with =ke, it is strongly preferred that they also be marked with -ta, and vice versa.

(35) a.  
\[ \text{kukur-}ta \text{ mach kba-i.} \]
\[ \text{dog-TA fish eat-PRES} \]
\[ 'The dog eats fish.' \]
b. ḍukur-ṭa mach-ke kba-i.
dog-TA fish=ACC eat-PRES
? 'The dog eats fish.'

(36) a. ḍukur-ṭa mach-ṭa kba-i.
dog-TA fish-TA eat-PRES
? 'The dog eats the fish.'

b. kukur-ṭa mach-ṭa=ke kba-i.
dog-TA fish-TA=ACC eat-PRES
'The dog eats the fish.'

(35a) and (36b) are both accepted as well-formed. When presented with (35b) and (36a), HS struggled with their interpretations for a while before deciding that while he could see what was meant, he felt very strongly that they were not as well-formed as they could be. (35b) was more permissible than (36a), if it is assumed that the fish in question is being personified in some way, and HS saw the use of -ke as indicating that the fish had “more animacy” than a normal fish would. He regarded (36a) as having a piece missing – namely, a final -ke on mach, which if added would result in the well-formed sentence shown in (36b).

This tendency reverses, however, when -ṭa is found on an object with lower animacy. In (36b), mach ‘fish’ is marked by both -ṭa and -ke, with no grammaticality issues based on those affixes. When -ke is missing, but -ṭa is present, as in (36a), the sentence again becomes questionable. According to HS’s elaboration, he could understand roughly what the sentence was intended to mean, but he felt strongly that it was missing something – the ‘something’ being a -ke which would be added to mach. Therefore, -ke cannot be said to only deal with animacy. There must be some degree of overlap with -ṭa, especially in the domain of specificity, but -ke cannot fully introduce specificity on its own. If it could, then we would expect example (34) to be more acceptable than it is. Instead, -ke supports the specificity introduced by -ṭa in a sequence such as -ṭa=ke, and seems to be a required item when a living object is marked with -ṭa and is also the object of a verb. Nonliving objects do not appear to require -ke (examples (13-14), reproduced below from section 3.2).

(13) Raja dorca(-ṭa) kbul-ṭo.
Raja door(-ṭa) open-3.PAsT
'Raja opened the door.'
In (13-14), dorca ‘door’ is the object, but does not receive =ke. Further, the presence of -ta marking dorca in (14) does not require the use of =ke as well. This contrasts with the behavior of mach in (36), and indicates that nonliving objects do not require =ke to be marked as objects, nor do they require -ta in the object position to be supported by the additional marking of =ke. There are no examples anywhere in the data where a nonliving object is marked with =ke.

In some contexts, such as clauses involving the verb chawa ‘want’, the presence or absence of =ke and -ta in different combinations can introduce dramatic changes to the interpretation of animacy in the sentence, given in (37), or to the intended meaning of the outcome, given in (38).

(37) a. *ami mach-ta khete cha-i.
   1SG NOM fish-TA eating want-PRES
   'I want to eat the fish.'

b. *ami mach-ta=ke khete cha-i.
   1SG NOM fish-TA=ACC eating want-PRES
   'I want to eat the fish.'

In (37a), the fish is implied to be already dead. However, in (37b), the inclusion of =ke creates an implication that the fish is still alive, and that the speaker will need to kill the fish before they can eat it.

(38) a. *ami kukkan porte cha-i.
   1SG NOM dog catching want-PRES
   'I want to catch dogs.'

b. *ami kukkan-ja porte cha-i.
   1SG NOM dog-TA catching want-PRES
   'I want to catch the dog.'

c. *ami kukkan-ja=ke porte cha-i.
   1SG NOM dog-TA=KE catching want-PRES
   'I want to catch the dog.'

(38a) is a generically interpreted sentence caused by a bare noun, as discussed in section 3.3. However, while (38b-c) are basically translated the same into English, they mean very different things. (38b)
implies that the speaker wishes to catch the dog in order to eat it, or in order to determine if it will be good to eat. (38c), on the other hand, implies that the speaker wishes to catch the dog in order to keep it as a pet. The presence of -ke in (38c) personifies the dog, softening the meaning of 'catching' so that even when caught, the dog is treated something like a person, while in (38b), the dog is simply food.

4.4 fe

fe is a third-person pronoun in Bangla. All pronouns in this language have accusative forms, often suppletive, and the accusative form of fe is ta, which is always found modified by -ke. It was suggested (Gasser, p.c.) that a possible analysis of -ta might be as the accusative form of the pronoun fe, which Bangla allowed to attach to nouns. In essence, using -ta on a noun such as mach would create the animacy necessary to personify it. However, I hold that the analysis is not applicable to singular definite -ta affix. In the language, fe and its accusative form ta-ke occur very clearly in only subject or object positions of verbs, respectively.

(39) a. fe morege-lo.  
   3.SG.NOM die-3.PAST  
   'She/he died.'

   b. fe ama-r bari-te nek afa jawa kore.  
   3.SG.NOM 1.SG.NOM house-LOC many come go having done  
   'She/he visits my house a lot.'

(40) a. ei mach ta-ke kba-i.  
   this fish 3.SG-ACC eat-PRES  
   'This fish eats her/him.'

   b. ami ja-ke dekh-i.  
   1.SG.NOM 3.SG-ACC see-PRES  
   'I see her/him.'

However, the definite singular -ta also marks nouns which occur in the nominative position in sentences. Examples abound throughout this thesis, but (35a) is reproduced here for clarity.
(35a) \( \text{kukur-ta mach kha-i.} \)
\( \text{dog-TA fish eat-PRES} \)
'The dog eats fish.'

If the definite singular \(-\text{ta}\) was identical to the pronoun \(\delta \text{er}\), then we would expect to see nominative nouns marked with a \(-\text{fe}\) affix, not with the accusative 'version' \(-\text{ta}\). Therefore, I hold that the pronoun is distinct from the affix, and has no further bearing on an analysis of \(-\text{ta}\).

## 5 Topic and Focus Marking

Topic and focus are two major features of information structure in language. Information structure refers to how languages deal with the dispensing of new information, and how they keep track of relevant referents within the discourse. Following Lambrecht (1994), the topic of any proposition is what the sentence is about, while the focus is the part of the proposition that introduces new information relevant to the topic. A topic is pragmatically recoverable if omitted from a statement within the discourse context, while a focus is not pragmatically recoverable. Lambrecht gives the following definitions:

(41) "\text{TOPIC: A referent is interpreted as the topic of a proposition if in a given discourse the proposition is construed as being about the referent, i.e. as expressing information which is relevant to and which increases the addressee's knowledge of this referent.}" (Lambrecht 1994:131)

(42) "\text{FOCUS: The semantic component of a pragmatically structured proposition whereby the assertion differs from the presupposition.}" (Lambrecht 1994:213)

At first view, the appearance of \(-\text{ta}\) in a discourse context seems to align with topic. Data such as (41) and (42) appear to use \(-\text{ta}\) in a topical sense.

(43) \( \text{ei-ta ama-r kukur.} \)
\( \text{this-TA 1.SG-POSS dog} \)
'This is my dog.'
(44) *bakes*-*ta* teibel-*er* opor-*e*.
    box-*TA* table-*poss* top-*LOC*
'The box is on top of the table.'

In (41), -*ta* appears to be fulfilling a topic role, specifying *ei* 'this (dog)' as the referent that the sentence is about. (42) is a typical example of the locative construction in Bangla, where the referent being located is always marked with -*ta*. This may easily be extended to say that the locative sentence is "about" this referent, and -*ta* marks it to specify this aboutness. The following sections examine the presence or absence of -*ta* within actual discourse contexts, to determine if there is any basis for aligning -*ta* with topic and/or focus.

### 5.1 Evidence from Frog Story

A 'frog story' is one of a set of children's books illustrated by Mercer Mayer, each of which is told entirely through a series of illustrations, with no words involved. As they have no words, they are useful tools of language elicitation. Furthermore, a continuous narrative such as a frog story is a useful text for discerning information structure, because clauses occur within an accessible context that introduces new referents, and then has to refer back to them at later points. The data in examples (43-48) come from a frog story elicited in the Field Methods class in October 2015.

(45) ratribelae *ek*-*ta* chele o-*r* kukur-*er* fattbe *ek*-*ta* *ben* botol-*e* dhore
    night time one-*TA* boy 3.SG-*poss* dog-*poss* with one-*TA* frog bottle-*LOC* having.caught
    *fa*-ke dek-chilo.
    3.SG-*ACC* watch-3.PAST.FROG
'In the night a boy and his dog, having caught a frog in a bottle, were watching it.'

In (43), three main referents are introduced for the first time – the boy *chele*, the dog *kukur*, and the frog *ben*. If any of these are topics, it is not yet clear, as they are only in this sentence being first introduced as active participants in the proceedings.

*chele* and *ben* are introduced with the phrase *ek*-*ta*, 'one' in the numeral construction discussed earlier in section 3.1. While this does include -*ta*, the -*ta* that is found in such constructions is semantically bleached enough that it cannot be decisively argued to have any clear relationship to topic or focus. *kukur* 'dog', on the other hand, is introduced in the phrase *or* *kukurer*, as a possession of the
boy. No instance of -ta is to be observed, so it cannot be said to have any bearing on the introduction of this referent. Overall, then, -ta cannot be claimed to have an important role in the information structure of this sentence and in the introduction of its referents.

(46) dhu-jonei benj ghore rekhe khub khusi.

'two-person frog house-LOC having.kept very happy

'Both of them, having kept the frog in the house, were very happy.'

In (44), benj reappears, but is unmarked. It clearly refers to the frog from the previous sentence, and thus could be said to be a topic, but no -ta appears to indicate this. -ta further does not appear elsewhere in the sentence. However, in the following clause, (45), -ta does appear on benj:

(47) arh fowa-r age benj-ta dhore bef kotebl bai-eche tai

and sleep-poss before frog-TA having.caught quite.a.bit curiosity happened-PROG that's.why

watch-3.PROG

'And before sleeping, the catching of the frog has caused quite a bit of curiosity, which is why they're watching it.'

This -ta cannot be referring to any 'new' information of the frog having been captured, as dhore 'having caught' has already appeared in (43) and is not new information. However, it is remotely possible that it refers to the whole event of 'catching the frog' as a topic. This analysis is not very compelling, because -ta has only ever been observed attaching to the end of the noun it marks, as a suffix, and noun phrases in Bangla are consistently head-final. There is thus no evidence for how the -ta would extend from benj to the remainder of the proposition including dhore.

Example (46) shows the other two referents, chele and kukur, also appearing unmarked, while in example (47) benj again appears marked with -ta.

(48) tarpor chele arh kukur dhu-jonei gumie por-lo khat-er opor.

'After boy and dog two-person slept fall-3.PAST bed-poss top

'After that, the boy and the dog both feel asleep on (top of) the bed.'

(49) itimoddhe benj-ta kaste-kaste botol-er theke berier por-eche ak

in.the.middle frog-TA laughing-REDUP bottle-poss from having.come.out.of fallen-PROG one

leg out having.taken

'in the meantime, the frog, laughing, has come out of the bottle, having taken out one leg.'
Based on these first few sentences, the frog appears to be more often marked with -ta than the boy or the dog, but it is not exhaustively marked. However, the topic appears to either be the frog itself, or the event of the catching of the frog, so -ta does at least appear to be distributing itself fairly close to the topic of these sentences. Once the frog disappears from the images, -ta begins to appear on bay with regularity, shown in the sequence of sentences given in (48).

(50) a. takbon chele arh kukur dq-jonei khub dukkbi kbar m bay-ta palie
    then boy and dog two-person very sad because frog-TA having.run.away
    ga-che.
go-3.PROG
    'Then the boy and the dog were both very sad, because the frog ran away.'

b. bujbo-che par-che na bay-ta khotai.
   understand-3.PROG able.to-3.PROG NEG frog-TA where.
   'They cannot understand where the frog went.'

c. chele arh kukur dq-jon mile sara ghor-e bay-ta-ke kbu-che
   boy and dog two-person together whole room-LOC frog-TA=ACC look-3.PROG
   thak-lo.
stay-3.PAST
   'Together both the boy and the dog kept for the frog all over the room.'

The sentences in (48) all occur directly one after the other within the larger narrative context. At each instance, chele and kukur appear without being marked by -ta, but bay appears consistently marked with -ta.

In sum, chele and kukur never appear directly marked with -ta, while bay appears alternately unmarked and marked with -ta. Bay is also the most probable topic maintained throughout the narrative. -ta only re-appears on bay, the instigator of the action in the story, and the titular argument. (The story is called ‘Frog, Where Are You?’; bay, thui khotai in Bangla.) While bay is not always marked with -ta throughout the eight sentences, and there is no strong evidence that -ta is actually functioning specifically as a marker of topic, there does appear to be a correlation between topicalization and the appearance of -ta on a noun. There is thus a possibility that -ta interacts with topic marking in narratives in some way, but the method is not regular, nor is it principled in any obvious manner, and therefore no particular claims can be made at this time.
5.2 Evidence from Images

Two pictures found in Appendix A, originally borrowed from Monari (2015), were used to elicit spontaneous sentences. Image 1 shows a young child talking on a phone while sitting in a woman’s lap. The woman is looking at a laptop. Image 2 shows a man sitting crosslegged on a giant dollar bill against a white background. However, the elicited sentence from image 2 did not contain any uses of -ta, and so it is not relevant to the present discussion. Image 1’s elicited sentence did contain an occurrence of -ta, and is given in (49). While eliciting these sentences, HS was given no prior note about what the two pictures would be, and the description of each was spontaneous at the time of his seeing each image. The resulting sentence was transcribed and translated before we moved on to the next image.

(51) **bacha-ta fon nie khel-che arh ma pafe laptop-e kichu ek-ta**
    child-TA phone having,taken play-3.PROG and mother next.to laptop-LOC some one-TA
dek-che.
    watch-3.PROG

'The child is playing with the phone, and the mother is watching something on the laptop next to (them).'</n
In (49), the noun *bacha* ‘child’ is immediately introduced with an attached -ta. In contrast, the noun *ma* ‘mother’ is not introduced with an attached -ta, even though in both cases the child and the mother are specific, singular entities, which would allow them both to receive the marking of the singular -ta. *fon* ‘phone’ also does not take any -ta marking, despite its singular and specific nature within the context of the sentence. This follows from previous discussions of -ta’s optionality. In this case, there is only one phone in the context of the image, so specifying that the phone is singular and a specific phone is not salient enough to the conversation to warrant an explicit marking with -ta.

*ek-ta* in (49) is not modifying a noun, but roughly compounds with *kichu* ‘some’ in order to complete the meaning of ‘something’. It is unclear if the presence of -ta is required for this particular meaning of ‘something’ to manifest, or if the phrase *kichu ek* alone would also be able to produce such a meaning. In the latter case, the presence of -ta on *ek* ‘one’ would be significant in the interpretation of the information structure of the sentence, while in the former case, it would not be significant.
In summary, there is no obvious evidence that bacha is marked with -ta specifically for information structure concerns. While bacha is the most salient referent in the image, and therefore the more likely to be interpreted as the topic, it is unclear if the marking of bacha with -ta is because bacha is being interpreted as the topic, or simply because bacha is being marked with -ta for the sake of indicating specificity. However, it also cannot be denied that the correlation is evident, if difficult to detangle. It can be safely concluded based on the frog story, and on example (49), that -ta exhibits some degree of correlation with information structure marking of topic. However, it is not an obviously principled relationship, and -ta does not exhaustively mark topics in the manner that would be required of a true topic-marking affix.

6 Conclusion and Suggestions for Further Research

-ta is an extremely versatile morpheme that plays a crucial role in the Bangla language. It performs tasks ranging from a semantically bleached aid for numeral phrases, to a nominal marker of definiteness and singularity, to a helping marker for the accusative case. It also shows evidence of correlation with topic in Bangla information structure. A great difficulty in analysing -ta’s functions stems from its lack of obligatory marking. As -ta does not need to mark all items which can grammatically be marked by it, it is often omitted, and it is sometimes unclear where it ought or ought not to apply.

Though this thesis has touched on a great number of -ta’s functions and uses, more work still remains. -gulo ‘PL’ mayor may not possibly also function as the plural version of -ta in terms of definiteness and topic, a question that is beyond the scope of this paper, but would be well worth the effort to investigate. In order to take the understanding of -ta itself even farther than this thesis has been able to, a diachronic study of Bangla would be ideal, with an attempt to isolate the original morpheme from which -ta descends. Such a line of research would also be ideal for discovering whether or not the counting -ta shares an origin with the definite -ta.
References

Gasser, Emily. 2016. Personal communication (email, private meeting).


Appendix A: Bangla Phonemes

An orthography for Bangla which was developed during the Fall 2015 Field Methods class is used to represent the Bangla data in this thesis.

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| trills      | aspirated |       |             |           |             | /r/ <r>    |       |       |
|             | unaspirated|       |             |           |             |           |       |       |

| approximants| /l/ <l>    | /w/ <w>  |             |           |             |           |       |       |

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<tr>
<td>high-mid</td>
<td>/ɛ/ &lt;ɛ&gt;</td>
<td>/o/ &lt;o&gt;</td>
</tr>
<tr>
<td>low-mid</td>
<td>/ɛ/ &lt;ɛ&gt;</td>
<td>/a/ &lt;a&gt;</td>
</tr>
<tr>
<td>low</td>
<td>/æ/ &lt;æ&gt;</td>
<td>/a/ &lt;a&gt;</td>
</tr>
</tbody>
</table>

The orthography is nearly identical to the more standard orthography used by Thompson in her 2012 grammar, with the exception that retroflex consonants are represented by Thompson with dots under them, rather than as their IPA symbols (e.g., /t/ <t>, /d/ <d>, etc). The Field Methods orthography has been retained for this thesis out of a desire to ensure that the /t/ of -ta remained clearly distinctive from /t/.
Appendix B: Images Used in Elicitation

Image 1

Image 2

Images gratefully borrowed from Monari 2015.