

Thematic Proto-Roles and *Zibun*

Kazuhiko Fukushima
Kansai Gaidai University

1 Introduction

Matters concerning *zibun*¹ have been some of the most controversial issues in (particularly generative) linguistics. *Zibun* commands a long history of being the target of linguistic research and has received plenty of attention of linguists in general. This paper sheds—though in a preliminary fashion²—new light on *zibun* with respect to its interpretation and is organized in the following manner. A brief overview of the past studies is given in section 2, providing the reader with the set of standard data. This section points out that the set of relevant facts are not treated uniformly, exhibiting an uneasy and arbitrary division of a single phenomenon into syntactic and pragmatic domains. In section 3, a new approach to *zibun* based on the THEMATIC PROTO-ROLE theory (Dowty 1989/1991) is introduced which is capable of furnishing a unified explanation for the disjunctively treated standard facts. With some modifications in section 4, the current system is shown to be able to provide coverage for previously undiscovered data introduced there. The new data expand *zibun*'s horizon since they are problematic for any existing account.

2 Past treatments

Let us glance at some standard facts about *zibun* (more examples to follow) and examine the past proposals aimed at explaining them. Among the past accounts proposed, there are two categories: (a) syntactic and (b) pragmatic approaches.

2.1 Syntactic accounts

Syntactic accounts for *zibun* can come in various forms depending on the kind of theoretical framework assumed by them. However, since such accounts—regardless of a particular choice of a framework—are uniformly based on configurational properties of sentences, it seems to be reasonable to extract the essence of the accounts in a general way as below. (See Inoue

¹Though basically an account for data of the form *X-zisin* 'X-self' can be provided along the lines of the current proposal, the data involving *X-zisin* are ignored here. However, it is noted in passing that the claim often made in the literature concerning the locality of *X-zisin* binding is false as the example below demonstrates.

(i) Taroo, -ga [s sono kiji-ga (hokademonai) zibun/kare-zisin,-o hihansi-ta] -to kinisitei-ru
-NOM that article-NOM none.other.than self/he-self-ACC criticize-PAST -COMP worry-PRES
'Taroo, worries that the article criticized (none other than) self.'

Clearly, *zibun/kare-zisin* in this example, does not have to be bound in the minimal local S domain containing it.

²See Fukushima (in progress) for a more definitive statement on the subject matter.

(1976) for a summary of the classical transformational approaches. More recently, some try to derive the syntactic conditions seen in the text from LF movement and VP-adjunction (Katada 1991) or from binding by INFL (Aikawa 1993).)

(1) Syntactic conditions on *zibun* binding

- Subject condition: the antecedent of *zibun* has to be the subject.
- C-command condition: the antecedent has to c-command *zibun*.

According to such assumptions, the data in (2) below is expected. In (2a), *Taroo* is the c-commanding subject for *zibun* but the same NP is neither in (2b) and (2c). In (2d), both *Hanako* and *Taroo* are the c-commanding subjects for *zibun*.

- (2) a. *Taroo*_i -ga *zibun*_i-o but-ta
 -NOM self-ACC hit-PAST
 'Taroo hit himself'
- b. *[_{NP} *Taroo*_i -no *otooto*]-ga *zibun*_i-o but-ta
 -GEN brother -NOM self-ACC hit-PAST
 '*Taroo_i's brother hit himself_i'
- c. **Zibun*_i-ga *Taroo*_i -o but-ta
 self-NOM -ACC hit-PAST
 '*Himself hit Taroo'
- d. *Hanako*_i -ga [_S *Taroo*_j -ga *zibun*_{i/j}-o home-ta]-to omot-ta
 -NOM -NOM self praise-PAST-COMP think-PAST
 'Hanako thought that Taroo praised her/himself'

With the assumption that causatives are syntactically complex involving S-embedding, the data below can also be easily accounted for. On some derivational stage, both *Hanako* and *Taroo* will be the c-commanding subjects, hence both are possible antecedents for *zibun*. So far so good.

- (3) *Hanako*_i -ga *Taroo*_j -o/-ni [_{NP} *zibun*_{i/j}-no ie]-de mat-ase-ta
 -NOM -ACC/-DAT self-GEN house-at wait-CAUS-PAST
 'Hanako made Taroo wait at her/his house'

2.2 Pragmatic accounts

It did not take a long time for researchers to recognize that the syntactic story told above about the distribution of *zibun* is incomplete (Kuno (1978) and Kaneyama (1985); see also Sells (1987)). An examination of the data in (4) is sufficient to show the inadequacy of the syntactic conditions.³ Here *Taroo* is neither the subject of the sentence nor c-commanding *zibun*.

³An account assuming the 'psych verb' status of *kurusimeta* 'agonized' may be possible along the line of Belletti and Rizzi (1988). We ignore such an account for now but will come back to it below and show that such an account is also problematic.

- (4) [s Zibun_i-ga bakana]-koto-ga Taroo_i -o kurusime-ta
 self-NOM stupid-COMP-NOM -ACC agonize-PAST
 'The fact that self_i is stupid agonized Taroo_i'

Faced with such data, the following pragmatic account was proposed.

- (5) Pragmatic condition on *zibun* binding

- *Zibun* as a logophoric pronoun.
- *Zibun* is anteceded by a logophoric NP referring to an individual whose speech, thought, feelings, or general state of consciousness are reported.

In (4), a report is being made of *Taroo*, a logophoric NP, concerning his feelings, or general state of consciousness, making it a possible antecedent of *zibun*, a logophoric pronoun.

2.3 Summary

Upon summarizing the current state of affairs with regard to the treatments of *zibun*, the following picture (6) emerges. As correctly pointed out by Iida (1992)⁴, the distribution of *zibun* which ought to be treated as a single phenomenon is unnaturally and arbitrarily divided into *disjunctive* domains each of which operates independently according to unrelated rules and conditions.

- (6) Disjunctive conditions on the antecedent of *zibun*

- C-commanding subject *or* ...
- A logophoric NP.

3 Proposal

3.1 Assumptions

One of the aims of the current proposal is to remedy the unnatural disjunctive accounts for *zibun* currently assumed in the literature and open up a possibility of treating various data involving *zibun* in a uniform manner. We begin with the basic approach in this section and then see how it can be extended to widen the coverage of the data in the next section. The key concept is that of entailment-theoretic THEMATIC PROTO-ROLE of Dowty (1989/1991)⁵.

⁴Iida (1992), in attempting to provide a uniform account for *zibun*, tries to reduce the task of *zibun* binding to the matters of pragmatic 'points of view' in conjunction with a minimal syntactic restriction. Such an approach appears to let some data slip though its coverage as shown below.

⁵Dowty (1989) explicates a model-theoretic approach to thematic proto-roles in which an INDIVIDUAL THEMATIC ROLE (ia) is defined as a set of entailments (ib) made available for each argument of a predicate. Traditional thematic role labels such as 'agent', 'theme', etc. correspond to Dowty's THEMATIC ROLE TYPES (ic).

- (i) a. Given an n -place predicate δ and a particular argument x_i , the INDIVIDUAL THEMATIC ROLE $\langle \delta, i \rangle$ is the set of all properties α such that the entailment below holds.

$$\Box[\delta(x_1, \dots, x_i, \dots, x_n) \rightarrow \alpha(x_i)]$$
- b. TRIVIAL INDIVIDUAL THEMATIC ROLE ENTAILMENT

$$\lambda x_i \exists x_1, \dots, \exists x_{i-1}, \dots, \exists x_{i+1}, \dots, \exists x_n [\delta(x_1, \dots, x_i, \dots, x_n)]$$

According to Dowty, thematic roles are not primitives but rather derived concepts utilizing independently available lexical properties (i.e. entailments) of lexical items.⁶ Also, instead of being discrete objects, thematic roles are located along the continuum of roles the dimension of which is characterized by the concepts of PROTO-AGENT (an 'agent-like' element) and PROTO-PATIENT (a 'patient-like' element). As seen in (7), both proto-agent and proto-patient are clusters of a verb's entailments available for each argument of the verb.⁷

(7) a. PROTO-AGENT properties

- volitional involvement in the event or state.
- sentience (and/or perception).
- causing an event or change of state in another participant.
- movement (relative to the position of another participant).
- (exists independently of the event named by the verb).

b. PROTO-PATIENT properties

- undergoes change of state.
- incremental theme.
- causally affected by another participant.
- stationary relative to movement of another participant.
- (does not exist independently of the event, or not at all).

3.2 The basic account

Capitalizing on the proto-role theory, the basic account of *zibun* is deceptively simple as seen in the following convention (8a) with two ancillary definitions (8b, c).⁸

(8) a. Basic *zibun* interpretation (preliminary):

- c. Given a set T of pairs $\langle \delta, i_\delta \rangle$ where δ is an n -place predicate and i_δ the index of one of its arguments (possibly a different i for each verb), a THEMATIC ROLE TYPE τ is the intersection of all the individual thematic roles determined by T .

It is noted, as pointed out by Dowty (1991), that thematic proto-roles are independently motivated in that, among other things including child language acquisition, they play a crucial role in predicting argument selection patterns of predicates—a semantic argument with more PROTO-AGENT properties will be lexicalized as the syntactic subject.

⁶In this way, Dowty's approach is distinct from that of Jackendoff (1987) based on CONCEPTUAL STRUCTURES. In the latter, though they are also non-primitives, thematic roles are defined by employing the primitive vocabulary of conceptual semantics, namely predicates like BE, GO, TO, IN, AT, ORIENT, etc. Thus, in comparison to Dowty's truly primitive-free characterization of them, Jackendoff defines thematic roles by employing other primitives.

⁷As emphasized by Dowty, it is important to distinguish entailments arising purely from the lexical property of a given predicate *per se* and those arising from the (pragmatic) inferences made based on a situation described by such a predicate. For example, if Mary hits John, he (being a live human) will certainly feel something (i.e. sentence below). But this is not what the predicate *hit* necessarily entails for the object argument since Mary can hit a rock as well.

⁸The convention is a revision of a previous formulation found in my oral presentations (Fukushima 1993). Also Engdahl (1990) points out the relevance of thematic proto-roles for the interpretation of anaphors in English. In passing, it is noted that, though she is concerned with a much restricted range of data involving *zibun*, Uda (1993) independently proposes an account for *zibun* drawing on thematic proto-roles. The crucial difference between the current approach and Uda's is that the former is purely semantic while the latter is partially syntactic in which a hierarchy of grammatical relation plays a role.