The Research Design of Cognitive Linguistic Typology: Synchronic and Diachronic Analyses of the Emergence Degrees of Modalized and Objectified Construals in Japanese and English

Ken-ichiro Nakano

Abstract

The purpose of this paper is to present a new research perspective in linguistics termed Cognitive Linguistic Typology. This new research perspective, grounded in the paradigm of Cognitive Linguistics, proves that particular cognitive "construals" emerge as peculiar grammatical categories or linguistic constructions through "iconicity." In this respect, "iconicity" is the most significant foundation for elucidating the relations among the emergent cognitive motivations by a particular cognitive mode's "construal" and grammatical or linguistic categories. These relations yield the linguistic logic of the particular language.

Three major linguistic or grammatical categories, - "adjective," "tense" and "voice" - are investigated in this paper to prove the validity of this new research perspective. These linguistic or grammatical categories are considered to be universal across all languages. However, this paper reveals that they are not universal and, more specifically, not valid in the Japanese language.

In the field of the linguistic research, the Western mindset and perspective is dominant; unfortunately, it is apt to neglect and ignore the existence of diverse and competing mindsets and perspectives. Recognizing and acknowledging the existence of diverse linguistic logics opens the door to the elucidation of the emergent cognitive motivations of languages across the world—this new door is Cognitive Linguistic Typology.

Keywords: cognitive mode, construal, iconicity, emergent motivation, linguistic logic

1. Introduction

Recent cognitive linguistic studies have established the existence of cognitive modes through analyzing a wide variety of linguistic instances. Considering the results of such cognitive linguistic analyses, we can postulate the existence of at least two kinds of cognitive modes. However, as few diachronic and theoretical investigations have succeeded in elucidating the relationship between cognitive modes and their constructions or grammatical categories,
a valid perspective of cognitive linguistic typology has not been established yet. Through a diachronic and synchronic examination of Japanese and English, this study aims to demonstrate that the construal of a language's cognitive mode emerges as the language's compositions and grammatical categories through iconicity. The findings indicate that several linguistic phenomena such as the grammatical categories of subject, object, transitive verb, intransitive verb, case, voice, and tense, which have been assumed to be premises in Modern European Standard Languages, are invalid in many other languages. The linguistic perspective detailed in this paper will enable us to establish a research design of Cognitive Linguistic Typology, which can reveal a common underlying logic in the evolution of a host of world languages, namely Modalization Logic—even though present-day dominant languages are now based on a different logic, namely Objectification Logic.

2. The compendium of Cognitive Linguistic Typology

"Grammar is conceptualization" (Croft & Cruse 2004: 1). This Cognitive Linguistic thesis may be refined as follows: All languages come into existence out of their own construals about the world through iconicity. This refinement may be the most significant principle in Cognitive Linguistic Typology. It is therefore necessary to examine the construal of each language within its own linguistic logic. Without this examination, it is impossible to demonstrate the emergent motivations in each language's compositions and grammatical categories. By examining English and Japanese construals diachronically as well as synchronically, we demonstrate the existence of at least two kinds of typical construals: the Objectified Construal in English and the Modalized Construal in Japanese. The difficulty of elucidating each language's construal lies in two major facts: Each one has been diachronically influenced by epistemological changes, and each has been semantically expanded with regard to the use of its compositions and grammatical categories (Nakano 2013, 2017, 2018). This study aims to propose a Cognitive Linguistic Typology research design by demonstrating the emergence degrees of the two abovementioned construals in English and Japanese.

3. Basic principles in Cognitive Linguistic Typology

The Research Design of Cognitive Linguistic Typology: Synchronic and Diachronic Analyses of the Emergence Degrees of Modalized and Objectified Construals in Japanese and English

Following facts:

(a) The compositions and grammatical categories of each language evidence that a construal based on a particular cognitive mode inherent in the language emerges **iconically**.

(b) The cognitive mode inherent in the language subsists with a **particular subjectivity** that becomes part of its epistemological matrix.

These demonstrated facts indicate that every language, no matter where in the world it is spoken, can be properly located on the semantic map through synchronic and diachronic analyses of its emergence degrees with regard to Modalization or Objectification Logic. This makes us recognize that a Cognitive Linguistic Typology research design will eventually be established.

![Modification Pole Diagram](image)

Figure 1. Semantic map of Cognitive Linguistic Typology based on Nakano (2017: 310).

It is possible to identify the cognitive mode inherent in a language by examining how the grammatical category defined as **adjective** emerges and what kind of cognitive process it uses. For example, in the relations between the 2nd (or 3rd) person and the **adjectives** in the following linguistic instances, the English instance in (1a) is grammatically acceptable, whereas the Japanese one in (1b) is not.

1. a. He is very glad / happy / sad.
   b.* 彼はとても嬉しい / 楽しい / 哀しい。
   "/kare wa totemo ureshii / tanoshii / kanashi-i/^

   "^
If the Japanese instances in (1b) are to be considered grammatically acceptable, then the grammatical category defined as emotive adjectives, which are characterized by the suffix しい/si/., must be transferred into the verbal range as follows: 彼はとても嬉しそう/kare wa totemo ureshi-sou/; or 彼はとても喜んでいる/kare wa totemo yorokonde-iru/; 彼はとても楽しそう/kare wa totemo tanoshi-sou/; 彼はとても喜んでいる/kare wa totemo tanoshinde-iru/; and 彼はとても哀しそう/kare wa totemo kanashi-sou/ or 彼はとても哀しそう/kare wa totemo kanashinde-iru/. Oddly enough, the Japanese instances in (1b) have counterinstances.

(2) a. 指に光る指輪 そんな小さな宝石で 未来ごと売り渡す 君が哀しい
/Yubi ni hikaru yubiwa sonna chiisana houseki de miraigoto uriwatasu kimiga kanashii/
'A ring shining on your finger, for the sake of the tiny jewel, you, who have decided to sell your all future, are poor.' おろずの少年/otomoe no shounen/: a boy of glass.
lyrics by 松本隆 (Matsumoto Takashi), music by 山下達郎 (Yamashita Tatsuro).
b. OHR KAREN! 誰より君を愛していた心と知りながら捨ててる
OHR KAREN!/dareyori kimi wo aishite-ta kokoro to miru kara suteru/
'OHR KAREN! Nobody loved you more than I; knowing my heart, you've jilted me.'
OHR KAREN! 悲しみに満たさればよく哀しい そうさ哀しい女だね君は
OHR KAREN!/furare-ta boku yori kanashi-i sou sa kanashi-i onna dane kimi wa/
'OHR KAREN! You are poorer than me, the thrown-away boy; indeed, a pitiful girl you are.'
lyrics by 松本隆 (Matsumoto Takashi), music by 大泷詠一 (Ôtaki Ei-ichi).

Moreover, the concrete instance of the grammatical category defined as the Japanese attribute adjectives, which are characterized by the suffix い/i/, can have two types of patterns when translated into English, as follows:

(3) a. 今朝は少し肌寒い/kusa wa sukoshi hada-zamui/
   b.1. 'It is a little chilly this morning.'
   b.2. 'I'm feeling a bit chilly this morning.'

What has to be noted when analyzing the Japanese instance in (3a), which is a typical and canonical Japanese sentence, is that it does not contain a verb. As a consequence,
this typical and canonical Japanese sentence has no subject because the presence of the grammatical category subject is predicated on the presence of the category verb. As this instance demonstrates, even if Japanese sentences do not have the grammatical combination of subject and verb, they are accepted as compositionally well-formed and canonical. In contrast, when the Japanese instance in (3a) is translated into English, the subject and verb are indispensable grammatical categories. If the "chilly" entity is regarded as the air surrounding the conceptualizer, the subject of the English instance will be "it." If the "chilly" entity is, however, regarded as the conceptualizer (cognitive subject), then the subject of the alternative English instance will be "I." Needless to say, both English instances that have subjects must also have verbs. When the subject is "I," the verb "am" is selected; when the subject is "it," the verb "is" is selected.

A cognitive linguistic typological perspective, which is inclusive as well as analytic, enables us to elucidate the linguistic phenomena emerging in instances (1), (2), and (3). The perspective is as follows: the grammatical category defined as 形容詞 (keiyoushi/: a grammatical category translated from an English adjective) in Japanese emerges by way of a construal (conceptualization) that differs from the alternative construal that yields an adjective in English. Therefore, one can conclude that 君 (kimi/: 'you' in English) in the Japanese instances in (2) is not an objective entity that can be referred to by the grammatical 2nd person; it is a modalized (traditionally called subjectified) entity that is inseparably related to the cognitive subject.

This realization explains why Japanese emotive adjectives characterized by the suffix しい/shii/-, such as 悲しい/kashii/-, 憂しい/ureshi/-, or 楽しい/nanoshi/-—which must originally be used in Japanese instances like (1), where they refer to the 1st person—can be applied to Japanese instances like (2), in which the 2nd or 3rd person is used. Moreover, it explains why the Objectified Construal (traditionally called the objective construal) of the world allows English constructions to emerge with two types of grammatical subjects, as demonstrated in (3b); it also explains why the Modalized Construal of the world, in which the cognitive subject and the cognitive object are construed nondisjunctively, does not need the grammatical subject in Japanese constructions such as (3a). This leads to the following conclusion: The Japanese construal (Japanese linguistic logic) does not need the grammatical category of subject, which emerges in linguistic conditions where the discourse functional theme, the nominative case, and the agent (as the semantic role) are fused at a conceptual level (conceptually). In Japanese philology, the grammatical category termed

—5—
consists of 認知様態詞/ninchi-yōtaï-shi/ and 經過詞/keika-shi/. 認知様態詞/ninchi-yōtaï-shi/ (cognitive mode word), which has traditionally been termed 形容詞/keiyō-shi/—because this term was translated from the English adjective—actually represents the cognitive condition of subject–object nondisjunction. 經過詞/keika-shi/ (process word), which has traditionally been termed 動詞/dō-shi/ (because this term was also translated from the English verb)—it actually represents the cognitive subject’s construal in which the occurrence of cognitively focused events is classified according to whether it is within or beyond the subject’s volition. The existence of 用言/yō-gen/ allows Japanese to generate grammatically adequate sentences without verbs, such as (1b), (2a), and (3a). These findings lead to two conclusions. First, the Japanese grammatical category 認知様態詞/ninchi-yōtaï-shi/ (cognitive mode word) is not compatible with the English grammatical category adjective; second, Modification Logic (subject–object nondisjunction logic) confirms the central role of compositional and grammatical emergence mechanisms in Japanese. Objectification Logic (subject–object disjunction logic) performs a similar function in Modern European Standard Languages, including English.

In the cognitive mechanism defined as "modalization," the subject and object of conception are epistemologically not separately construed, so this construal allows Japanese constructions to emerge without the grammatical categories subject and verb (Nakano 2017: 287).

Figure 2. a. English construal based on Objectification Logic.
   b. Japanese construal based on Modalization Logic.
4. Linguistic instances of Modalized Construal (「主体化論理」) and Objectified Construal (「客体化論理」): The English grammatical categories Tense and Voice and the Japanese grammatical conjugationsた/ta/ and だ/da/, す/su/ andする/suru/, and れる/leru/ andられる/leraru/

4.1. The English grammatical categories Tense and Voice

One of the most significant findings in Cognitive Linguistic Typology is that the construals, derived through the abovementioned cognitive modes, as shown in Figures 2a and 2b—no matter how unsophisticated the figures are—emerge iconically as compositions or grammatical categories. For example, Tense and Voice are indispensable prerequisites for English compositions, but it is possible to elucidate the emergent mechanisms of the following instances in (4a) and (4b) if we comprehend the principle that construals emerge iconically through particular cognitive modes.

(4) a. John hammered the TV set.

```
Subject   ↓   t-V past tense   ↓   Object
```

(origin argument) (transmission argument) (attainment argument)

b. The TV set was hammered by John.

Figure 3. Transmission of force dynamics.

In the English instance in (4a), the unidirectional and irreversible transmission of force dynamics emerges as a composition and grammatical category through iconicity. The correspondence between the origin argument "John," as expressed by the transmission of force dynamics, and the grammatical subject in the composition, as well as between the attainment argument "the TV set" and the grammatical object ensures that the conceptualization of the unidirectional and irreversible force dynamics transmission emerges as a transitive construction through iconicity while avoiding constructional or formal inconsistencies.

In contrast, a retrospective construal of force dynamics transmission from the attainment argument to the origin argument can cause a semantic collision. In other words, the cognitive process of construing the force dynamics transmission retrospectively (from the attainment argument to the origin argument) is required to take on the form of a particular composition or grammatical category. For the purpose of this emergence, the
attainment argument is first profiled as a result of the force dynamics transmission. Next, the cognitive process of retroactively construal the transmission and origin arguments of force dynamics is formalized. The **iconic emergence** for the cognitive process of retroactive construal is the prototypical **passive voice** construction in the English instance (4b). "The TV set" is the attainment argument of the force dynamics transmission, and it is profiled as a grammatical **subject** by being anchored with the **verb** "be." "Hammer" is the transmission argument, and "John" is the origin argument, and the result or completion of the force dynamics transmission is represented by using the **past participle** of the **transitive verb**. The **preposition** "by," which emerges in this composition, marks the argument that is to be construed retroactively and functions as the origin. The significance of the **passive voice** composition is expressed in the semantic collision between a cognitive process that involves the unidirectional and irreversible transmission of force dynamics and one that involves its retroactive construal.

Similarly, it is the grammatical category termed **Tense** that objectively ensures the temporal differentiation of event occurrence. English elongates the morphological configuration of the **verb**, which exists as the emergence of process conception, by typically adding the "-ed" suffix (pronounced /ɪd/, /ɪt/, or /eɪd/) to a **verb**. As a result, the events represented in (4a) and (4b) are recognized as events that occur epistemologically (far from the present time in the cognitive space). This is the epistemological reason why the **verb** "be" is changed from "is" to the **past tense** "was," and the **ordinary verb** "hammer" is changed to the **past participle** "hammered." Epistemological principles concerning **Tense** and **Voice** are to be cognitively formalized, as shown in Figure 4.
4.2. The conviction conjugations た/ta/ and だ/da/, the volition conjugationsす/su/ andする/suru/, and the beyond-volition conjugations とる/reru/ and ならえる/ra-reru/

The concrete instances that emerge through the Objectified Construal in English are demonstrated in Figure 3. Meanwhile, the Modalized Construal in Japanese requires the conjugations representing the cognitive subject’s conviction, volition, and consciousness of beyond-volition to emerge in the concrete instances. The cognitive subject’s conviction about the occurrence of events is expressed as the grammatical conviction conjugations た/ta/ and だ/da/, added to the end of 用言/yō-gen/, which consists of 体言/tai-gen/: noun, and 体言/ninchi-yōta-shi/: cognitive mode word). The cognitive subject’s consciousness of whether he or she can exercise his or her volition over the occurrence of events emerges in the form of the grammatical volition conjugations す/su/ andする/suru/, which are added to the end of 用言/yō-gen/ or 体言/tai-gen/. For example, the representation in Japanese of the events described in (4a) and (4b) will be as follows:

(5) a. ジョンはそのテレビをハンマーで打ち壊した.
/John wa sono terebi wo hannā de uchi-kowa-shi (euphonic change from /su/)-ta/. 

b. そのテレビは、ジョンによってハンマーで打ち壊された。
/sono terebi wa John ni yottte hannā de uchi-kowa-sa (euphonic change from /su/-reru/.

Traditionally, the Japanese sentences in (5a) and (5b) are regarded as past-tense descriptions based on their use of た/ta/. There are, however, various kinds of Japanese instances that do not describe past-tense events even though they incorporate た/ta/.
Kenichiro Nakano

(6) a. 「昨日、雨で試合が中止になった。」/sakujitu, ame de siai ga tyūsi ni nat-ta/
   'Yesterday, the game was called off due to the rain.'

b. 「あっ, 雨が降り始めた。」/ah, ame ga furi hajime-ta/
   'Ah, it's begun to rain.'

c. 「先に着いたら、はくを待たずに、始めていこうね。」
   /saki ni tui-ta-ra, boku wo mata-zu-ni, hajime-te -ite -ne/
   'If you get there before my arrival, please get the ball rolling without waiting for me.'

d. (相撲で) 「はっけよい, 残った。残った。」/hakke-yoi, nokot-ta, nikot-ta/
   (sumo wrestling) 'Ready, don't get beaten, don't lose!'

e. (2時間歩いて) 「やっぱ, 着いた。」/yat-to, tsui-ta/
   (after two hours' walking) 'We've finally arrived!'

f. (探し物をしていて) 「あっ, ここにあった。」/ah, koko ni at-ta/
   (trying to find a belonging) 'Ah, I've finally found it.'

g. (市場の魚屋さんで) 「さあ, 買った。買った。」/sa-a-sa, kat-ta, kat-ta/
   (at a fish dealer's in a market) 'Come now, this fish is a bargain!'

h. (日程を確認していて) 「あ, 明日, 現代文のテストだった。」
   /ah, asu, gendai-bun no tesuto dat-ta/
   (checking tomorrow's schedule) 'Oh, tomorrow, I'll have to take an exam in modern literature!'

Traditionally, タ/ta/ has been defined as an auxiliary verb that signifies the past tense in Japanese; however, of all the linguistic instances in (6), this grammatical definition is valid only for (6a). This assumption that Japanese タ/ta/ is a marker for the past tense cannot be applied to the other seven instances. It is a diachronic fact that タ/ta/, regarded as a grammatical marker for the past tense, emerged from the phonological change of たり/ta-ri/; たり/ta-ri/, in turn, emerged from the phonological change of てあり/te-ari/. In other words, this diachronic fact indicates that the Japanese タ/ta/ represents the cognitive subject's conviction about the relevant event's occurrence. Furthermore, the subject's conviction is that the event exists (在る/aru/) in a defined state (て/te/) in his or her consciousness. Needless to say, the subject's consciousness is an epistemological entity that can exist only now and here, so the occurrence of events that Japanese conviction conjugations タ/ta/ or だ/da/ can represent is in-the-now. This epistemological process is the cognitive motivation that caused the diachronic change from てあり/te-ari/ and たり/ta-ri/ to タ/ta/.
in Japanese. Furthermore, it caused た/ta/ to be added to 経過詞/keika-shi/: process word) as the grammatical conjugation representing the cognitive subject's conviction regarding the relevant event's occurrence. However, this Japanese Modalized Construal—in this case, the cognitive subject's conviction—has been mistakenly presupposed to belong to the Tense category, which originates in the Objectified Construal in Modern European Standard Languages (including English). Because the conviction is a part of the cognitive subject's stream of consciousness, and the stream of consciousness is always present, the grammatical category that the Japanese た/ta/ represents is not the past tense but just the epistemological present.

The same Modification Logic emerges in the use of the conjugations of する/reru/ and られる/rararu/. Traditionally, the Japanese する/reru/ and られる/rararu/ have also been termed auxiliary verbs that mark 受け身文/ukemi-bun/: passive sentence), and consequently, Japanese has been categorized as one of the languages possessing the grammatical categories of active and passive voice. The usage range of Japanese する/reru/ and られる/rararu/, however, has covered a broad range of instances such as 自発/jihatsu/: spontaneity), 可能/kanō/: possibility), 尊敬/sonkei/: reverence), and 自動詞/ji-dōsi/: intransitive verb).

(7) a-1. 災難に見舞われました。/sainan ni mimawa-re-mashi-ta/
   (被害受け/hiigai ukemi/: physical and mental damage)
   'I suffered a loss due to fire.'
   ↓ semantic extension
a-2. 窓が割られた。/mado ga wara-re-ta/
   (受動文/jyudō-bun/: damage due to dynamic force)
   'The window was broken down.'
b-1. 故郷のことが憶われる。/kokyō no koto ga sinoba-reru/
   (自発/jihatsu/: spontaneity) 'My homeland is brought to mind.'
b-2. 媛のことが思い出される。/musume no koto ga omoi-dasa-reru/
   (自発/jihatsu/: spontaneity) 'My daughter comes to my mind.'
c-1. 富士山が見える。/fuji-san ga mie-ru/
   (非制御/hi-seigo/: uncontrollability and unavoidability)
   'Mt. Fuji meets our eyes.'
   ↓ semantic extension
c-2. 100mを1秒で走ります。/hyaku-ichi-bō-dai de hase-re-masu/
Ken-ichiro Nakano

(可能/kanō/: possibility and ability)
'I can run 100 meters in 11 seconds.'

d-1. 先生がお読みになります。/sensei ga o-yomi ni na-rare-masu/
(尊敬/sonkei/: reverence) 'Our teacher will read it.'

d-2. 先生が間もなく来られます。/sensei ga mamonaku ko-rare-masu/
(尊敬/sonkei/: reverence) 'Our teacher will come soon.'

e-1. この春、息子が生まれます。/kono haru, musuko ga umare-masu/
(自動詞/ji-dōsi/: intransitive verb) 'We'll have a son this spring.'

e-2. 間もなく、日が暮れます。/mamonaku, hi ga kure-masu/
(自動詞/ji-dōsi/: intransitive verb) 'Night will fall soon.'

e-3. 風で花瓶が倒れました。/kaze de kaban ga taore-mashita/
(自動詞/ji-dōsi/: intransitive verb) 'The vase fell down because of the wind.'

e-4. 川は流れます。/kawa wa nagare-ru/
(自動詞/ji-dōsi/: intransitive verb) 'Waters run.'

The above-mentioned instances emerge because of diachronic semantic extensions. The diachronic semantic extensions are as follows: /yū/ and ら/ryū/, originally denoting 発/jihatsu/: spontaneity until the Nara period (8th century), morphologically changed into る/ru/ and ら/raru/ during the Heian period (roughly from the 9th to the 12th century) and further changed into れる/reru/ and られる/reraru/ after the Edo period (roughly from the 17th to the middle of the 19th century). The epistemological motivation that induced these diachronic semantic changes was the cognitive subject's consciousness of uncontrollability and unavoidability with regard to the events' occurrences. The cognitive subject's construal that the occurrence of events is beyond his or her volition causes れる/reru/ and られる/reraru/ to be added to the 言語/keika-shi/: process word) as grammatical conjugations that represent spontaneity, uncontrollability, and unavoidability; ability and possibility; physical and mental damage; damage due to dynamic force; and reverence. The verbs to which the grammatical conjugation れる/reru/ is added seem to be intransitive verbs when observed from the traditional grammatical viewpoint. On the other hand, the cognitive subject's construal that the occurrence of events is within his or her control causes す/su/ and する/suru/ to be added to the 言語/keika-shi/: process word) as grammatical conjugations that express his or her volition. The verbs to which the grammatical conjugation す/su/ is added also seem to be transitive verbs when observed
from the traditional grammatical viewpoint.

5. Conclusion

As the above-mentioned linguistic elucidations demonstrate, the particular construal derived from a peculiar cognitive mode emerges through "iconicity" as the particular grammatical categories or linguistic constructions. The Japanese construal derived from the modalized mode of cognition emerges through "iconicity" as its own grammatical categories or linguistic constructions; on the other hand, the English construal derived from the objectified mode of cognition emerges through "iconicity" as its own. Logically, then, Japanese grammatical categories and linguistic constructions are different from English ones; in other words, Japanese has no grammatical categories of "adjective," "tense," and "voice."

In the field of linguistic research, the Western mindset and perspective is dominant, which is apt to neglect and ignore the existence of diverse and competing mindsets and perspectives. To be sure, linguistic research must be a humane domain that elucidates the linguistic logics of diverse languages; however, the situation in academe involves scientific restrictions and limitations. When we recognize and acknowledge the existence of diverse linguistic logics, we open the door to the elucidation of the emergent cognitive motivations of languages all around the world, and this new door is Cognitive Linguistic Typology.

Acknowledgement

The contents of this brief paper follow the elucidations in The principles of cognitive linguistic typology: The cognitive mechanisms of modalization and objectification [Nakano, K. (2017). Kyoto: Kyoto University Press.] The publication of the book was realized by a grant-in-aid from the Japan Society for the Promotion of Science. In writing this paper, many linguistic researchers assisted me by giving informative suggestions or insightful comments. I sincerely acknowledge them, especially provided by Prof. R. W. Langacker and two anonymous reviewers, and indicate my recognition here.
Ken-ichiro Nakano

Note

i) Semantically, the concept of "object" is subjective; therefore, the combination of semantical terms with "object" and "subject" cannot be used in linguistics. Instead, the combination of terms with "objectified" and "modalized" (traditionally, "subjectified") is used in this paper to describe the true aspects of different linguistic logics emerging in English and Japanese. The grammatical terms object and subject are indicated in italics in order to distinguish between semantics and grammar.

ii) The grammatical categories that emerge from the Modalized Construal are not compatible with those of the Objectified Construal. Therefore, Japanese grammatical categories cannot be replaced with English counterparts.

iii) In actuality, it is impossible to replace Japanese grammatical categories with English ones, but appropriate English expressions are used here to promote cross-fertilization in this paper.

Reference


中野研一郎 (2013).「言語における「主体化」と「客体化」の認知メカニズム - 日本語の事態把握とその創発・拡張・変容に関わる認知言語類型論的考察」山漢正明編『認知言語類型論 No. 11』pp. 99-161. ひつじ書房.


中野研一郎 (2017).「認知言語類型論的境界 -「主体化」と「客体化」の認知メカニズム」京都大学学術出版会.
The Research Design of Cognitive Linguistic Typology: Synoptic and Discursive Analysis of the Emergence Degrees of Modalized and Objectified Constructions in Japanese and English


（中村芳久（准教授） ）