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I was raised that life begins at sixty!

Kazuhiro Tokunaga*

Abstract The English language has copious idiosyncratic expressions that often challenge conventional linguistic analysis. This study investigates the unique construction *BE raised that ...* (BRTC), exploring its meaning and linguistic characteristics in comparison to similar expressions. Using a combination of informant-based and corpus-driven methods, this study reveals four key findings: (i) BRTC and *BE brought up that ...* convey equivalent meanings, while other similar constructions differ due to difference in co-occurring elements; (ii) BRTC is interpreted through analogical mapping and the recovery of omitted sequences (e.g., *to believe* and *to think*); (iii) the main clause in BRTC functions as an evidential marker, reflecting the speaker's personal belief; and (iv) the complementizer *that* in BRTC remains intact to facilitate the recoverability of associated elements, akin to mechanisms observed in quotative predicate omission in Japanese. These insights shed light on the creative language use, particularly in nonstandard and often-overlooked linguistic constructions.

Keywords analogical mapping, evidentiality, nonstandard construction, quotative predicate drop, schematization

1. Introduction

This article focuses on the underlined nonstandard constructions in (1), where a passive form of NP *be raised* is followed by a content clause. In (1a), the complementizer *that* is overtly realized, and it can be truncated, as in (1b). Unlike the former cases, the third-person pronoun *she* is used in (1c). For convenience of reference, the *be raised that* construction is hereafter called BRTC in this paper.

- (1) a. (from TIME: 67)
I was raised that God was a magician, he was a protector. In the black community there was a time where we needed to hope and pray that way ... Well, that was me before this experience, and now this is me.
- b. (from COCA: web)
I was raised everyone should vote and ...
- c. (from Randy Harris, *Revenge? Redemption? or just convenience?*)

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...but she was raised that keeping a clean home was a woman's responsibility and no one else had been able to clean the house to her satisfaction.

Compared with a more standard case, the BRTCs in (1) seem idiosyncratic. Typically, the expression *be raised* occurs with a complement, as in (2).

(2) (from a post by Kamara Harris on X: 2024/09/11)

I was raised a middle-class kid, and I'm the only person ...

As mentioned above, BRTC, although used in the passive, is accompanied by a *that*-clause. It lead to the question of why BRTC can take a content clause and how this construction should be interpreted.

In addition to these syntactic and semantic issues, the reason why English speakers use this idiosyncratic form is worth consideration, especially because they choose BRTC even when more standard expressions are available. Therefore, this study also considers the mechanism behind the use of BRTC and how it is distinct from other related expressions.

Considering these problems, this study examines the following research questions using naturally occurring examples, collected from corpus data.

- How is BRTC interpreted?
- How does BRTC differ from other similar expressions?
- Why does *that* persist in BRTC?

This paper is structured as follows. Section 2 provides an overview of the categorization of *that*-clauses and presents a literature review of linguistic phenomena related to the complementizer *that*. Section 3 presents the empirical findings on BRTC, based on informant-based and corpus-driven surveys, and argues that BRTC is distinct due to its frequent co-occurrence with thinking verbs and its main clauses function as an evidential marker, conveying the speaker's private belief. Additionally, this section proposes that analogical mapping is a key mechanism for explaining the appropriate interpretation of BRTC. Section 4 examines parallels with quotative predicate omission in Japanese and discusses why *that* tends to remain intact in BRTC. Finally, Section 5 summarizes the main findings and concludes the paper.

2. Background of *that*-clauses

2.1. Three categories of *that*-clauses

Before examining the characteristics of BRTC, a brief review of the categorization of *that*-clauses is provided in this section. According to Araki & Yasui (1992:1478), *that*-clauses can be broadly classified into three categories with respect to the semantic relationship between the main clause and the *that*-clause:

(3) (from Araki & Yasui 1992:1478)

- a. When functioning as a relative clause
- b. When functioning as an adverbial clause
- c. When functioning as a complement to the verb, adjective, or noun in the main clause

(3a) corresponds to the *that*-clause in a cleft sentence. However, since BRTC examined in this paper does not have an expletive subject, the focus here will be on explaining (3b) and (3c).

When the *that*-clause functions as an adverbial clause, it expresses result or purpose (emphasis in original).

(4) (from Araki & Yasui 1992:1478)

- a. We paid him immediately, *so that* he left contented. ⟨result⟩
- b. We paid him immediately *so that* he would leave contented. ⟨purpose⟩

Such adverbial *that*-clauses can be realized as adjuncts without *so*, as in (5) (underlining in original).

(5) a. (from Huddleston & Pullum 2002:225)

What had happened, that she was looking so worried?

b. (from Huddleston & Pullum 2002:952)

He appealed to us to bring his case to the attention of the authorities that justice might be done.

(5a) can be interpreted as *something had happened; as a result, she was looking so worried*, while (5b) appears more ambiguous. The underlined *that*-clause may express the purpose or intended result of bringing his case to the authorities. Either way, adjunct *that*-clauses represent either a causal relationship to their matrix clause or the purpose of the action described in the main clause.

Lastly, the following examples in (6) illustrate instances where the *that*-clauses function as complement (emphasis in original). The italicized compliments are all licensed by the verb *know*, the adjective *sure*, and the noun *doubt*.

(6) (from Araki & Yasui 1992:1478)

- a. I know *that she is reliable.*
- b. I'm sure *that Ted has paid.*
- c. There is no doubt *that she is pregnant.*

According to Araki & Yasui (1992:1478), the *that*-clause complements the meaning of *know*, *sure*, and *doubt*. The content clause in (6a) expresses what the subject knows, while in (6b) it conveys what the subject is sure of. In contrast, the clause in (6c) indicates the information about which there is no doubt.

2.2. Emotional adjectives and *that*-clauses

Emotional adjectives are also followed by *that*-clauses, as in (7) (underlining mine).

(7) (from Inada 1989:77)

- a. I am sorry that I have to leave now.
- b. John is happy that he could meet her.
- c. Sue was surprised that the doctor came at all.

The examples in (7) that include emotional adjectives exhibit two properties. First, Inada (1989:77-78) argues that the experiencer role is assigned to the subjects of emotional adjectives. Additionally, there is a causal relationship between the emotion and the content clause. For instance, in (7b), John feels happy because he believes he can meet her.

Since the subject arguments in (7) serve as experiencers, they must be animate beings. Compare the following examples (8a) and (8b).

(8) (from Inada 1989:78)

- a. *It is {sorry/happy/proud/angry} that he didn't come.
- b. It is {true/clear/well-known} that he didn't come.

The pronoun *it* is considered an inanimate subject, so it cannot appear in sentences with emotional adjectives, as in (8a).

In contrast, as shown in (8b), this pronoun can be combined with certain other adjectives that reflect the speaker's judgment or stance on the information conveyed in a *that*-clause (see Martin & White 2005; Su & Hunston 2019). For instance, *true* indicates the speaker's evaluation regarding the truthfulness of the content clause, *clear* reflects the speaker's view on the clarity or certainty of it, and *well-known* describes its familiarity of the unrealized of his visit.

The three categories of *that*-clauses and their relationship to the main clause described above raise two key questions regarding BRTC:

- (i) What is the semantic relationship between the main clause and the complement in BRTC?
- (ii) What mechanisms underlie the interpretation of BRTC?

Section 3 addresses these questions by investigating the descriptive features of BRTC through the analyses of corpus data and informant surveys.

2.3. Null-say analysis and *that*-clauses

This section addresses another linguistic phenomenon related to the complementizer *that* before proceeding with the descriptive analysis. Verbs of saying or speaking are representative examples of verbs that are often followed by *that*-clauses. Among these are verbs expressing nonverbal cues or emotional expressions, namely *sigh*, *laugh*, and *nod*. Although these verbs do not directly represent the act of speaking, they can convey similar meanings to verbs of speech, as shown in (9) (underlining mine).

- (9) a. (from COCA: web)
She just laughed that he was hurt.
- b. (from COCA: fiction)
She motioned to Donnelly, and he nodded that he'd seen the child.
- c. (from Kratzer 2016:46)
Ralph sighed that Orcutt was a spy.

To explain why the verbs in (9) can be interpreted that way, Kratzer (2016:43–49) postulates null-*say* that “coerces verbs into verbs of speaking” (Kratzer 2016:48), as illustrated in (10). This element functions as a hidden verb in the interpretation of (9c).

(10) The semantics of (9c) (from Kratzer 2016:47)

- a. [Ralph sighed [_{CP} [say] [_{MoodP} that Orcutt was ...]]]
- b. $\lambda e \lambda w \exists x (\text{say}(x)(e) \ \& \ \text{sigh}(e) \ \& \ e \leq w \ \& \ \text{thing}(x)(w) \ \& \ \forall w' (w' \in \text{Content}(x) \rightarrow \text{spy}(\text{Orcutt})(w'))))$

Interestingly, Saito (2023) points out that this null-*say* analysis is applicable to Japanese quotative predicate drop. The Japanese language features a variation of a quotative predicates that include either a saying verb or a thinking verb, such as *to iu* ‘say that’ and *to omou* ‘think/believe that’ (Oshima 2010; Saito 2023). Both sequences comprise the complementizer *to* ‘that’ followed by either the Japanese speech verb *iu* ‘say’ or the thinking verb *omou* ‘think/believe.’¹

For instance, Oshima (2010:89) observes that the parenthesized quotative predicates (e.g., *iu* and *omou*) in (11) can be dropped while the complementizer *to* is retained.

(11) Quotative predicate drop in Japanese² (from Oshima 2010:89)

- a. “Omae-ga ike” to (i-tte) heya-o detei-tta.
“You-2-SG-NOM go-IMP” C (say-NFCJ) room-ACC exit-PAST
“‘You go,’ he said, and then exited the room.’
- b. “Dare-ni-demo shippai-wa ar-u” to (omo-tte) jibum-wo
“Anyone-DAT-ADV failure-TOP” happen-PRS C (think-NFCJ) myself-ACC
nagusame-ta.
comfort-PAST
‘I comforted myself, thinking that anyone can make mistakes.’

This quotative predicate drop does not alter the original meaning of these sentences. One possible reason is that the elided elements (i.e., *iu* and *omou*) are easily predictable or recoverable. In this regard, Shibasaki (2005:fn.4) conducted a quantitative analysis of his database and reported that, among the verbs co-occurring with *to*, the thinking verb *omou* ranked first, followed by the saying verb *iu* as the second most frequent. This high frequency of co-occurrence likely contributes to their easy recoverability. This suggests that the complementizer *to* functions as a marker signaling a dropped saying verb or thinking verb, inducing

¹ According to Saito (2023:Ch.3), *to iu* has traditionally been treated either as a complementizer or as a more complex structure (the complementizer *to* ‘that’ + the Japanese speech verb *iu* ‘say’). Saito (2023) supports the latter position, arguing that phenomena such as complementizer drop, island effects, and relativization of certain adjunct types provide evidence for this view. However, as this distinction is not relevant to the current discussion, further details will not be addressed here.

² The following abbreviations are used in this paper: 2SG=second person singular, ACC=accusative, ADNZ=adnominalizer, ADJR=adjectivizer, ADV=adverb, AUX=auxiliary, C=complementizer, CJP=conjunctive particle, DAT=dative, IMP=imperative, loc=locative, NOM=nominative, NFCJ=non-finite conjunctive verb form, PRS=present, RES=reason, TOP=topic, VOL=volitional

the interpretation of appropriate verbs to bridge between the matrix and quotative clauses. As discussed in Section 4, this point is highly relevant to the interpretation of BRTC.

2.4. Evidentiality of saying and thinking verbs

Cross-linguistically, languages have linguistic devices that indicate the source of the speaker's information and knowledge (Aikhenvald 2004, 2018; San Roque 2019). Such expressions are called evidential markers. Aikhenvald (2018:4) summarizes several strategies for indicating information sources, including speech reports (such as quotations), modal verbs, and parentheticals.

English also has some evidential markers, such as *see*, *allegedly*, as illustrated in (12) (underlining mine).

(12) (from San Roque 2019:354)

- a. I saw Annie pull the trigger[.]
- b. Allegedly, Annie pulled the trigger[.]

Xu (2022:4) categorizes verbs related to thinking or knowledge as evidentials.

(13) (from Xu 2022:4)

- a. Personal assumed evidentials (P.A), indicating evidence from sources based on assumed personal knowledge or belief [...] (e.g. I know; I believe; I think).
- b. Shared assumed evidentials (S.A), indicating evidence from sources based on general knowledge [...] (e.g. we know; you know; everyone knows).

As mentioned in Section 2.3, saying and thinking verbs frequently co-occur with the complementizer *to* in Japanese. Moreover, these verbs can be dropped. Shibasaki (2005) and Saito (2023) argue that the complementizer *to* can serve as an evidential marker.

(14) (from Shibasaki 2005:49)

Zentai-teki-na kousei-wa deki-te-i-ta-node,
Whole-ADJR-ADNZ composition-TOP complete-CJP-AUX-PAST-RES,
ato-wa mukoo-de yar-oo, to.
remainder-TOP place-LOC do-VOL, C

‘The overall composition was already in place, so (I thought) I decided to finish the rest over there.’

When an explicit quotative predicate is used, the example in (14) would include a verb of thought (e.g., *omou* ‘think or believe’) following the complementizer *to*, as seen in (11b). However, in (14), no such complement-taking verb follows; instead, the preceding clause (i.e., *ato-wa mukoo-de yar-oo* ‘I decided to finish the rest over there’) structurally accompanies *to*. According to Shibasaki (2005), *to* in this context serves as an evidential marker indicating the source of the speaker's prior statement or intention.

It is worth noting that the original main clause here is demoted to a subordinate clause. If *to* were not dropped, a complement verb would occur immediately after *to*, recognizing the sequence as the main clause. However, in (14), with the complement verb dropped, the preceding clause (i.e., *ato-wa mukoo-de yar-oo*) has the status of the main clause.

The quotative predicate drop and clause demotion phenomena are linked to certain distinctive features of BRTC. However, this study primarily focuses on BRTC’s role as an evidential marker, specifically in conveying the speaker’s private belief (see Section 3.3).

3. Corpus-driven and informant-based observations on the behavior of BRTC

3.1. Data source and data selection

In this study, I queried a large-scale corpus, the Corpus of Contemporary American English (COCA; Davies 2008–, available online), for a pilot study. All data presented in this study were searched and collected on September 12, 2024.

As shown in (1), BRTC involves a personal pronoun subject and the main clause (e.g., *I was raised*) is the passive form, so the search query in (15) was applied. In this query, “np” represents singular and plural common nouns, “nn” represents proper nouns, “pp” denotes pronouns and indefinite pronouns, and “_vb” refers to inflected and contracted forms of the verb *be*.

- (15) The search query for BRTC
[np*][nn*][pp*][pnl*] _vb raised

Since the query also returned instances with inanimate subjects (e.g., *it*), false hits were manually removed, retaining only instances with animate subjects. At this stage, the search yielded 4,613 hits, of which 13 were identified as BRTC. This finding suggests that while BRTC is a real phenomenon (not an accidental error), it remains a relatively marginal case.

In addition to the search for instances of BRTC, an investigation was conducted to determine whether the transitive verb *raise* can be followed by a *that*-clause. The search query used for this purpose is shown in (16).³

- (16) The search query for *raise NP that*
RAISE [np*][nn*][pp*][pnl*] that

For this search, only examples with animate objects were included. As a result, 85 examples were collected, but most of them involved the adverbial phrase (e.g., *that way*), with no instances matching the interpretation of BRTC.

An additional analysis investigated whether expressions similar to *be raised* can be followed by a *that*-clause. Using the search query in (17), I collected three expressions: *brought up*, *grew up*, and *born*.⁴

- (17) The search query for expressions similar to *be raised*
[np*][nn*][pp*][pnl*]{ _vb brought up|grew up|_vb born} that

The corpus search found 16 instances of *be brought up that* with animate subjects, of which 3 could be interpreted in the same way as BRTC (1 instance in the movie genre and 2 instances in the spoken genre). For *grew up*, 20 instances with animate subjects were found, but none could be interpreted similarly to BRTC. The same was true for *be born*; as out of 222 instances, none conveyed a meaning similar to BRTC.

³ The small-cap RAISE in (16) and (26) represents various inflectional forms of *raise*.

⁴ In practice, each expression within the brackets is entered individually into the search field.

3.2. Informant survey

An informant survey was conducted to investigate how native English speakers interpret BRTC. Questions were presented on a website created using *PsyToolkit* on the web (version 3.4.6) (Stoet 2010, 2017). Participants were recruited through a participant recruitment site called *Prolific*, including 20 native English speakers (15 British English speakers, 4 American English speakers, and 1 unspecified). All participants were screened based on their having a Graduate degree (MA/MSc/MPhil/other) or Doctorate degree (PhD/other) and were compensated £8.04 for their participation.⁵

3.3. Empirical analysis of BRTC: Insights from corpus and informant surveys

3.3.1. BRTC and *-vp brought up that*

This section explains the corpus survey conducted using the search query in (15). This study found that most instances of BRTC are accompanied by a *that*-clause (e.g., (1a) and (1c)), with only three exceptions where the clause is absent (e.g., (1b)). BRTC tends to occur in spoken contexts (6 out of 14 cases), blogs (4 cases), and less frequently on the web (2 cases) and TV (1 case). BRTC typically takes a first-person subject (e.g., *I* and *we*). This result suggests that the instance in (1c) is relatively rare. While second- or third-person subjects, proper nouns (e.g., *Obama* and *Christ*), and common nouns (e.g., *children*, *siblings*, *animals*), were observed in COCA, such cases were not classified as BRTC. This is because they do not occur with a *that*-clause, or when *that* appears, it typically forms an adverbial phrase such as *that way*, as illustrated in (18).

- (18) a. (from COCA:blog)
I'm sorry you were raised that way.
b. (from COCA:web)
Obama must not have been raised that way.

It is noteworthy that the informant survey indicates that the content of the clause typically reflects the speakers' sense of moral duty or personal belief, shaped by their life experiences. In the survey, I asked informants how they would interpret the BRTC in (19a). Several informants suggested that (19a) could be interpreted as (19b) or (19c). This observation suggests that BRTC is understood by inferring thinking verbs (e.g., *believe* or *think*) between the matrix clause and the *that*-clause.

- (19) a. (from COCA:spoken)
I was raised that a person is innocent until proven guilty.
b. I was {raised / brought up} to {believe / think} that a person is ...
c. I was raised believing that a person is. . .

The informant survey revealed that the *that*-clauses in (20) can be considered the speaker's private (positive or negative) beliefs, shaped by their life experiences. The underlined BRTC in (20a) indicates that the writer believes voting is private—a belief developed over time. The

⁵ It should be noted that this informant survey is not intended as a rigorous psycholinguistic study but rather aims to understand how BRTC is interpreted.

same applies to the BRTC in (20b). In contrast, the BRTC in (20c) suggests that the speaker once believed smoking was bad, but this belief has since changed.

- (20) a. (from COCA:blog)
While I appreciate people are passionate about their party (yes, I have friends on both sides of the political spectrum) I was raised that your vote is private.
- b. (from COCA:blog)
I was raised that it is very rude to salt your food before tasting it because you are inferring that the chef/cook didn't season it enough or to your liking before even trying it.
- c. (from COCA:spoken)
4th TEENAGER: I was raised that smoking was bad, but when I hung out with my friends and they'd all be smoking, I'd try it, you know, see what it's like, you know. It was kind of rough at first, but it was a lot better than bringing – breathing in the secondary smoke.

As mentioned in Section 3.1, the corpus search of the sequence *_vb brought up that* found 3 instances which could be interpreted in the same ways as BRTC. In this case, the characteristics described above can also be observed, as in (21).⁶ As indicated in (19b) and (19c), *to believe* or *believing* is likely to be (implicitly) understood between the main clauses and the *that*-clauses.

- (21) *_vb brought up that*
- a. (from COCA:movie)
On the other hand, it's a question of morality, because I was brought up that you do not cross a picket line, no matter what.
- b. (from COCA:spoken)
ADAM: I just wanted to say that we are to blame because we were brought up that we are an indestructible country and that nothing in the world could ever even dent us in the least bit.
- c. (from COCA:spoken)
ADAM: Exactly. That we were, like I said, we were brought up that nothing could ever dent us[.]

The speaker's private belief of both constructions suggests that the main clauses of BRTC and *_vb brought up* can function as an evidential marker representing the speaker's private belief (in the sense of Xu (2022) in (13)), even though the associated thinking verbs remain covert. The reason these main clauses exhibit such evidentiality is that the sequence PERSONAL SUBJECTS *_vb raised/brought up* + THINKING VERBS (*believe* or *think*) becomes a chunk through repeated occurrences. This facilitates an analogy between the form without omission and the one with omission. This point will be further explored in Section 3.3.3.

⁶ As for (21b) and (21c), the same speaker made these sentences. Interestingly, in (21a) and (21b), *because* co-occurs with BRTC in the same way as *node* ('because') in (14).

3.3.2. Difference between BRTC including *vp brought up that* and other expressions

Unlike BRTC and *vp brought up that*, the semantic relationship between the main clause and its complement appears to differ in constructions such as *raise NP that*, *grew up that*, and *vp born that*.

Regarding *raise NP that*, as mentioned in Section 3.1, there are no instances matching the interpretation of BRTC. For example, the instance in (22a) can be paraphrased as *You could become someone who has a loving marriage and who raises children in a way that both you and others can enjoy them*. That is, the *that*-clause in (22a) can be seen as representing the *manner* in which the children are raised. Similarly, the *that*-clause in (22b) specifies the speaker's inability to imagine certain behavior from God. It conveys that the speaker cannot envision a scenario in which God would expect or desire the speaker to stop loving the child.

- (22) a. (from COCA:web)
You could become someone who has a loving marriage, who does raise children that they enjoy and others do as well.
- b. (from COCA:spoken)
I can't imagine God giving me this child and living with her and raising her that he would want me to stop loving her.

Given that neither of the examples in (22) can be interpreted in the same way as in BRTC, the speaker's private belief in (20) and (21) appears to be restricted to the passive version (i.e., *be raised that*).

Similar to *raise NP that*, almost no data support the use of *grew up* and *vp born* accompanied by a *that*-clause. The only exception is as follows.⁷

- (23) (from COCA:blog)
Marrying a person your own age who is your soul mate is a good thing, it shows that you grew up that you're ready for adulthood.

The underlined part differs from BRTC because the sequence does not convey the speaker's private belief. Instead, the underlined part can be paraphrased in two ways, depending on whether it reflects a result reading or a cause reading. In the former, the subject becomes ready for adulthood as a result of growing up; in the latter, being ready for adulthood is caused by growing up. This interpretation is similar to the adverbial *that*-clauses in (4a) and (5), or the ones with emotional adjectives in (7).

- (24) a. (a result reading)
You grew up, and as a result, you're ready for adulthood.
- b. (a cause reading)
You grew up, which made you ready for adulthood.

⁷ For *vp born that*, the following example cannot be considered BRTC in my view as the underlined part corresponds to *when he was born*. *That attempt ...* in the original script. This discrepancy occurred probably due to an OCR software error, and this is why the instance was discarded.

(i) (from COCA:movie)
... and he was born that attempt failed back 1947 and ...

The differences between BRTC and other expressions such as *raise NP that*, *grow up that*, and *_vb born* can be summarized as follows:

	Speaker's private belief	Cause/Result
BRTC	OK	–
<i>_vb brought up that</i>	OK	–
<i>raise NP that</i>	–	OK
<i>_vb born that</i>	–	OK
<i>grew up that</i>	–	OK

Table 1. Summary of the differences between BRTC and other expressions

The distribution presented in Table 1 raises the question of why BRTC and *_vb brought up that* are capable of conveying the speaker's private belief. This issue is examined in the next section.

3.3.3. Why BRTC and *_vp brought up that* reflect the speaker's private belief

This section explores why BRTC and *_vb brought up that* may convey the speaker's private belief. To address this issue, the queries in (25) and (26) were employed to examine which lexical verbs (excluding *be* verbs) occur following sequences such as *_vb raised to*, *_vb brought up to*, *raise NP to*, *_vb born to*, and *grew up to* in COCA.

- (25) The search query for lexical verbs after *_vb raised to*, *_vb brought up to*, *_vb born to*, and *grew up to*
`[np*][[nn*]][pp*][[pnl*]] { _vb raised to | _vb brought up | grew up | _vb born } [vvi*]`
- (26) The search query for lexical verbs after *raise NP to*
`[np*][[nn*]][pp*][[pnl*]] RAISE [np*][[nn*]][pp*][[pnl*]] to [vvi*]`

Table 2 summarizes the search results for these queries. As indicated in the table, the ratio of thinking verbs following each construction is higher in *_vb raised to* and *_vb brought up to* compared to other constructions.

Constructions	Number of tokens	Thinking verbs
<i>_vb raised to</i>	206	113 (55%)
<i>_vb brought up to</i>	83	70 (84%)
<i>raise NP to</i>	592	4 (0.7%)
<i>_vb born to</i>	57	13 (5%)
<i>grew up to</i>	98	5 (5%)

Table 2. Summary of thinking verb frequencies in constructions

The specific thinking verbs associated with each construction are illustrated in Figure 1. Notably, BRTC and *_vb brought up to* most frequently co-occur with *believe*, suggesting a strong association between these constructions and this verb. In contrast, this tendency is not observed in other constructions.

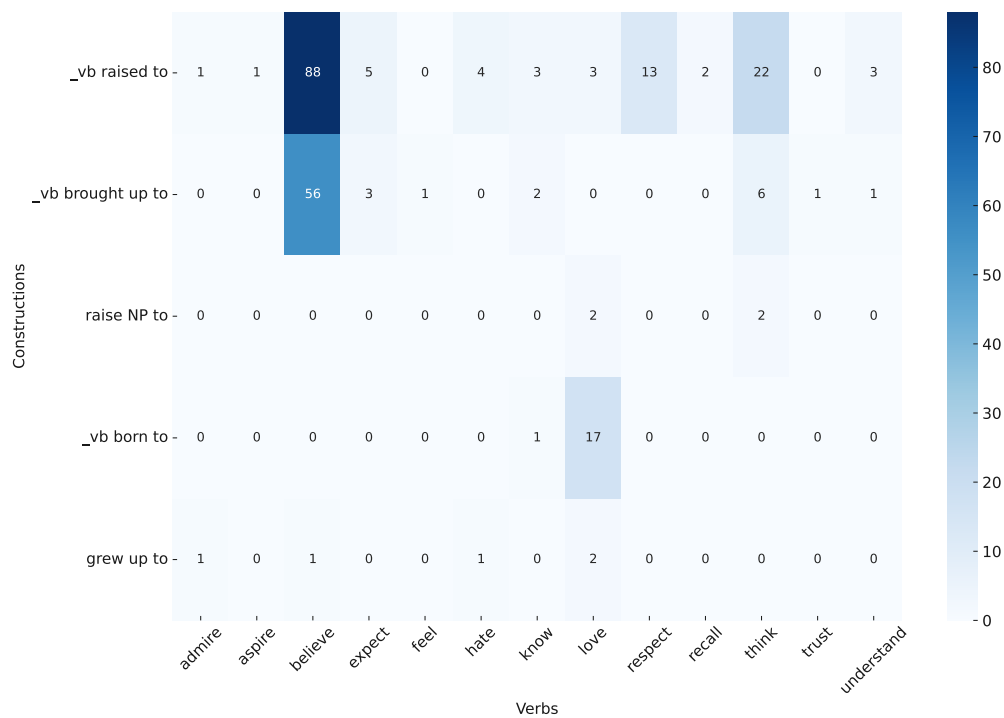


Figure 1. Frequency of thinking verbs by constructions

According to Hoffmann (2022:33), “[t]ype and token frequency of the linguistic input, therefore, facilitate the mental schematization and categorization of more abstract constructions.” This study builds on Hoffmann’s findings by demonstrating that the frequent co-occurrence of *_vb raised to*, *_vb brought up to*, and *believe* not only promotes schematization but also functions as a foundation for interpreting evidentiality in BRTC constructions. Specifically, sequences such as *BE raised to/brought up to + THINKING VERB* act as schematic sources, contributing to the interpretation of BRTC through analogical mapping.

Gentner & Smith (2013:669) describe analogical mapping as recognizing relational commonalities between two situations and generating further inferences. Extending this framework, the present study demonstrates that in BRTC, the sequence *to believe* is inferred from similarities in form and frequent co-occurrence patterns of linguistic inputs. These factors enable BRTC and *_vb brought up to* to function as evidential markers, even in the absence of explicit verbs like *believe* or *think*, as detailed in Section 3.3.1.

Unlike previous studies that focus on general patterns of analogical reasoning and categorization, this research reveals a more specific mechanism by which schematic representations and frequent co-occurrence patterns alone can suffice to convey evidentiality. By identifying cases where evidentiality persists without explicit markers, this study challenges the assumption that such markers are necessary. In doing so, it complements the findings of Hoffmann (2022) and Gentner & Smith (2013) by illustrating how the interpretative processes of BRTC constructions are uniquely shaped.

Figure 2 summarizes the interpretive process by which linguistic inputs, consisting of various patterns illustrated in Figure 1, are schematized into a source (e.g., *BE raised to + THINKING VERBS*). This mental schematization leads to the interpretation of *belief* in BRTC through analogical mapping.

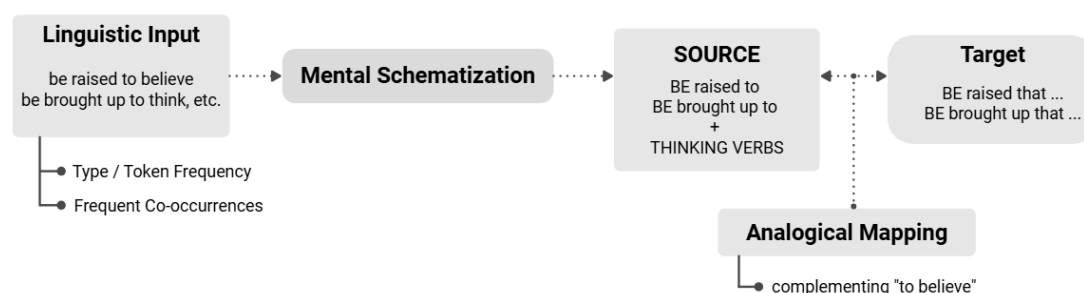


Figure 2. Mapping: From linguistic input to the interpretation of *believe*

Through this process, BRTC (and *be brought up that ...*) can be interpreted similarly to *be raised to believe that ...*, despite its distinctive form. In contrast, this mapping process does not occur in other constructions, as Figure 1 indicates, due to their infrequent co-occurrence with *believe* or *think*. Consequently, their schematization and analogical mapping differ from those of BRTC.

4. Similarity in null elements between the complementizer *to* and *that* in BRTC

Section 3.3.3 argued that the interpretation of BRTC can be explained through analogical mapping between the source (e.g., *BE raised to believe that ...*) and the target (i.e., BRTC). However, this hypothesis raises an important question: why does the complementizer *that* remain?

As noted in Section 3.3.1, BRTC typically occurs in spoken contexts. Given this tendency, one might expect frequent omission of the complementizer *that*, as Biber et al. (1999:680) observes that *that* ellipsis is common in spoken language. However, occurrences without *that* were rarely observed in this corpus analysis. This discrepancy suggests the influence of a specific factor inhibiting the omission of *that* in BRTC.

To further examine this issue, the phenomenon of quotative predicate omission in Japanese, as exemplified in (11), provides a potentially useful parallel. For clarity, (11b) is repeated here as (27).

- (27) Quotative predicate drop in Japanese (from Oshima 2010:89)
- | | | | | |
|-----------------|--------------|------------|----------------|------------|
| “Dare-ni-demo | shippai-wa | ar-u” | to (omo-tte) | jibum-wo |
| “Anyone-DAT-ADV | failure-TOP” | happen-PRS | C (think-NFCJ) | myself-ACC |
| nagusame-ta. | | | | |
| comfort-PAST | | | | |
- ‘I comforted myself, thinking that anyone can make mistakes.’

Section 2.3 explained that the omission of elements such as *iu* (‘say’) and *omou* (‘think’) can often be recovered due to their frequent co-occurrence with the complementizer *to*. This

repeated co-occurrence establishes the complementizer *to* and these elements as a set phrase. Consequently, the presence of *to* acts as a cue for recovering the omitted elements, effectively linking the main clause to the complement clause and enabling accurate interpretation. Thus, the complementizer *to* functions as a marker, prompting the addressee to infer the missing elements.

The same analysis can be extended to the complementizer *that* in BRTC. Without it, it would be difficult for the addressee to recover what is omitted, as PERSONAL PRONOUN + BE *raised/brought up* does not typically take a complement. The remaining *that* provides a basis for the recoverability of its frequently co-occurring elements (e.g., thinking verbs such as *to believe* and *to think*).

5. Conclusion and prospects for further studies

This study analyzed the unique construction PERSONAL PRONOUN + BE *raised that* ... (BRTC) and its linguistic characteristics. To explore how English speakers interpret this construction and how it differs from other constructions with similar meanings, this study utilized informant-based and corpus-driven methods. The findings of the analysis are summarized as follows:

- (i) BRTC and BE *brought up that* ... convey the same meaning, whereas other similar constructions do not, due to the difference in co-occurring elements.
- (ii) BRTC is interpreted through analogical mapping (as shown in Figure 2) and the recovery of omitted sequences (e.g., *to believe* and *to think*).
- (iii) The main clause in BRTC serves as an evidential marker, expressing a speaker's personal belief achieved through analogical mapping.
- (iv) The complementizer *that* in BRTC frequently remains because it aids the recoverability of frequently associated elements, similar to the mechanism observed in quotative predicate omission in Japanese.

This study has limitations. Future research should expand data collection beyond COCA to include other large-scale corpora for more robust analysis. Moreover, future research should correct the imbalance in English varieties observed in the informant survey.

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