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VERBAL COMPLEMENT SELECTION FOLLOWING ASPECTUAL VERBS

1 INTRODUCTION

Many verbs select infinitives and gerunds as verbal complements. Some of these include a class of verbs called aspectual verbs, such as *start*, *begin*, and *continue*. Some aspectual verbs, such as *start* and *begin*, express the beginning of an action, and the verb *continue* marks an ongoing event. Verbs of liking, such as *like*, *love*, and *hate*, are another class of verbs that select both gerunds and infinitives as their complements. In the literature, it has been argued that the use of either a gerund or an infinitive as the complement of an inchoative aspectual verb or verb of liking is preferred in certain contexts. To my knowledge, the durative aspectual verb *continue*, however, appears in very few studies that investigate the difference between the two types of complements. Therefore, it is necessary to reveal whether a gerund or an infinitive as the complement of *continue* is chosen in certain contexts. This paper mainly focuses on the verb *continue* and aims to elucidate in what context a gerund or an infinitive is chosen as a complement of the verb. This paper also aims to investigate whether the factors affecting verbal complement selection following *continue* also influence that following *start* and *begin*.

This paper consists of six chapters. The background and the aim of study are presented in this chapter. In Chapter 2, I review some previous analyses on ambivalent complement-taking verbs and then present my proposal. In Chapter 3, I claim that factors that affect complement selection following *continue* are (i) intentionality and (ii) lack of futurity. Then, in Chapter 4, I maintain that intentionality also influences the choice between gerundive and infinitive complements of *start* and *begin*. We investigate the relation between stative verbs and complement selection in Chapter 5. Chapter 6 concludes this thesis.

2 PREVIOUS ANALYSES

This chapter reviews some previous analyses on ambivalent complement-taking verbs to evaluate what has been discussed regarding verbal complement selection.

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2.1. Analyses of Verbs of Starting and Liking

Many researchers have argued that the selection of complement types of inchoative verbs and verbs of liking is sensitive to the meaning of the embedded verbs. This section deals with both inchoative verbs and verbs of liking because their complement selections are explained from a similar perspective. The proposed differences between the two types of complements are as follows:

- (1) gerund :: infinitive = durative, iterative :: generic
 fact :: idea
 activity :: habit
 (= specific :: general)

Many previous analyses have argued that complement selection is dependent on context and that a difference exists between gerunds and infinitives, while others have maintained that there is no difference. I present each of these claims in the following sub-sections.

2.1.1 Durative, Iterative vs. Generic Freed (1979) uses terms such as “durative,” “iterative,” and “generic” to characterize the aspectual qualities of the event named by the complement. According to Freed, “durative” and “iterative” are used to refer to the duration of SINGLE EVENTS. An example of a durative event is seen in (2), and an example of an iterative event is presented in (3), where the event, although unspecified for duration, is understood as consisting of a series of individual sneezes:

- (2) She is sleeping. (durative)
 (3) She is sneezing. (iterative)

In contrast, *generic* is used to refer to a SERIES (or repetition) OF EVENTS of the same type carried out during separate intervals. Examples follow:

- (4) They own a house. (general state)
 (5) He smokes a lot. (habit)

According to Freed’s classification, *She is sneezing (now)* is iterative, while *She sneezes a lot* is generic. Thus, the difference derives from the duration of an event being discussed. It may be difficult to set an appropriate duration of each event, but the duration is likely to be fixed depending on context.

Based on these terms, Freed claims that the *V-ing* form carries a durative (or iterative) reading, while the *to-V* form has a generic reading. On the one hand, a sentence with a gerund describes a single event occurring continuously or for a prolonged duration at a given time. This suggests an extended occurrence of one

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event. A sentence with an infinitive, on the other hand, describes a series of single events of the same type occurring at different times. This implies an intermittent occurrence of the events. Freed gives some illustrative sentences as follows. The author claims that (6) describes a single event of what someone says, and the *-ing* form is quite natural. However, an infinitive is more natural in (7) because the sentence describes generic events that recur and are affected by various individuals:

(6) They said horrible things to each other. First he said that she was the most selfish person who had ever lived. She said that he was too defensive to even realize any of his own faults. He came back with a crack about her family and then she started **saying/?to say** how she was going to leave him if he didn't change. They went on like that for hours.

(Freed (1967:76))

(7) Leon and Ruth's marriage had been in trouble for years. Despite numerous tense situations, their friends supported them both and did what they could to keep the two together. Last month they finally split up - they say that it is a trial separation. Yet just as soon as they separated, their friends began **to take up sides/?taking up sides**.

(Freed (1967:75))

2.1.2 *Fact vs. Idea* Some researchers claim that the distinction between gerunds and infinitives is due to the contrast between *facts* and *ideas*. Givón (1993), for example, claims that a sentence with a gerund represents the subject's actual action, and a sentence with an infinitive represents the subject's idea before taking action. Consider the following example:

- (8) a. John started doing the dishes every evening, but then changed his mind.
b. John started to do the dishes every evening, but then changed his mind.

(Givón (1993:31))

According to Givón (1993), in sentence (8a), the probability is higher that John changed his mind after doing the dishes for a while. In sentence (8b), however, there is a high possibility that John changed his mind before doing any dishes.

Lewis (1984) makes a similar claim about verbs of liking: he argues that a sentence with a gerund describes "FACT," whereas one with an infinitive describes "IDEA."

- (9) She likes/loves/prefers/hates/can't bear cooking at home.
= FACT (She often cooks at home.)
(10) She likes/loves/prefers/hates/can't bear to cook at home.
= IDEA (This is only her idea; perhaps she doesn't often cook at home.)

(Lewis (1984:122-3))

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The sentences in (9) convey the idea that the referent of the subject actually often cooks at home and that the speaker states her liking of it. However, in sentence (10), the subject does not cook often and expresses her liking of cooking.

2.1.3 Action vs. Habit Close (1975) states that the distinction between gerunds and infinitives is captured by the *action* vs. *habit* dichotomy. He gives several illustrative sentences as follows:

(11) I like going for a walk.

(12) I like to go for a walk on Sundays.¹ (Close (1975:71–72))

According to Close, the *to*-infinitive refers not to a future state/action but to a habit/a course of action (as the phrase “on Sundays” in sentence (12) indicates). When verbs of liking (*like*, *hate*, *prefer*) are followed by gerunds, emphasis is placed on the activity rather than on the habit, and sentence (11) can be paraphrased as “I am content when I am walking.”

Table 1 summarizes the points presented so far.

Table 1: The semantic difference between gerund/infinitive complements in previous analyses

	gerund	infinitive
Freed (1979)	DURATIVE, ITERATIVE (specific)	GENERIC (general)
Givón (1993), Lewis (1984)	FACT (specific)	IDEA (general)
Close(1975)	ACTION (specific)	HABIT (general)

From the above, we can see that the arguments in the table all point in the same direction, although different terms are used. These proposed factors are subsumed under the contrast between “specific” and “general”: sentences with gerunds express events that occur in a specific, limited span, and, thus, the notions of facts and actions are seen to be connected to specificity. Meanwhile, sentences with infinitives describe generic events, and the notions of ideas and habits are closely related to genericity.

¹ In sentence (12), the phrase *on Sundays*, which is likely to lead to a habitual reading, is added, and sentences (11) and (12) do not constitute a minimal pair. To prove that the notion of habit is derived from *to*-infinitives, *I like going for a walk* and *I like to go for a walk* must be compared.

2.2 “No difference” theories

While the researchers mentioned in the previous subsection argue that the selection of complement types of inchoative verbs and verbs of liking is sensitive to the context, some researchers claim that there is no difference between the two verb categories.

Kuno and Takami (2017) mention verbal complement selection following liking verbs (*like, love, hate, and prefer*) and aspectual verbs (*start, begin, commence, cease, and continue*). They claim that there is no difference between using gerunds and using infinitives, and they do not offer explanations regarding the context in which each type occurs.

Moreover, Swan (1980) addresses verbs of liking, such as *love, hate, and prefer*, and insists that there is not much difference between the two structures.

- (13) I love lying/to lie on my back and staring/to stare at the sky.
- (14) Some people hate working/to work in the early morning.
- (15) Personally, I prefer working/to work in the morning. (Swan (1980:339))

2.3 Analyses of *continue*

The verb *continue* also selects either a gerund or an infinitive as its complement. Many analyses explain the difference in complement types from a viewpoint different from that of the semantic contrast discussed in Section 2.1.

First, according to Freed (1979), the contrast between *durative/iterative* vs. *general* also holds true for *continue*:

- (16) While the man held a gun on her, she continued **counting**/?**to count** out
hundred-dollar bills. (Freed (1967:93))
- (17) The economy is terrible. Inflation is out of control and from all indications,
things are going to continue **to get**/?**getting** worse. (*ibid.*)

The author maintains that sentence (16) describes a single activity and that the *-ing* form is more natural because it carries a durative reading. However, an infinitive is preferred in (17) because it has a generic reading.

Second, Dixon (1991) offers a different point of view: he argues that the choice between gerundive and infinitive complements of *continue* pertains to an interruption in the activity described by the complement.

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(18) a. John continued painting the wall (despite all distractions).

b. John continued to paint the wall (after that interruption).

(Dixon (1991:241))

He explains that sentence (18a) states that John carried on with an established activity rather than stopping it, while (18b) conveys the idea that he became involved again after having stopped.

Contrary to what Dixon (1991) observes, however, five dictionaries, at least to my knowledge, state that the implication of an interruption is associated with a gerund, not with a *to*-infinitive. In addition, *A Valency Dictionary of English* states that a gerund “can place more emphasis on the continuity of the action.” Table 2 summarizes the descriptions from six dictionaries.

Table 2: Descriptions of gerundive complements of *continue* in dictionaries

	Dictionaries	Descriptions
Interruption	Macmillan English Dictionary for Advanced Learners	to start doing something again after you have stopped
	Longman Dictionary of Contemporary English	to start again, or start doing something again, after an interruption
	Merriam-Webster’s Advanced Learner’s English Dictionary	to start again after an interruption or pause
	Cambridge Advanced Learner’s Dictionary	to start to do something again after a pause
	Collins Coubuild Advanced Learner’s Dictionary	If you continue with something, you start doing again after a break or interruption.
Emphasis on the continuity	A Valency Dictionary of English	gerunds place more emphasis on the continuity of the action.

As stated above, the difference in verbal complement selection after *continue* is mainly explained from the viewpoint of whether there is an interruption of an action or not. However, there is a discrepancy between the description offered by Dixon (1991) and those in the dictionaries.

The natural question then is which is correct. I show that the descriptions in the dictionaries are correct. This is based on my own examination with five native speakers of English as informants.² Test sentences include:

² I consulted two Britons, two Americans, and a Canadian.

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- (19) *While John was eating breakfast, he noticed that his favorite actor was on TV.*
 a. He paused for a moment to listen and then continued **eating**.
 b. He paused for a moment to listen and then continued **to eat**.
- (20) *While John was reading his book, he noticed that an airplane was flying over him.*
 a. He looked up briefly, then continued **reading** his book.
 b. He looked up briefly, then continued **to read** his book.

With respect to these sentences, three informants answered that they preferred using gerunds, while the other two found no difference. I take this as evidence that the descriptions in the dictionaries are correct and gerunds are associated with interruption.

2.4 Discussion

In this section, I argue that the specific vs. generic contrast proposed in previous analyses does not explain the distribution of gerunds vs. infinitives after *continue*. The first data point comes from a case in which the subject continues an activity despite a distraction. Two of my informants preferred the use of a gerund in this context:

- (21) a. He continued **reading** despite the noise of jet planes.
 b. He continued **to read** despite the noise of jet planes.

Both of the sentences are specific because a single durative event rather than a generic or habitual event is denoted. Thus, the specific vs. generic contrast cannot discern the two cases and fails to explain the contrast.

Another case for which the informants showed a preference for gerunds is one in which the subject continues an activity with an endpoint. Three informants exhibited a preference for gerunds in the following sentence:

- (22) a. Mary continued **teaching** at college until a month before her death.
 b. Mary continued **to teach** at college until a month before her death.

Both sentences describe generic events because they refer to events of the same type that occur habitually. The specific vs. generic dichotomy also fails to explain why gerunds are preferred in this case.

Lastly, we cannot give an account of cases in which the subject continues some activity after an interruption, which is noted in the previous section:

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- (23) *While John was eating breakfast, he noticed that his favorite actor was on TV.*
 a. He paused for a moment to listen and then continued **eating**.
 b. He paused for a moment to listen and then continued **to eat**. (= (19))

These sentences both denote specific events, and the semantic contrast cannot illustrate why gerunds are preferred in these contexts.

In the following chapters, I claim that factors affecting verbal complement selection following *continue* are (i) intentionality of subjects and (ii) lack of futurity. These factors explain a wide range of data for *continue*. I will argue that intentionality is extended to inchoative verbs such as *start* and *begin*.

3 FACTORS GOVERNING GERUNDIVE VS. INFINITIVE COMPLEMENTS OF *CONTINUE*

This chapter focuses on the verb *continue* and aims to elucidate in what context a gerund or an infinitive is chosen as the complement of the verb. I will argue that contexts exist in which the use of a gerund, which occurs with a lower frequency than of infinitives (as will be shown below), tends to be preferred, and I will claim that intentionality and lack of futurity affect the selection of gerunds.

3.1 *The formal restrictions on the distribution of complements of continue*

Let me first present the overall corpus search results of *continue*, *start*, *begin*, *commence*, and *hate*. I present results of corpus investigations based on the Corpus of Contemporary American English (COCA) and the British National Corpus (BNC) to show the distribution of complements of *continue*. I conducted a search with the interfaces provided by Brigham Young University (BYU)-COCA and BYU-BNC. The collocation search was conducted with gerunds or infinitives immediately followed by lemma such as “CONTINUE,” “START,” and so on.

I found that the frequency of infinitives after *continue* is overwhelmingly larger compared with that after other verbs such as *start* or *begin*. This tendency seems rather peculiar if we look at other ambivalent complement-taking verbs. The total frequencies of gerunds and infinitives are given in Table 3.

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Table 3: The total frequencies of gerunds and infinitives following some aspectual verbs and verbs of liking

words	frequency		proportion	
	gerund	infinitive	gerund	infinitive
<i>continue</i>				
BNC	835	11443	1	14
COCA	8717	79605	1	9
<i>start</i> (COCA)	78947	49629	1.6	1
<i>begin</i> (COCA)	48465	103487	1	2.1
<i>commence</i> (COCA)	154	169	1	1.1
<i>hate</i> (COCA)	2251	4913	2.2	1

As the table above shows, regarding verbs other than *continue*, the proportion of one type is about twice that of the other. I found that this difference in preference is not affected by whether the sentence is in an affirmative or negative context. The difference in matrix verb tenses also has little impact on the proportion. Therefore, we can safely say that *continue* shows a strong preference for infinitives.

Despite this preference, gerunds are chosen when *continue* is embedded in another infinitive-taking verb phrase to avoid the repetition of infinitives:

- (24) a. John decided **to continue working** at the company for two years.
(COCA)
b. ? John decided **to continue to work** at the company for two years.

Gerunds are avoided after verbs in the progressive aspect:

- (25) ...the president **is continuing to do** as much as he can within the
boundaries of his authority. (COCA)
(26) ...Dorothy **is continuing to design** and make handcrafted jewelry...
(COCA)

This stylistic preference seems persistent in English. The avoidance of identical forms is seen in the selection between *help* and *help to* as well. Lohmann (2011) states that one of the factors that affect the choice between *help* and *help to* is the avoidance of identical lexical or morphological forms in immediate adjacency. Therefore, *help* with a bare infinitive is preferred in the sentence below:

- (27) Your job as an interviewer is to help the candidate (to) relax...
(Lohman, (2011:501))

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In the following sections, I argue that two semantic factors govern the distribution of gerund vs. infinitive complements.

3.2. *The relation between intentionality and verbal complement selections*

In this section, I will argue that the intentionality of the subject relates to the selection of a gerund based on the survey of semantic types in complement phrases of *continue*.

3.2.1. Generalization: Intentionality First, I conducted a corpus investigation to determine whether verb type affects the selection of complement type. I selected the 20 most frequent (embedded) verbs that occur in gerund and infinitive phrases following *continue*. The results are shown in Table 4 on pages 17–18. As you can see from the table, *continue* + *-ing* and *continue* + *to* tend to co-occur with different types of verbs. The latter has a higher tendency to co-occur with stative verbs such as *be* and *see*, while the former does not. The relation between stative verbs and complement selection will be discussed in Chapter 5. In addition, the former co-occurs with what is called intentional verbs, while the latter co-occurs with non-intentional ones.

Intentionality is a notion that eludes an exact definition. I tackle this problem by giving it an operational definition, namely, whether a verb in question (i) co-occurs with *intentionally*, *deliberately*, or *on purpose* and expresses the agent's intention and (ii) is compatible with the imperative. I have conducted informant tests to check whether the verbs in Table 4 pass these tests. I should note here that these verbs may have several different meanings where “intentionality” is involved in one meaning but not in the others. Therefore, I have selected “CORE SENSES” from *The New Oxford American Dictionary* and regard them as the verbs' core meanings. I consulted this dictionary because it lists meanings based on corpus investigation, and meanings are listed in order of frequency in usage. If verbs had more than three CORE SENSES, I selected the top three. For example, the top three CORE SENSES of the verb *see* are listed below, each with example sentences:

- (28) a. perceive with the eyes; discern visually
In the distance she could see the blue sea.
- b. discern or deduce mentally after reflection or from information; understand
I can't see any other way to treat it.
- c. meet (someone one knows) socially or by chance
I saw Colin last night.

(*The New Oxford American Dictionary*, Edition 3:1542)

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When I tested these meanings of *see* with the above-mentioned intentionality tests, I obtained the following results:

- (29) a. ?He saw the blue sea intentionally/deliberately/on purpose.
 b. ?See the blue sea.
- (30) a. ?He saw the other ways to treat it intentionally/deliberately/on purpose.
 b. ✓See the other ways to treat it.
- (31) a. ✓He saw Colin intentionally/deliberately/on purpose.
 b. ✓See Colin.

With the first meaning, the verb *see* does not pass test (i) or test (ii). The second meaning passes only test (ii), and the third meaning passes both tests. From this, I conclude that *see* may or may not be intentional depending on the interpretations of the verb. Other verbs that are considered to have both intentional and non-intentional interpretations are shown in Table 5. Check marks in the table show that verbs co-occur with adverbs such as *intentionally* and are compatible with the imperatives.

Now let us return to Table 4. The italicized verbs with [$\pm$ intentional] have both intentional and non-intentional interpretations. The verbs without this notation are those for which the top three core senses are regarded to be intentional. A verb is considered to include an intentional interpretation if it passes either test (i) or (ii).

Table 4: Frequencies of the top 20 verbs with the two types of complements of *continue* (COCA)³

	CONTINUE + <i>ing</i>		CONTINUE + <i>to</i>	
1	work	576	<i>be</i> [$\pm$ intentional]	8704
2	do	320	<i>grow</i> [$\pm$ intentional]	2153
3	talk	276	do	2127
4	use	189	work	1848
5	play	183	<i>have</i> [$\pm$ intentional]	1390
6	make	179	make	1071
7	<i>live</i> [$\pm$ intentional]	125	play	899
8	take	111	<i>rise</i> [$\pm$ intentional]	895
9	cook	109	use	826
10	try	104	go	623
11	move	100	support	618
12	walk	98	<i>live</i> [$\pm$ intentional]	614

³ In COCA-based examination, *continue* is displayed separately depending on the inflection: CONTINUE, CONTINUES, CONTINUED, and CONTINUING. I calculated the sums by adding the numbers of the four types, calculated rankings for the top 35 verbs, and then displayed the top 20.

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13	look	96	provide	582
14	<i>be</i> [$\pm$ intentional]	94	hold	571
15	go	80	take	558
16	speak	78	get	555
17	pay	74	look	552
18	run	73	fight	512
19	operate	72	<i>see</i> [$\pm$ intentional]	508
20	search / <i>rise</i> [$\pm$ intentional]	68	improve	506
total		3005		26112

Table 5: The results of informant tests concerning verbs with intentional and non-intentional interpretations

verb	meanings	results	
		test (i)	test (ii)
be	exist		
	occur; take place	✓	✓
	having the state, quality, identity, nature, role, etc., specified		✓
grow	undergo natural development by increasing in size and changing physically; progress to maturity	✓	
	become larger or greater over a period of time; increase		
	become gradually or increasingly		
have	possess, own, or hold	✓	✓
	experience; undergo		✓
	perform the action indicated by the noun specified		
rise	move from a lower position to a higher one	✓	✓
	get up from lying, sitting, or kneeling	✓	✓
	incline upward; become higher		
live	remain alive		
	make one's home in a particular place or with a particular person	✓	✓

I observed that *continue* + *to*-infinitive tends to co-occur with non-intentional verbs such as *be*, *grow*, *rise*, and *live*, while *continue* + *-ing* co-occurs with intentional verbs such as *work* and *walk*. I state this observation as follows:

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(32) Generalization

Continue is likely to take a gerund complement when the complement verb denotes an intentional event, while it is likely to take an infinitive when the complement verb describes a non-intentional event.

I argue below that this generalization is reinforced by three facts discovered by the corpora searches. The followings are the factors that I tested:

- (33) a. Frequencies of gerunds and infinitives with *intentionally/deliberately/on purpose* phrases
- b. Frequencies of gerunds and infinitives with inanimate/animate subjects
- c. Frequencies of unambiguously non-intentional verbs in gerunds and infinitives

3.2.2. *Reinforcing generalization* Let me first start with (33a). Corpora searches were conducted to investigate the frequencies of gerunds and infinitives that co-occur with *intentionally/deliberately/on purpose*. Collocation search was performed for instances of “CONTINUE” preceded or followed by “intentionally,” “deliberately,” or “on purpose” within five words. The results are as follows:

Table 6: Frequencies of gerunds and infinitives with *intentionally/deliberately/on purpose* (iWeb)

	CONTINUE + <i>ing</i>	CONTINUE + <i>to</i>
<i>intentionally</i>	4	28
<i>deliberately</i>	9	55
<i>on purpose</i>	2	5
total	15	88
proportion	1	6

Recall that the ratios of the overall frequency of gerunds to that of infinitives are 1:13 (BNC) and 1:9 (COCA). From Table 6, we can see that the ratio has decreased to 1:6. I take this fact as evidence for the generalization above.

Let me turn to (33b). I searched for the collocation “N CONTINUE” and listed the top 10 inanimate/animate nouns. The results are shown in Tables 7 and 8.

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Table 7: The number of occurrences of gerunds and infinitives following inanimate subjects (COCA)

	CONTINUE + <i>ing</i>	CONTINUE + <i>to</i> ⁴
government	8	232
work	1	53
fighting	0	3
party	0	32
process	0	18
trend	3	19
voice	2	17
business	0	39
war	0	32
game	1	13
Total	15	458
Proportion	1	31

Table 8: The number of occurrences of gerunds and infinitives following animate subjects (COCA)

	CONTINUE + <i>ing</i>	CONTINUE + <i>to</i>
woman	16	164
man	19	104
minister	1	4
worker	5	62
girl	9	34
leader	7	78
staff	6	72

⁴ As stated in Section 3.1, repetition of gerunds tends to be avoided because of stylistic preference. Therefore, the number of *CONTINUING-to v* occurrences is excluded from the total because it is natural to select infinitives after verbs in the progressive aspect.

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student	16	140
father	6	42
player	5	24
Total	85	699
Proportion	1	8

From the tables above, we can infer that infinitives are selected when the subject is inanimate, while gerunds are consonant with animate subjects. Table 7 shows that the number of infinitives is significantly larger than that of gerunds (gerunds:infinitives = ca. 1:31) when the subject is inanimate. It is evident that the preference for infinitives over gerunds becomes even stronger with inanimate subjects compared with the one in the total frequency. Furthermore, Table 8 shows that the ratio of gerunds to infinitives has decreased compared with that in cases where the subjects are inanimate. Therefore, we can conclude that gerunds are avoided when the subject is inanimate but tend to be used with animate subjects. This fact also demonstrates that my generalization is valid.

Let me now turn to (33c). I selected 15 verbs that are considered to be unambiguously non-intentional. Informant tests have clarified that these verbs do not co-occur with *intentionally*, excluding irregular contexts. I investigated the distribution of complement types of these verbs following *continue*. For the verb *suffer*, for example, I investigated the number of occurrences of “CONTINUE suffering” and “CONTINUE to suffer.”

Table 9: Complement types of non-intentional verbs following *continue*

	CONTINUE + <i>ing</i>	CONTINUE + <i>to</i>
suffer	8	237
occur	0	83
thrive	3	174
arise	0	14
perceive	0	18
disappear	3	23
bloom	3	20

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age	2	30
rain	1	21
bleed	2	24
gush	1	4
itch	1	3
blush	0	2
dawn	0	2
snow	0	1
Total	24	656
Proportion	1	27

Table 9 shows that significantly more infinitives co-occur with unambiguous, non-intentional verbs. When the complement verb describes a non-intentional event, the tendency to select infinitives becomes stronger. This fact also shows that the generalization above is valid.

3.3 Intentionality and “distractions” or “interruptions”

Having established that the generalization in (32) is correct, I now turn to the data that previous analyses have failed to explain and argue that (32) explains the subtle contrast between gerundive and infinitive complements.

3.3.1. Activities with distractions Recall from Chapter 2 that some of my informants preferred gerunds in the following sentences, and the specific vs. generic dichotomy cannot explain the contrast:

- (34) a. He continued **reading** despite the noise of jet planes.
 b. He continued **to read** despite the noise of jet planes. (= (21))
- (35) a. John continued **painting** the wall despite all distractions.
 b. John continued **to paint** the wall despite all distractions.

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As noted above, at least for some speakers, gerunds are preferred when the subject continues an activity despite distractions.

A *Valency Dictionary of English* also states that *continue* + *-ing* “can place more emphasis on the continuity of the action,” giving the following example sentence with a *despite* phrase:

- (36) He continued playing **despite** the noise outside.

(A *Valency Dictionary of English*:181)

Although the *Valency* dictionary states that gerunds can emphasize continuity, this description is not sufficiently clear since continuity itself can be expressed by both gerunds and infinitives. The main predicate of the sentence is the aspectual verb *continue*, so the emphasis is placed on the continuity of the complement event irrespective of the form of the complement.

I claim that the preference for gerunds seen here is explained by the generalization in (32). A gerund is preferred because a sentence describes an event where the subject exerts intention. In sentences (34) and (35), certain kinds of distractions exist, but the subjects continue the designated actions with intentional efforts and without being discouraged by the distractions. Therefore, intentionality is the factor that affects the preference for gerunds.

Intentionality explains another related phenomenon wherein a subject continues some unpleasant activity unwillingly. Regarding the sentences below, the subjects have negative feelings about continuing designated activities, but they continue them with intentional efforts. In these cases as well, two informants showed preference for gerunds, while the others found no difference.

- (37) a. John and his son continued **working** for the company despite being unhappy.
 b. John and his son continued **to work** for the company despite being unhappy.
 (38) a. Mary continued **swimming** although she didn't enjoy it.
 b. Mary continued **to swim** although she didn't enjoy it.

The two informants reported that, if a gerund is used, it is expected that some undesirable event follows. The difference here is also explained in terms of the generalization in (32). Gerunds are preferred in (37) and (38) because the subjects continue unpleasant events intentionally, without being discouraged by negative feelings.

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3.3.2. *Activities with interruption* Let us now turn to another case that cannot be explained by the specific vs. generic dichotomy. As noted in Section 2.3, contrary to Dixon (1991), I found that interruption is associated with gerunds, not with infinitives:

- (39) *While John was eating breakfast, he noticed that his favorite actor was on TV.*
 a. He paused for a moment to listen and then continued **eating**.
 b. He paused for a moment to listen and then continued **to eat**. (= (19))

I claim that the interruption is due to intentionality, because the subject can restart the actions intentionally after he/she has stopped. The notion of interruption here should not be a planned interruption. Observe the following:

- (40) a. The orchestra started their performance at 9:00. They continued **playing** for 3 hours, stopping for 5-minute breaks every half hour.
 b. The orchestra started their performance at 9:00. They continued **to play** for 3 hours, stopping for 5-minute breaks every half hour.

In the context given in (40), three informants showed a preference for the infinitive over the gerund, while the others replied that there was no difference between them.

I claim that this result derives from the difference in the characteristics of the interruption. Sentence (40) involves apparent interruptions, but they are planned pauses in the event. Agents do not assume that the designated action will stop completely, and they do not have to overcome an interruption.

In contrast, sentences like (39) contain interruptions that occur as a result of an external influence. An unexpected distractor could stop the event in question entirely. Regardless, the subject continues the actions without being discouraged by the distractions. In this case, agents have to resume the activity intentionally.

In addition, I suspect that other verbs selecting only gerunds affects the preference for gerunds. With regard to sentence (39), an informant commented that *resume* + *-ing* is used when you want to convey more clearly the idea that someone starts an activity again. *Resume*, which means that a subject begins again or continues an action after a pause or interruption, selects only gerunds. Moreover, verbs of terminative aspect such as *stop*, *finish*, and *quit* select solely gerunds as well. Decomposing the event of “interruption” results in two parts, “stopping” and “resuming,” and both subparts only select gerunds. This could be considered a possible incentive to select gerunds in contexts where the subject continues some activity after an interruption.

In summary, gerunds are selected when the subjects continue activities with intention. This is explained by the generalization above.

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3.4 Specificity and genericity in terms of intentionality

In the previous section, I have claimed that intentionality underlies the distinction between gerundive and infinitive complements for at least some speakers. How is the notion of intentionality related to the afore-proposed specificity vs. genericity dichotomy? In this section, I claim that the former notion can be subsumed under intentionality.

As mentioned in Section 2.1, it has been claimed that sentences with gerunds tend to express specific events, while those with infinitives describe generic events. This tendency is also clear from the results of my informant tests below. Sentences (41) and (43) describe specific events that occur in specific time periods, while sentences (42) and (44) refer to generic events. Three informants preferred gerunds for specific events, while they showed preference for infinitives for generic events:

- (41) Over a wage hike, they continued **fighting** / **to fight**.
- (42) Throughout history human beings have generally continued **fighting** / **to fight**.
- (43) John continued **writing** / **to write** the letter to his mother last night.
- (44) Novelists continue **writing** / **to write** throughout their lifetime.

I claim that the notion of specificity vs. genericity is closely related to intentionality. When a general fact is mentioned, the concept of intentionality tends to be weakened. I present the following typical generic sentences as examples:

- (45) a. Man is mortal.
- b. Children are innocent.

The sentences above describe the general natures of mankind and children. In the context in which a general fact is referred to, the mentioned topic is not related to a specific individual, so the concept of intentionality is weakened. However, it is easier to associate a specific fact with intentionality, which is similar to my claim that the use of gerunds is associated with intentionality.

The relation between genericity and low intentionality is manifested in the following corpus research. I investigated the number of occurrences of *intentionally*, *deliberately*, and *on purpose* in generic sentences. I first searched for these adverbial phrases, extracted 100 examples randomly, and then checked how many of them were used in generic sentences. The judgment of whether a sentence described a generic or specific event was made by the author.

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Table 10: The number of occurrences of *on purpose/intentionally/deliberately* in generic sentences (COCA)

	Frequency: adverbial in generic sentences
<i>intentionally</i>	8/100
<i>deliberately</i>	5/100
<i>on purpose</i>	3/100

As Table 10 shows, adverbs that show the agent's intention are more readily accepted in non-generic sentences, and most of these phrases are used in sentences in which a specific person acts on a specific occasion, such as (46)–(48). In a few cases, they also occur in generic sentences, as in (49)–(51).

- (46) ...Quarterback Khalil Tate said he did not intentionally step on Oregon defensive lineman Henry Mondeaux last week. "If I intentionally stepped on him, it would've hurt," Tate said...
(COCA)

- (47) ..."She must have thought I did it on purpose and she screamed like someone stabbed her."...
(COCA)

- (48) ...The company also charged that Dietrich deliberately hid the payments from the MassRoots board of directors," knowing that the transactions involved unauthorized appropriations of Company funds and knowing MassRoots would object to the transactions if discovered."...
(COCA)

- (49) ...Under Oregon law, people can be charged with second-degree intimidation if they intentionally tamper with another person's property, subject another person to offensive physical contact or make threats because of a perception of the victim's race, color, religion, sexual orientation, disability or national origin...
(COCA)

- (50) ...The statute was applied unfairly to deliberately harm aliens, violating the Equal Protection Clause...
(COCA)

- (51) ...She knew better. "Angel would never hurt anyone on purpose"...
(COCA)

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Although adverbs such as *intentionally* can occur in generic sentences, these adverbs are rarely used in such contexts in actual language use. This indicates that generic events are often associated with low intentionality. Meanwhile, the concept of intentionality is connected to specific events. Therefore, the semantic contrasts proposed in Section 2.1 (e.g., specific vs. general) can be reduced to the notion of intentionality.

3.5 The relation between controllability and verbal complement selection

In the previous sections, I argued that the factor that governs the complement selection of *continue* is intentionality, and when a sentence describes an intentional event, a gerund tends to be selected. However, verb phrases such as “lose money,” “fall down,” and “stumble” co-occur with gerunds relatively easily, even though they are classified as non-intentional when we exclude irregular contexts:

- (52) gerund:infinitive = 32:228 (ca. 1:7) (*lose money*)
 5:37 (ca. 1:7) (*fall down*)
 15:164 (ca. 1:11) (*stumble*) (i-Web based research)

In the case of these non-intentional predicates, gerunds are more acceptable, and the ratios seen here are closer to the overall ratio. I suspect that this is explained in terms of the notion of *controllability*. In this section, I argue that controllability has a certain effect on the selection of complements.

3.5.1 Controllability and intentionality The term *controllable* means that one can exercise control over the non-realization of a designated event. Both intentionality and controllability have been considered defining features of transitivity. They are intuitively related to each other, but many researchers, such as DeLancey (1985), Pardeshi (2002), Chung (2005), and Minami (2007), argue that they have to be distinguished. For example, DeLancey (1985) claims that intentionality and controllability are different features in Lhasa Tibetan. He reveals that some non-intentional yet controllable events are coded differently from non-intentional and non-controllable events. Minami (2007) also remarks that controllability underlies a wider range of events than intentionality does, and “intentionality presupposes controllability, but the opposite is not true.” (Minami (2007:114)) Thus, we could consider controllability to underlie intentionality. Chung (2005) and Minami (2007) claim that the presence of intentionality is tested by imperatives, while the presence of controllability is tested by negative imperatives. Intentional (and simultaneously

(53) a. Kill the chicken!
b. Break the glass!

(54) a. Don't kill the chicken!
b. Don't break the glass! (Minami (2007:116))

(55) a. *Spill the coffee carelessly!
b. Don't spill the coffee carelessly! (Chung (2005:46), translation mine)

(56) a. *Catch a cold.
b. *Fracture your left leg.

(57) a. Don't catch a cold.
b. Don't fracture your left leg. (Kageyama 1996:88)

(58) *don't miss, don't hurt yourself, don't catch a cold, don't spill the milk, don't misunderstand, don't lose your keys...*
(cited from Brennenstuhl 1976:63)

(59) **don't bleed, *don't digest, *don't lose your hair, *don't become older, *don't itch, *don't blush...*
(cited from Brennenstuhl 1976:63)

So far, we have subcategorized non-intentional events into (i) controllable and (ii) non-controllable ones. Table 11 summarizes the characteristics of each

subcategory.

Table 11: The subcategorization of non-intentional predicates

	(i) non-intentional yet controllable events	(ii) non-intentional and non-controllable events
compatible with the imperative	×	×
compatible with the negative imperative	○	×
examples	<i>miss, hurt yourself, catch a cold, spill the milk, ...</i>	<i>bleed, digest, lose your hair, ...</i>

3.5.2 *Controllability and complement selections* Based on the classification above, corpus investigation was conducted to examine whether controllability has an effect on complement selection. I investigated the distribution of complement types of the two subcategories of predicates that follow *continue*. The iWeb-based research was conducted to obtain sufficient samples. The predicates in the tables are mainly adopted from Brennenstuhl (1976). Typical stative verbs are excluded from the table because the tendency to avoid gerunds with such verbs is remarkable, as will be discussed in Chapter 5. The results are as follows:

Table 12: Complement types of (i) non-intentional yet controllable events (iWeb)

	CONTINUE + <i>ing</i>	CONTINUE + <i>to</i>
lose money	32	228
fall down	5	37
stumble	15	164
miss	40	426
make mistakes	11	113
hurt *self	3	7
forget	4	50
spill N (water, tea, milk,	0	5

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etc)		
grieve	10	220
blurt out	0	2
total	120	1352
proportion	1	11

Table 13: Complement types of (ii) non-intentional and non-controllable events (iWeb)

	CONTINUE + <i>ing</i>	CONTINUE + <i>to</i>
happen	119	2465
digest	15	114
age	65	964
occur	29	2634
arise	3	382
suffer	141	4250
dawn	0	4
itch	10	59
soar	22	1296
sprout	6	96
flow out	2	73
thrive	100	6286
total	512	18623
proportion	1	36

From the results, it is observed that, if an event is controllable, the proportion of gerunds increases. The tendency to prefer infinitives decreases with non-intentional yet controllable events (in Table 12) compared with that with non-intentional and non-controllable events (in Table 13). I conclude that controllability has a certain effect on the selection of complements, although there are individual differences.

In the previous sections, I have divided verbs into two classes, intentional and

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non-intentional verbs, and claimed that intentional verbs are selected as gerund complements, while non-intentional ones are correlated with the use of infinitives. However, when we focus on non-intentional verbs, the degree of preference for infinitives seems to differ between their subtypes. If a predicate has controllability, which underlies the concept of intentionality, the frequency of gerunds is likely to increase. It could be said that there is a difference between a context in which a subject does not act intentionally yet exhibits some control to avoid an outcome and one in which the subject does not act intentionally and cannot exert any control at all. Moreover, when an event is controllable, the proportion of gerunds increases. Therefore, there is a possibility that controllability actually distinguishes gerunds and infinitives in the complement of *continue*. Individual differences exist depending on the verbs, and I have not been able to confirm whether this factor actually governs complement selection, but controllability could exert an influence on the selection, at least for some predicates.

3.6 A factor other than intentionality: lack of futurity

As stated in the previous sections, gerunds are selected when a subject continues a certain activity with intentional efforts, and intentionality is the key factor in considering the complement selection after *continue*. However, this explanation fails to elucidate why three informants preferred using gerunds in the following examples:

- (60) a. Mary continued **living** in London until she was eight.
b. Mary continued **to live** in London until she was eight.
- (61) a. It continued **snowing** until 9 p.m. yesterday.
b. It continued **to snow** until 9 p.m. yesterday.

Since living and snowing are not intentional events, the source of preference cannot be intentionality. Recall that these examples are also problematic in the previous studies that refer to the specific vs. generic distinction.

What governs the preference here, I suspect, is the lack of futurity. The events described in (60) and (61) do not illustrate anything that is proceeding into the future, because the events are bounded by *until* phrases. This is supported by the fact that the three informants showed an especially strong preference for a gerund in sentence (62) where the subject is a dead person:

- (62) a. Mary continued teaching at college until a month before her death.
b. Mary continued to teach at college until a month before her death.

(= (22))

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An informant remarked that, if an infinitive is used in a sentence such as (62b), it gives the impression that the subject is still alive. Accordingly, sentences with gerunds describe events that are expected to end, while sentences with infinitives express events that last longer or have no end.

The relation between the use of gerunds and the lack of futurity is also clear from the result of the corpus investigation. I investigated co-occurrences of gerunds and *until* phrases using a collocation search of “CONTINUE” followed by “until” within four words. The result is as follows:

(63) gerunds:infinitives = 465:660 (ca. 1:1.4) (COCA)

It is clear that the ratio has decreased compared with the ratio seen in the total frequency. Gerunds are selected when a subject continues an event that has an endpoint.

I suspect this phenomenon is explained in terms of the process of *conceptual reification*. Langacker (1991), for example, remarks that a nominalized verb, such as *consumption*, *destruction*, *chanting*, or *breaking*, represents the *conceptual reification* of an event. The effect of the process is diagrammed as in Figure 1(b): the heavy-line circle signifies that the event or process as a whole is construed as an abstract thing and is profiled by the nominal expression.

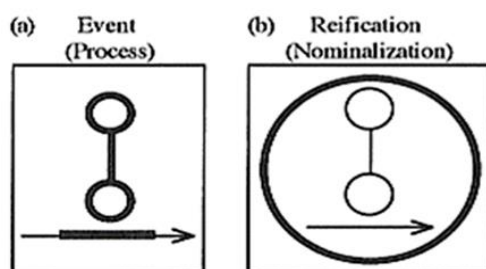


Figure 1: Conceptual reification (Langacker (1991:86))

One of the functions of gerunds is to nominalize verbs. Seeing an action as an object means that we set a boundary on the act. A gerund treated as a unit is described as a “reified thing” by Radden and Dirven (2017). Duffley (2006) also refers to this “reification,” giving the example sentence that follows.

(64) Climbing a mountain is very good for one’s stamina. (Duffley (2006:20))
By nominalizing verbs, it is easier to capture an action as something bounded. A

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bounded entity tends to be connected with lack of futurity. As for the sentence in (62), the subject continues an event that has an endpoint. In this case, it is easier to assume a boundary on an action, and a gerund seems to be preferred. In summary, a gerund tends to be chosen when a described event does not have open-endedness.

To conclude Chapter 3, I have argued that gerunds, which occur at a lower frequency, tend to be selected when sentences describe (i) intentional events or (ii) events with endpoints.

4 INTENTIONALITY HYPOTHESIS TESTED: CASES WITH *START* AND *BEGIN*

In the previous chapter, I showed how the intentionality generalization in (32) explains problematic data in previous analyses. In this chapter, the same explanation is extended to complement selection for *start* and *begin*.

4.1 Corpora investigations

In this section, the results of corpora investigations are presented to show that intentionality of the subject relates to the selection of a gerund.

Recall from Chapter 3 that the total frequency ratios of gerundive to infinitive complements of inchoative verbs are 78947:49629 (*start*) and 48465:103487 (*begin*). Unlike the case of *continue*, the proportion of one type is about twice that of the other (1.6:1 for *start*, 1:2.1 for *begin*).

Now let us turn to whether intentionality has an impact on the selection of gerunds over infinitives. I present the frequencies of verbs that are used in the two types of complements of *start* and *begin* in Tables 14 and 15. The italicized verbs with [–intentional] are those for which all of the top three core meanings are interpreted to be non-intentional, while the italicized verbs with [±intentional] have both intentional and non-intentional interpretations. Table 16 on page 43 presents a list of verbs that were examined for intentionality and judged to include both intentional and non-intentional meanings and that were not included in the previous sections.

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Table 14: Frequency of top 20 verbs with the two types of complements of *start* (COCA)

	START + <i>ing</i>		START + <i>to</i>	
1	talk	3158	get	2521
2	work	2247	<i>see</i> [±intentional]	1357
3	get	2197	<i>feel</i> [±intentional]	1291
4	look	2022	<i>cry</i> [±intentional]	1168
5	<i>think</i> [±intentional]	2018	look	995
6	do	1764	<i>think</i> [±intentional]	897
7	make	1665	say	799
8	take	1550	make	749
9	go	1476	go	743
10	play	1357	come	735
11	walk	1345	take	699
12	run	1195	move	669
13	come	1084	walk	594
14	write	1075	<i>be</i> [±intentional]	540
15	use	1038	turn	523
16	call	863	talk	475
17	ask	751	<i>fall</i> [−intentional]	464
18	shoot	738	run	452
19	date	645	laugh	408
20	read	618	speak	268
total		28806		16347

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Table 15: Frequency of top 20 verbs with the two types of complements of *begin* (COCA)

	BEGIN + <i>ing</i>		BEGIN + <i>to</i>	
1	work	1463	<i>see</i> [±intentional]	2045
2	make	832	<i>feel</i> [±intentional]	1875
3	take	754	<i>think</i> [±intentional]	1653
4	use	712	<i>be</i> [±intentional]	1601
5	talk	670	take	1534
6	write	650	look	1342
7	look	622	<i>understand</i> [−intentional]	1309
8	walk	532	get	1249
9	move	458	make	1072
10	sell	453	move	1052
11	play	441	cry	980
12	read	440	<i>wonder</i> [−intentional]	954
13	build	423	change	954
14	run	397	<i>realize</i> [±intentional]	844
15	teach	358	<i>fall</i> [−intentional]	814
16	offer	351	talk	694
17	ask	305	<i>appear</i> [±intentional]	622
18	study	296	play	537
19	collect	294	speak	527
20	arrive	282	walk	437
total		11016		22095

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Table 16: The results of informant tests concerning the verbs that have intentional and non-intentional interpretations

verbs	meanings	results	
		test (i)	test (ii)
think	have a particular opinion, belief, or idea about someone or something		
	direct one's mind toward someone or something; use one's mind actively to form connected ideas		✓
feel	be aware of (a person or object) through touching or being touched		
	experience (an emotion or sensation)		✓
	have a belief or impression, esp. without an identifiable reason		
realize	become fully aware of (something) as a fact; understand clearly		
	cause (something desired or anticipated) to happen	✓	✓
appear	come into sight; become visible and or noticeable, typically without visible agent or apparent cause		✓
	seem; give the impression of being		
cry	shed tears, esp. as an expression of distress or pain		✓

Table 14 shows that, among the 20 most frequent verbs, 19 are unambiguously intentional verbs for *start* + *-ing*, while for *start* + *to*, six have non-intentional meanings. Table 15 shows the same tendency, where all of the verbs are intentional for *begin* + *-ing*, but nine have non-intentional meanings for *begin* + *to*. From these data, we observe that infinitives tend to co-occur with non-intentional verbs, while

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gerunds co-occur with intentional ones. Thus, inchoative aspectual verbs (*start*, *begin*) share a similar behavior with respect to the type of complement verbs used with *continue*.

Table 17 below reinforces this claim. The table shows the number of occurrences of gerunds and infinitives following ten inanimate subjects (I searched for the collocation “N START/BEGIN” and listed the top 10 inanimate nouns):

Table 17: The number of occurrences of *start* + *ing/to* and *begin* + *ing/to* following inanimate subjects (COCA)

inanimate subjects	START + <i>ing</i>	START + <i>to</i>	inanimate subjects	BEGIN + <i>ing</i>	BEGIN + <i>to</i>
thing	308	363	war	3	39
rate	31	34	story	10	71
war	3	12	program	22	48
price	28	40	thing	33	341
fire	14	10	life	11	32
season	4	6	season	4	6
program	12	7	project	8	9
heat	2	3	process	4	11
project	8	9	day	14	11
show	17	12	rain	26	31
total	427	496		135	599
proportion	1	1.2		1	4.4

Recall again that the ratios of the total frequencies of gerunds to infinitives are about 1.6:1 (*start*) and about 1:2.1 (*begin*). The ratios are now about 1:1.2 (*start*) and 1:4.4 (*begin*). Although the difference is not as striking as in the case of *continue*, there are changes in the ratios. In the case of *start*, the ratio is reversed, and the difference between the ratios of the two types of complement is larger than that of the total frequency ratios with *begin*. I contend that intentionality of subjects also has an effect on the selection of complements for *start* and *begin*.

Further evidence comes from the distribution of non-intentional verbs in complements of *start* and *begin*. This investigation has been conducted with the same

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15 verbs as those in Section 3.2.1.

Table 18: Complement types of non-intentional verbs following *start/begin*

	START + <i>ing</i>	START + <i>to</i>	BEGIN + <i>ing</i>	START + <i>to</i>
suffer	22	26	45	113
occur	4	21	8	75
thrive	0	4	2	20
arise	2	4	2	27
perceive	3	3	0	66
disappear	33	50	37	132
bloom	19	34	10	60
age	6	13	2	28
rain	96	198	27	181
bleed	74	59	18	86
gush	13	7	10	13
itch	11	35	1	40
bush	2	3	0	10
dawn	1	15	0	78
snow	37	77	6	72
total	323	549	168	1001
proportion	1	1.7	1	6
overall proportion	1.6	1	1	2.1

Again, the difference is not as remarkable as it is in the case of *continue*, but changes in the ratios exist. In the case of *start*, the ratios are reversed, and as for *begin*, the ratio of the two types becomes much larger than the ratio of overall frequencies. It is clear that the proportion of infinitives increases in both cases. Therefore, intentionality of a subject has an influence on the selection of the complement with respect to *start* and *begin*.

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4.2 *The case in which intentionality affects the complement selection after start and begin*

In this section, I argue that the semantic contrast of specific vs. general, which can be reduced to the notion of intentionality (as discussed in Section 3.4), also pertains to the selection of inchoative verbs.

The following is the result of my informant tests. Three informants preferred gerunds in specific contexts such as (65) and (67), while they preferred infinitives in generic sentences such as (66) and (68):

- (65) John fell down but then stood up and started **walking** / **to walk** again.
- (66) Infants generally start **walking** / **to walk** when they are approximately a year old.
- (67) Mary will start **working** / **to work** at 9 a.m. tomorrow morning.
- (68) People in this country generally start **working** / **to work** at 9 a.m.

The same tendency seen in the case of *continue* is observed, and this is explained in terms of intentionality. A specific event occurring at a specific time is easily connected to intentionality, and a gerund is chosen in this case.

The lack of futurity is irrelevant in this case because inchoative verbs mark only the initial part of an event. Whether or not someone starts an action is important, but whether or not he or she continues is a matter of no importance for these verbs. Meanwhile, the verb *continue* marks an ongoing event, and the described event carries into the future, so the verb *continue* is deeply connected with the notion of futurity.

To summarize this chapter, the notion of intentionality, which influences complement selection following *continue*, also affects the selection of inchoative verbs.

5 STATIVE VERBS: INTENTIONALITY HYPOTHESIS EXTENDED?

This brief chapter deals with the relation between stative verbs and complement selection. As noted in Chapter 3, *continue* + *to* tends to co-occur with stative verbs such as *be* and *see*, while *continue* + *-ing* does not. I investigated whether there is a higher tendency to prefer infinitive to gerund complements of *continue* in the case of stative verbs. My informant tests clarified that the use of the *-ing* form is extremely resisted, as the following examples show:

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- (69) a. ?The problem continued **existing**.
 b. The problem continued **to exist**.
 (70) a. ?He will continue **owning** the rights to the design.
 b. He will continue **to own** the rights to the design

Despite this tendency, gerunds are still found to be more acceptable when an *until* phrase is added. In addition, stative verbs can occur in *-ing* form in cases where they follow inchoative verbs such as *start* or *begin*. This chapter discusses why gerunds are more acceptable in these cases.

5.1 Facts

The following corpus research clearly exhibits the incompatibility of *continue* + *-ing* with stative verbs:

Table 19: Complement types of stative verbs following *continue* (COCA)

	CONTINUE + <i>ing</i>	CONTINUE + <i>to</i>
own	2	39
exist	5	389
believe	10	355
desire	0	7
doubt	0	12
recognize	0	38
understand	0	14
fear	0	11
prefer	0	15
owe	0	5
resemble	0	6
possess	0	9
admire	0	11

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When gerunds do occasionally occur, as shown in the table above, it is largely to avoid the repetition of infinitives, as in the following sentences. This stylistic preference seems to be a persistent factor with *continue* + *-ing*.

- (71) ...No, they will attempt **to continue existing** regardless of the elections.
(COCA)

- (72) ...It is unrealistic **to continue believing** that you can keep a possible sale secret from your employees.
(COCA)

Despite this tendency, three informants answered that gerunds are more acceptable with stative verbs in contexts in which an *until* phrase is added:

- (73) a. ✓ The problem continued **existing until** the equipment was reexamined.
b. ✓ He will continue **owning** the rights to the design **until** his death.

Moreover, according to the informants, gerunds are more acceptable when *continue* is replaced with *start* (or *begin*):

- (74) a. ✓ The problem **started/began existing** from that moment.
b. ✓ He **started/began owning** the rights to the design yesterday.

As for (74), corpus research indicates that the number of occurrences of *start/begin* + *-ing* with stative verbs is larger than that of *continue* + *-ing*. The following table shows the number of occurrences of some stative verbs in *-ing* form following *continue*, *start*, and *begin*. The number of gerunds that are preceded by infinitives (such as *to continue believing*) is excluded this time.

Table 20: The number of occurrences of stative verbs in *-ing* form following *continue*, *start*, and *begin* (COCA)

	CONTINUE -ing	START -ing	BEGIN-ing
believe	3	95	12
exist	1	2	0
doubt	0	11	8
own	0	1	0
recognize	0	21	7
understand	0	23	8
fear	0	4	4
resemble	0	4	1

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possess	0	1	0
admire	0	4	3
total	4	166	43

Concerning stative verbs following *start* and *begin*, the *-ing* form is found to occur in many cases even when the verb is not preceded by an infinitive:

(75) ...Did he at some point **start believing** in the fake reality that he creates?
(COCA)

(76) ...You get really excited because you **start understanding** them....
(COCA)

These results show that it is easy for stative verbs in *-ing* form to co-occur with inchoative verbs.

5.2 Explanation

This section discusses why stative verbs that occur as gerunds are acceptable in the contexts mentioned above. First, intentionality, which is the key factor in considering complement selection after *continue*, does not explain the contrast. The data come from cases where the subject continues an event intentionally. My informants resisted using gerunds in the following context:

- (77) a. ?He will continue **owning** the rights to the design **intentionally**.
b. He will continue **to own** the rights to the design **intentionally**.

Intentionality does not have an impact on the acceptability of gerunds.

Let me then illustrate why *continue* + *-ing* becomes more acceptable when *until* is added and why speakers are more receptive to *start/begin* + *-ing*. My informants made the following claim: adding *until* or *start/begin* emphasizes the fact that the mentioned state is actually temporary and limited, and when a described event is limited in time, it does not seem as egregious to use gerunds with stative verbs. I suspect this could be explained in terms of *reification*, as shown in Section 3.4. When *until* is added, it becomes easier to assume boundaries in activities, and these boundaries are compatible with the characteristic of gerunds, as discussed in the section. In the case of *start/begin* + *-ing*, inchoative verbs express just the beginning of an action, so a sentence refers to an event occurring in a limited time period. For example, the sentence *He started owning the rights yesterday* expresses a transition from one state to another that occurs over a short duration. Therefore, speakers could

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easily capture a state as something bounded.

In summary, the use of stative verbs that occur in gerunds following *continue* tends to be extremely resisted, but it is not the case that it is excluded completely. It becomes more acceptable to use stative verbs in the *continue* + *-ing* form by adding *until*. Furthermore, these verbs can occur in *-ing* form when they follow inchoative verbs because it is easy to assume boundaries for the events described.

6 CONCLUSION

This paper has investigated verbal complement selection following the aspectual verbs *continue*, *start*, and *begin*. The research finds that, with respect to *continue*, although the frequency of infinitives is predominantly larger, gerunds tend to be chosen when sentences denote (i) intentional events or (ii) events with endpoints. Concerning *start* and *begin*, although the difference is not as remarkable as it is with *continue*, these verbs tend to take a gerund complement when a sentence describes an intentional event. Each verb is idiosyncratic with respect to verbal complement selection. The complement selections of *start* and *begin* show different behaviors from that of *continue* in that they neither exhibit a strong preference for infinitives nor are affected strongly by the notion of intentionality. However, their behaviors point in the same direction and show a similar tendency.

Aspectual verbs we have addressed select both gerunds and infinitives, but it is not the case that the difference in linguistic form is a free option and that either is used in any context. It can be considered that context does affect the selection of the complement, and intentionality especially works as a key factor in the selection.

There are remaining issues that this thesis was not able to address. Corpus-based examination found that the difference between affirmative and negative contexts does not affect the proportions of gerunds and infinitives, and neither does the difference in matrix verb tense influence the frequencies. I have not been able to confirm whether these factors actually have no influence on the selection of the verbal complement. This problem is not well understood at present, and more micro-level investigation is needed. Additionally, I have not been able to provide sufficient explanation of the relation between controllability and complement selection. In Section 3.5, I maintained that controllability could have an influence on selection, at least for some predicates. However, I have not been able to verify whether controllability actually governs the complement selection of *continue*; therefore, further investigation is needed.

Regardless, I hope that my findings make a contribution to the studies of verbal complement selection following aspectual verbs.

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