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On Syntax and Construal of V-*kake* Constructions*

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Abstract

Japanese complex predicate V-*kake* shows interesting properties with respect to its meanings; some V-*kake* phrases express an event which is about to happen, while other V-*kake* phrases express an event which has just begun. These V-*kake* predicates are called aspectual predicates. There is another type of V-*kake* phrase which describes an event in which an agent acts on someone. In this reading, -*kake* somewhat retains its meaning as a main verb. This V-*kake* is called lexical V-V compound. In this paper, we will assume that the difference between aspectual -*kake* and lexical V-V compounding -*kake* lies in the implication of what we call “minimal approved point” (MAP) in the event described by the complement VP which -*kake* takes. If such a point was not implied, we could not anchor our view just prior to the beginning time, especially of instantaneous achievement V-*kake* phrases. Based on observations, we will consider the syntactic structures for each -*kake* phrase, following previous analyses which suggest that the aspectual -*kake* has raising construction, and we will also consider the various meanings which V-*kake* describes, assuming the presence of MAP.

日本語の複雑述語「動詞+かけ」には意味的に興味深い特徴がある。共起する動詞句によって、(i) 出来事開始の直前を描く場合もあれば、(ii) 出来事開始の直後の場合もある。これらの「-かけ」はアスペクト補助動詞として機能し繰り上げ動詞に分類されている。さらに (iii) 本動詞「掛ける」の意味を残し誰かに何かを仕掛けるという意味になる語彙的複合動詞の場合もある。本論では、まず、統語的複合語 (i), (ii) と語彙的複合語 (iii) の構造的位置を確認した後、次に、なぜ (i), (ii) あるいは、(iii) のような意味の違いが生じるかについて、「初回最短承認時点 (Minimal Approved Point: MAP)」という概念を用いて説明を試みることにする。

Key Words: syntactic V-V compound, lexical V-V compound, raising verb, minimal approved point, aspectual function of -*kake*,

1. Introduction

Japanese complex predicate V-*kake* shows interesting properties with respect to its meanings; i.e., some VPs with V-*kake* express an event which is about to happen, which means the event

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has not taken place, yet, other VPs with *V-kake* express an event which has just begun. Typically, sentence (1a) shows the former meaning, while (1b) shows the latter, respectively, though *kake* takes an unaccusative predicate in both cases.

- (1) a. Densha-ga eki-ni tuki-kake-ta.
 train-NOM station-at arrive-be about to-PAST
 ‘The train was about to arrive at the station.’
 b. Koori-ga toke-kake-ta.
 ice-NOM melt-have begun to-PAST
 ‘The ice has just begun to melt.’

Unergative verbs tend to show the latter meaning when they go with *-kake*. However, (2b) and (2c) are ambiguous.

- (2) a. Densha-ga ugoki-kake-ta.
 train-NOM move-have just begun-PAST
 ‘The train has just begun to move.’
 b. Akatyan-ga aruki-kake-ta.
 infant-NOM walk-have just begun-PAST
 (i) ‘The infant was about to walk.’ (ii) ‘The infant has just begun to walk.’
 c. Akatyan-ga naki-kake-ta.
 infant-NOM cry-have just begun-PAST
 (i) ‘The infant was about to cry.’ (ii) ‘The infant has just begun to cry.’

Furthermore, *V-kake* can describe an event in which an agent acts toward someone. In this reading, it does not seem to take on the character of an aspectual morpheme, as is shown in (3a), (3b).

- (3) a. Suzuki-sensei-ga gakusei-ni eigo-de hanasi-kake-ta.
 Suzuki-teacher-NOM students-DAT English-in talk-act ON-PAST
 ‘Prof. Suzuki talked to the students in English.’
 b. Gakusei-ga Suzuki-sensei-no setumei-ni gimon-o nage-kake-ta.
 students-NOM Suzuki-teacher-GEN explanation-DAT doubt-ACC throw-act ON-PAST
 ‘The students threw doubt on Prof. Suzuki’s explanation.’

Because of such inconsistent meanings, some previous studies have classified *V-kake* in different ways: for example, Nishigauchi (1993: 86, 95) classifies *-kake* in *Ame-ga huri-kake-te iru* into ‘pure raising’ verbs; *V-kake* forms in *Zyoya-no kane-ga nari-kake-ta* in Kageyama (1993: 142), *kare-kakeru*, *korobi-kakeru* in Yumoto (2005: 338), and *Zyon-ga hon-o yomi-kaketa* in Kishimoto (2013: 145) are classified as syntactic V-V compounds; *warai-kake-ru* in Kageyama (1993: 76), and *sasoi-kakeru* in Yumoto (2013: 120) are seen as lexical V-V compounds. Furthermore, in the framework of HPSG, *kake* in *odoroki-kake*, *aruki-kake* are classified as view-changing verbals in Igarashi and Gunji (1998: 90).

They have also suggested their reasons for the various meanings: for example, Kageyama (1993: 81) attributes ‘starting an action’ to syntactic *V-kake* compounds, while attributing ‘directionality’ to lexical *V-kake* compounds. Yumoto (2005: 182) states that the combination between V1 and ALMOST, which is a conceptual feature of *kake*, brings about the ambiguity between pre-occurrence (‘be about to’) and imperfect (‘have just begun’). Igarashi and Gunji’s

(1998) mechanism of *kake* is to be cited in Section 4. These previous explanations are useful for detecting the reasons for the two meanings of aspectual *-kake*, ‘be about to’ and ‘have begun,’ as long as the starting time (or the finishing time in the case of an instantaneous verb) of an event is clearly marked. Still, there is a problem: although activity events do not imply any starting and/or finishing time usually, *-kake* with such a verb shows the two meanings as well, as seen in (2b), (2c).

Based on various *V-kake* data and classifications in the previous studies, first, we are going to observe various behaviors of *V-kake* phrases with some linguistic tests, and make a distinction between aspectual *-kake* and lexical *-kake*, analyzing the former as a raising verb and the latter as a verb composing V_1 - V_2 compounds. We postulate different syntactic positions for each *-kake*, as previous studies sparsely describe. Next, we will focus on the issue of why aspectual *-kake* has the two meanings even with activity verb phrases.

2. Preliminaries

2.1 Data of *V-kake* phrases

Let us observe more data to see what kind of verbs *-kake* can attach to. First, it does not attach to any stative verbs.

- (4) a. *Hanako-ga ane-ni ni-kake-ta.
Hanako-NOM sister-DAT resemble-be about to-PAST
‘*Hanako was about to resemble her sister in appearance.’
- b. *Koosoobiru-ga sobie-kake-tei-ru.
tall building-NOM rise to the sky-be about to-PROG-NONPAST
‘*The tall building is about to rise to the sky.’

When *-kake* is adjoined to an activity verb, the *V-kake* phrase seems to have three different meanings: (i) the event of the phrase has not happened, but is close to happening, which we paraphrase as ‘be about to,’ (ii) the event has just begun, which we shorten to ‘have just begun,’ and (iii) the event in which an agent causes some action toward someone/somewhere. We express this reading as ‘act on.’ The phrase in (5a), (5b) can be ambiguous between ‘be about to’ and ‘have just begun’ if they do not have the main clause.

- (5) a. Activity V + *-kake*: ‘be about to’
Akatyan-ga naki-kake-ta-node omotya-de ayasi-ta.
infant-NOM cry-be about to-PAST-as toy-INST make a baby smile-PAST
‘As the baby was about to cry, I made her smile with a toy.’
- b. Activity V + *-kake*: ‘have just begun’
Akatyan-ga aruki-kake-ta-node bideo-de satuei-si-ta.
infant-NOM walk-have just begun-PAST-as video-INST record-PAST
‘As the infant has just begun to walk, I recorded the scene on video.’
- c. Activity V + *-kake*: ‘act on’
Suzuki-sensei-ga gakusei-ni eigo-de hanasi-kake-ta.
Suzuki-teacher-NOM students-ACC English-INST talk to-act on-PAST
‘Prof. Suzuki talked to the students in English.’

Actually, a meaning like (5c) does not occur so unrestrictedly and some phrases of this type rather sound like set phrases: e.g., *gimon-o nage-kake-ru*, ‘throw doubt on,’ *soodan-o moti-kake-ru*, ‘consult,’ *mondaiten-o toi-kake-ru*, ‘ask a question,’ *sasoi-kake-ru*, ‘seduce,’ *hanasi-kake-ru*, ‘talk to,’ *de-kake-ru*, ‘go out.’

When *-kake* is attached to an instantaneous achievement verb, it definitely marks a moment just prior to the beginning of the event, which is seen in (6a). On the other hand, when it is attached to an achievement verb which has an incremental theme, as in (6b), the *V-kake* phrase views a moment just posterior to the beginning of the event.

- (6) a. Achievement V + *-kake*: ‘be about to’
 Moosukoside sini-kake-ta.
 almost die-be about to-PAST
 ‘I was about to die.’
- b. Achievement V + *-kake*: ‘have just begun’
 Mizu-ga koori-kake-ta.
 water-NOM froze-have just begun-PAST
 ‘The water has just begun to froze.’

Accomplishment verbs which have an incremental theme in their object position can also be read ambiguously, which is shown in (7).

- (7) Accomplishment V + *-kake*: ‘be about to’/‘have just begun’
 Gohan-o tabe-kake-ta-toki okyakusan-ga ki-ta.
 supper-ACC have-be about to-PAST-when visitor-NOM come-PAST
 (i) ‘A visitor came just as we were about to have supper.’
 (ii) ‘A visitor came as soon as we began to have supper.’

In sum, the morpheme *-kake* can attach to any dynamic verbs, but not to stative verbs. When it attaches to an instantaneous achievement verb, the phrase describes ‘be about to.’ On the other hand, when it attaches to an achievement verb which has an incremental theme, the phrase can read ‘have just begun.’ Activity or accomplishment verbs can also adjoin to *-kake* and the phrase can be read ambiguously between ‘be about to’ and ‘have just begun.’ Furthermore, there are some rather idiomatic *V-kake* phrases which have ‘act on’ reading.

2.2 Tests for the word formation of *V-kake*

The following tests from Kageyama (1993) show that aspectual *V-kake* predicates behave as syntactic compounds, in which *-kake* embeds VP in their complement position. The ‘act on’ type of *V-kake* predicates, on the other hand, does not behave the same as aspectual *V-kake* does, though they show the VP embedding phenomenon at first glance.

The first test is the replacement with *Sa-hen* verbs:

- (8) a. Densha-ga eki-ni tootyaku-si-kake-ta.
 train-NOM station-at arrive-be about to-PAST
 ‘The train was about to arrive at the station.’
- b. Dooro-no hidari-o hokoo-si-kake-ta.
 road-GEN left-ACC walk-be about to/have just begun-PAST
 ‘I was about to/have just begun to walk on the left side of the road.’

- c. Suzuki-sensei-ga sono koto-nituite gakusei-ni situmon-si-kake-ta.
Suzuki-teacher-NOM the issue-about student-DAT ask-be about TO-PAST
(i) ‘?*Prof. Suzuki took action to ask the student about the issue.’
(ii) ‘Prof. Suzuki was about to ask the student about the issue.’

The achievement verb, *tuk-u*, ‘arrive at’ and the activity verb, *aruk-u*, ‘walk’ can be replaced with *sa-hen* verbs to be *tootyaku-su-ru* and *hokoo-su-ru*, respectively and the replacements do not change their aspectual properties. The activity verb, *to-u*, ‘ask’ can also be replaced with *situmon-su-ru* in (8c), but the *situmon-si-kake* shifts its meaning from ‘act on’ to ‘be about to.’ The example of (8c) is hard to read as ‘act on,’ which meaning *toi-kake* had.

The next test is *soo-su-ru* substitution:

- (9) a. Taroo-ga tyoozyoo-ni tuki-kake-ta. ?*Hanako-mo
Taroo-NOM summit-to reach-be about TO-PAST Hanako, too
soo-si-kake-ta.
do so-be about TO-PAST
‘Taroo was about to reach the summit. ?*Hanako was about to do so, too’
b. Hutago-no ane-ga aruki-kake-ta. Imooto-mo soo-si-kake-ta.
twins’ elder sister-NOM walk-be about TO-PAST sister, too do so-be about TO-PAST
‘The elder sister of the twins was about to walk. The younger sister was about to do so, too.’
c. Suzuki-sensei-ga gakusei-ni gimon-o nage-kake-ta. Gakusei-mo
Suzuki-teacher-NOM student-DAT question-ACC ask-act on-PAST students, too
soo-si-kake-ta.
do so-act on-PAST
‘Prof. Suzuki took action to ask his students a question.
(i) *The students did so, too. (ii) The students were about to do so, too.’

The reason for the awkwardness of (9a) is not that *tuki-kake-ta* is a lexical V-V compound: it should be ascribed to the semantic property of *soo-su-ru*, which prefers an Agent subject. The example of (9b) shows that aspectual V-*kake* compounds in which *-kake* is combined with an activity verb like *aruku* ‘walk’ are syntactic compounds. Again, example (9c) shows the phenomenon in which *soo-si-kake-ru* comes to mean ‘be about to’ rather than ‘act on.’

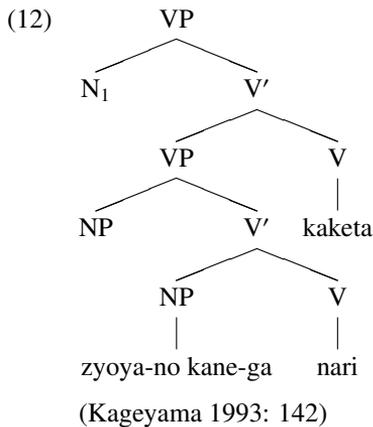
Finally, let us see the possibility of passivization. When the preceding verb is a transitive and the complex is syntactic, passivization of the verb must be possible:

- (10) a. Buka-ga syatyoo-o korosi-kake-ta.
subordinate-NOM boss-ACC kill-be about TO-PAST
‘The subordinate was about to kill his boss.’
b. Syatyoo-ga buka-ni koros-are-kake-ta.
boss-NOM subordinate-by kill-PASSIVE-be about TO-PAST
‘The boss was about to be killed by his subordinate.’
(11) a. Hanako-ga Taroo-o sasoi-kake-ta.
Hanako-NOM Taroo-ACC seduce-act on-PAST
‘Hanako took action to seduce Taroo.’

- b. Taroo-ga Hanako-ni sasow-are-kake-ta.
 Taroo-NOM Hanako-by seduce-PASSIVE-act on-PAST
 (i) ‘??Taroo was taken action to seduce by Hanako.’
 (ii) ‘Taroo was about to be seduced by Hanako.’

When (10a) and (11a) are in active voice, (10a) means ‘be about to,’ and (11a) is ‘act on’ or ambiguous between ‘be about to’ and ‘act on.’ After passivization, the aspectual reading of (10a) remains in (10b), while the aspectual property of ‘act on’ in (11a) is difficult to retain in (11b), its passivised variant.

So far, all the *V-kake* forms allow syntactic operations on V1, which shows that at least the *V-kake* forms which retain aspectual meaning like in (8a), (8b), (9a), (9b), (10a) and (10b) are qualified as syntactic compounds. The structure of (12) is Kageyama’s (1993) proposal for aspectual *V-kake* predicate: he calls it ‘unaccusative-embedded structure.’ More generally, it is assumed to be a raising predicate (cf. Nishigauchi 1993: 86, Kishimoto 2013: 145).



Basically, we will follow the analysis that aspectual *-kake* in *V-kake* forms, which means ‘be about to’ or ‘have just begun,’ is a raising predicate.

Some *V-kake* forms of ‘act on’ type came to shift their meaning from being ‘act on’ or ambiguous between ‘be about to’ and ‘act on’ to aspectual when they went through the tests above. Here we assume that there is a possibility that such *V-kake* forms do not have another element intervening between V and *-kake*, but attach the element outside the *V-kake* complex. Thus, we classified them as lexical V₁-V₂ compounds, following Kageyama (1993: 81) and Yumoto (2013: 119).

In the following sections, first, we will consider the syntactic properties of the two types of *-kake*: one is syntactic light verb and the other is lexical V₂. Secondly, we will deal with the semantic ambiguity of V + *-kake* forms, focusing on activity and accomplish verbs.

3. The structures of *V-kake* phrases

The aspectual *-kake*, meaning ‘be about to,’ or ‘have just begun,’ is a light verb of raising predicate and it must have experienced some meaning derivation from its original main verb, since the *-kake* has lost its original meaning as a main verb of *kake-ru*, ‘cover.’ Structurally speaking, the *-kake* must not be situated at the head of VP. We will examine if such a light verb

is situated in the position of *v* of *vP* or somewhere upper than *vP*. On the other hand, the *-kake* which retains the meaning of the main verb must be adjacent to V_1 under the *V* head of *VP*.

In order to determine the syntactic status of aspectual *-kake*, let us attach a causative morpheme *-(s)ase* to these *V-kake* constructions. The morpheme *-(s)ase* is treated as a light verb which appears as a head of *vP* in the same way as English periphrastic causative verb *make* or lexical conceptual predicate *CAUSE* is. The causative *vP* embeds *VP* as its complement. If *V-(s)ase* construction can have another light verb to its right side, it means that the causative *vP* has some upper projection(s) in the structure.

- (13) a. *Untensyu-ga densya-o eki-ni tuki-kake-sase-ta.
 driver-NOM trainACC station-at arrive-be about-to-CAUSE-PAST
 ‘The train driver made the train be about to arrive at the station.’
 b. ?Untensyu-ga densya-o eki-ni tuk-ase-kake-ta.
 driver-NOM trainACC station-at arrive-CAUSE-be about-to-PAST
 ‘The train driver was about to make the train arrive at the station.’
- (14) a. *Sensei-ga seito-o hasiri-kake-sase-ta.
 teacher-NOM student-ACC run-have just begun-CAUSE-PAST
 *‘The teacher made the student have just begun to walk.’
 b. Sensei-ga seito-o hasir-ase-kake-ta.
 teacher-NOM student-ACC run-CAUSE-be about to-PAST
 ‘The teacher was about to make the student run.’
- (15) a. *Suzuki-sensei-ga gakusei-ni gensyo-o yomi-kake-sase-ta.
 Suzuki-teacher-NOM student-DAT original-ACC read-be about to-CAUSE-PAST
 ‘Prof. Suzuki made his students be about to read the original.’
 b. Suzuki-sensei-ga gakusei-ni gensyo-o yom-ase-kake-ta.
 Suzuki-teacher-NOM student-DAT original-ACC read-CAUSE-be about to-PAST
 ‘Prof. Suzuki was about to make his students read the original.’

The causativization above shows that a causative light verb *-(s)ase* is situated under *-kake* projection. Namely, *-kake* must be situated above *vP* projection. For reference, *sasoi-kake* as a lexical compound can have *-(s)ase* to the right side of the *-kake*.

- (16) Yosiko-ga Hanako-ni Taroo-o sasoi-kake-sase-ta.
 Yosiko-NOM Hanako-DAT Taroo-ACC seduce-act on-CAUSE-PAST
 ‘Yosiko made Hanako seduce Taroo.’

Let us consider the lexical V_2 *-kake*. This *V-kake* form cannot be intervened by other elements as shown in Section 2, but the complex can be adjacent to another aspectual *-kake*.

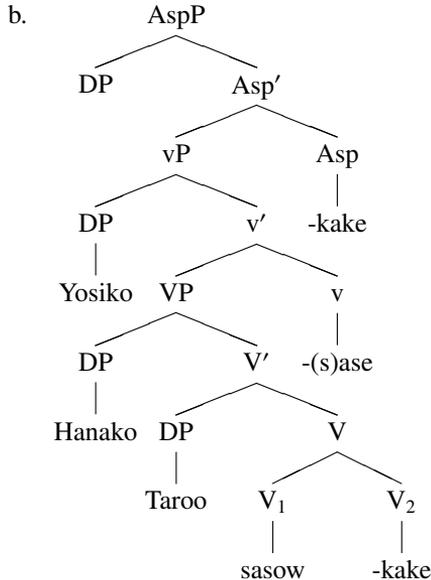
- (17) Hanako-ga Taroo-o sasoi-kake-ta. Yosiko-mo soo-si-kake-ta.
 Hanako-NOM Taroo-ACC seduce-act on-PAST Yosiko-too do so-be about to-PAST
 ‘Hanako took action to seduce Taroo. Yosiko was about to do so, too.’

Soo-su-(ru) in (17) is not substituted for *saso-u*, but for *sasoi-kake*. This is the reason why the tests in Section 2 caused the ‘act on’ *V-kake* predicate to shift to aspectual reading ‘be about to.’ To support the analysis of admitting two types of *kake*, the lexical *kake* must allow a raising predicate *kake* to appear together with it, while more than one raising predicate *-kakes* cannot appear together.

- (18) a. *Densha-ga eki-ni tuki-kake-kake-ta.
 train-NOM station-at arrive-be about to-be about to-PAST
 ‘*The train was about to be about to arrive at the station.’
- b. *Koori-ga toke-kake-kake-ta.
 ice-NOM melt-have just begun-have just begun-PAST
 ‘*The ice has begun to have just begun to melt.’
- c. *Akatyan-ga aruki-kake-kake-ta.
 infant-NOM walk-have just begun-have just begun-PAST
 ‘*The infant has just begun to have just begun to walk.’
- d. Hanako-wa Taroo-o sasoi-kake-kake-ta-ga, yame-ta.
 Hanako-TOPIC Taroo-ACC seduce-act on-be about to-but change one’s mind-PAST
 ‘Hanako was about to seduce Taroo, but changed her mind.’
- e. Hanako-wa Taroo-ni hanasi-kake-kake-ta-ga, yame-ta.
 Hanako-TOPIC Taroo-DAT talk to-act on-be about to-but change one’s mind-PAST
 ‘Hanako was about to talk to Taroo, but changed her mind.’

Here, we postulate the structure for the sentence which has a lexical verb *-kake*, a causative morpheme *-(s)ase* and an aspectual light verb *-kake*, all appearing together.

- (19) a. Yosiko-ga Hanako-ni Taroo-o sasoi-kake-sase-kake-ta.
 Yosiko-NOM Hanako-DAT Taroo-ACC seduce-act on-CAUSE-be about to-PAST
 ‘Yosiko was about to make Hanako seduce Taroo.’



When the raising predicate *kake* is attached to the phrase *sasoi-kake-sase* to become *sasoi-kake-sase-kake*, the structure projects the aspectual phrase above vP like in (19b).

4. The Cause of Ambiguity

There still remains an unsolved issue that raising *V-kake* has two meanings, ‘be about to,’ and ‘have just begun,’ depending on the properties of their VPs. In addition, what makes raising

-kake be different from lexical *-kake* should be considered.

When the preceding verb is an unaccusative verb whose starting time is identical to the finishing time, we definitely read it as ‘be about to.’ On the other hand, if the verb is an unaccusative with an incremental theme, we tend to read its sentence as ‘have just begun.’ The examples in the Introduction are repeated here.

- (20) a. Densha-ga eki-ni tuki-kake-ta.
 train-NOM station-at arrive-be about to-PAST
 ‘The train was about to arrive at the station.’
 b. Koori-ga toke-kake-ta.
 ice-NOM melt-have begun to-PAST
 ‘The ice has begun to melt.’

Here, we’d like to quote Igarashi and Gunji’s (1998: 90) lexical entry and explanation of *-kake*, which they call view-changing verbal.

- (21)
$$\left[\begin{array}{l} \textit{verb} \\ \textit{adjacent} \left\{ \begin{array}{l} \textit{verb} \\ \textit{view} < \textcircled{1}, \textcircled{2} > \end{array} \right\} \\ \textit{temp} < \textcircled{3}, \textcircled{3}, \textcircled{3} > \end{array} \right]$$
 where $\textit{basic}(\textcircled{1}), \textcircled{3} < \textcircled{2}, \textit{close}(\textcircled{3}, \textcircled{1})$
 (Igarashi and Gunji 1998: 90)

They mention the two readings of *kake* as follows:

This verbal pays attention to the neighborhood of the beginning of a basic view of the complement verb. ... If it is adjacent to a verb with an instantaneous view, since the instant $\textcircled{3}$ (the time V_2 (*kake*) views) in the value of the **temp** feature must be prior to the end time $\textcircled{2}$ (the end time of V_1) of the view of the complement verb, and since $\textcircled{2}$ is identical to the start time $\textcircled{1}$ (the start time of V_1) for an instantaneous view, $\textcircled{3}$ is necessarily prior to $\textcircled{1}$, if *kake* is adjacent to a verb with a durative view, $\textcircled{3}$ can be after $\textcircled{1}$; it has only to be in the neighborhood of $\textcircled{1}$. Thus, *aruki-kake* can mean either an event of getting closer to walking (but not actually walking) or an event of actually walking that is terminated before being finished. (Igarashi and Gunji 1998: 90) (Parentheses after $\textcircled{1}$, $\textcircled{2}$ and $\textcircled{3}$ are ours.)

In their mechanism, the aspectual *-kake* views the neighborhood of the starting time. The important factor of their explanation is that they include the finishing time in the *-kake* function. If the function needed only the starting time, we could not explain why instantaneous verb + *-kake* describes prior to the starting time, while durative verb + *-kake* is ambiguous. Furthermore, the neighborhoodness of the starting time is decided relatively to the finishing time. However, there is a puzzle. Some activity verb + *-kake* seems to have a selectional restriction on the subject: i.e., *aruki-kake* is compatible with *akatyān* as seen in (22a). The subject *Taroo* in (22b), on the other hand, does not cause ungrammaticality of the sentence, but it requires some specific or metaphorical context to interpret it.

- (22) a. Akatyān-ga ippo aruki-kake-ta.
 infant-NOM a step walk-be about to/have just begun-PAST
 (i) ‘The baby was about to take a step.’
 (ii) ‘The baby has just begun to take a step.’

- b. ?Taroo-ga ippo aruki-kake-ta.
 Taroo-NOM a step walk-be about to/have just begun-PAST
 (i) ?'Taroo was about to take a step.'
 (ii) ?'Taroo has just begun to take a step.'

In the case of an instantaneous verb with an incremental theme, when we add *-kake* to the VP, the phrase describes the moment when we admit that the event has begun to happen for the first time. The incremental event does not have to finish to the end.¹

- (23) a. Koori-ga toke-kake-ta.
 ice-NOM melt-have just begun-PAST
 (i) '*The ice was about to melt.' (ii) 'The ice has just begun to melt.'
- b. Koori-ga wazuka-ni toke-kake-ta.
 ice-NOM a little melt-have just begun-PAST
 'The ice has begun to melt a little.'
- c. *Koori-ga kanzen-ni toke-kake-ta.
 ice-NOM totally melt-have just begun-PAST
 '*The ice has begun to melt totally.'

Here, we hypothesize that the function of aspectual *-kake* does not include the finishing time, but includes some temporal point at which we can admit that an event, for example, the baby cries, we eat supper, or the ice melts, has happened for the first time. We call such a point the minimal approved point (hereafter, MAP).

- (24) a. The Minimal Approved Point (MAP):
 The temporal point at which an event described by the verb is approved to be brought about first.
- b. The function of aspectual *-kake*:
 Aspectual *-kake* describes the point just prior to MAP, viewing the range between the starting point and MAP.

To see how *-kake* is related to MAP even if the V of *V-kake* is an activity verb, we add frequency adverbial phrases to activity *V-kake* sentences:

- (25) a. Akatyan-ga saisyo-no ippo-o aruki-kake-ta.
 infant-NOM first step-ACC walk-be about to/have begun-PAST
 'The infant has just begun to make a first step.'
- b. *Akatyan-ga sanpo-o aruki-kake-ta.
 infant-NOM three steps-ACC walk-be about to/have begun-PAST
 '*The infant has just begun to make three steps.'
- (26) a. Puropera-ga yatto kaiten-si-kake-ta.
 propeller-NOM finally whirl-have begun-PAST
 'The propeller has begun whirling finally.'

¹The event described in (23a) has one block of ice. It does not have some pieces of ice. When the example of (23c) has a quantifier like *subete*, 'all' as *Koori-ga subete toke-kake-ta*, the example is grammatical. The matter of the relation between the scope and *-kake* should be treated in the next study.

- b. *Puropera-ga san kaiten-si-kake-ta.
 propeller-NOM three times whirl-have begun-PAST
 ‘*The propeller has begun whirling three times.’

The aspectual *-kake* does not adjoin to the homogeneous activity verbs as seen in (25b) and (26b). On the other hand, when the activity event is seen to occur finally, the *-kake* can adjoin to activity verbs to select the specific time, as seen in (25a) and (26a).

When the sentence does not imply any MAP, the *V-kake* phrase sometimes seems to have a lexical V-V compound.

- (27) a. *Kankyaku-ga tugitugini zabuton-o nage-kake-ta.
 audience-NOM one after another floor cushion-ACC throw-have begun-PAST
 ‘The audience were about to throw their floor cushions one after another.’
 b. Kankyaku-ga tugitugini gimon-o nage-kake-ta.
 audience-NOM one after another doubt-ACC throw-be about to-PAST
 ‘The audience took action to throw doubt one after another.’

If an audience member tries to throw a cushion to someone on the stage for the first time, we can decide MAP and say *Kankyaku-ga zabuton-o nage-kake-ta*. However, if it happened one after another, the first event must have gone from the scene and it is hard to decide MAP. That is why the aspectual reading of (27a) is impossible. When an audience throws doubt on someone on the stage, we understand the situation just as the audience’s attitude toward someone and it does not imply that the person on the stage certainly receives the doubt. In this situation, we do not have to decide MAP and we read (3b) as an abstract action toward someone.

Finally, we have to note that MAP is a relativized concept and it is not always the neighborhood of the starting point.

- (28) a. Hanako-ga eki-made hasiri-kake-ta-ga akirame-ta.
 Hanako-NOM station-to run-be about to-PAST-but give up-PAST
 ‘Hanako had begun to run to the station, but gave it up.’
 b. Hanako-ga sono marason koosu-o saigo-made hasiri-kake-ta-tokorode
 Hanako-NOM the marathon course-ACC end-till run-be about to-PAST-moment
 akirame-ta.
 give up-PAST
 ‘Hanako almost finished running the marathon course, but gave it up just before the goal.’

In (28a), the *hasiri-kake* phrase seems to describe just posterior to the starting point. In (28b), however, Hanako was running close to the goal and the *hasiri-kake* phrase describes the point prior to the finishing point. It is because we see the time span from the start to the goal as ‘one run’ in a marathon. As the ‘one run’ is approved as MAP in (28b), the *-kake* in the *hasiri-kake* selects the prior time to the finishing point.

5. Conclusion

In this paper, we have discussed the following points:

- There are two types of light verb *-kake* in *V-kake* phrases: (i) *-kake* as an aspectual raising verb which embeds VP in syntax; (ii) *-kake* as a lexical V_2 which forms a V_1 - V_2 compound in lexicon.
- Aspectual *-kake* also has two meanings, ‘be about to’ and ‘have just begun’ depending on the V it attaches to. *-kake* selects a specific time span between the starting point and MAP. The function of *-kake* is to see just prior to MAP within the time span. When V of *V-kake* is an instantaneous verb, *-kake* has no option but to select the moment just prior to the starting point, since the starting point and MAP of instantaneous verbs are equal.
- When *V-kake* describes some action toward someone without any implication of MAP, it seems to derive a lexical V_1 - V_2 compound occasionally.

Lastly, we could not discuss the subjective sense of *V-kake*, which expresses the first person’s feeling of something being about to happen. Such feeling could not be seen by appearance:

- (29) a. Moosukoside kabe-o keru-kake-ta-ga, omoi-todomat-ta.
 almost wall-ACC kick-be about to-PAST-but, stop doing-PAST
 ‘I was about to kick the wall, but stopped doing it.’
- b. Sono sirase-ni odoroki-kake-ta-ga, heisei-o yosoot-ta.
 the news-DAT be surprised at-be about to-PAST-but, calm-ACC put on-PAST
 ‘I was about to get surprised at the news, but I did my best to appear calm and composed.’

We can say the sentence (29a) without a bit of kicking action, and we can also utter the sentence (29b) unconcernedly. To include such a subjective sense of *-kake* seen above, we have to revise the definition of MAP and the function of *-kake* at least slightly, but it will be a problem confronting us as a subsequent issue.

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