

## Joint Display of Atode and Nochihodo in Japanese

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### Abstract:

‘Atode’ and ‘nochihodo’ are among the temporal adverbs studied in Japanese. The data comes from the <https://corpora.uni-leipzig.de/en?corpusId=jpn> corpus. Data were collected using a combined method with both quantitative and qualitative observations, recorded and classified using AntConc for concordance. The analysis used a joint display strategy to present results both quantitatively and qualitatively. This study aims to discuss ‘atode’ and ‘nochihodo’ through joint display collection and analysis. The results, drawn from the 2023 Japanese news corpus, show that ‘atode’ appears more frequently than ‘nochihodo.’ Both adverbs are classified as sequential-durative (posterior) with atelic time ranges that are not clearly defined. However, ‘atode’ also occurs in telic time ranges in informal situations, while ‘nochihodo’ is only found in atelic events within formal contexts.

**Keywords:** Atode, Nochihodo, AntConc, Joint Display

### Introduction:

The joint display of ‘atode’ and ‘nochihodo’ presents the analysis of this study by integrating quantitative and qualitative findings. Quantitative data show which term is used more frequently, while qualitative findings classify their semantic functions. The joint display strategy facilitates the integration and interpretation of these results.

### Literature Review:

This study examines the joint display of the Japanese temporal adverbs ‘atode’ and ‘nochihodo,’ focusing on how their similarities and differences are evident in both quantitative and qualitative corpus data. While prior scholarship highlights their distinct functions (Asrat et al., 2025; Endo, 2012; Koizumi & Tamaoka, 2010; Kudo, 2007; Miyamoto & Takata, 1996; Tamaoka et al., 2005; Tamaoka et al., 2022; Tamaoka & Zhang, 2022; Ueno & Kluender, 2003), this research aims to deepen understanding of these adverbs by directly comparing their usage (Kamiya, 2002; Kim, 2016). Leveraging the diverse functions of Japanese sentences (Ozawa et al., 2005), this study uses joint display methods (Creswell, 2018; McEnery & Hardie, 2012; Martínez, 2023) to highlight nuanced patterns found in corpus data.

### Research Limitations:

The data source for this study is an online corpus: <https://corpora.uni-leipzig.de/en?corpusId=jpn>, which consists of news articles from 2023 with 100,000 data units.

## Methodology:

This study used a deductive linguistic corpus method to collect data and applied both quantitative and qualitative methods at the same time (Creswell, 2008, 2009; Tognini, 2001). Data was analysed using both methods, and results are shown together (Creswell, 2018; McEnery & Hardie, 2012).

## Research Instrument:

AntConc version 4.3.1 was used as the research instrument. The KWIC feature detected the frequency of ‘atode’ and ‘nochihodo’. The File View feature, with regex searches, detected complex sentences including “atode” and ‘nochihodo’.

## Result:

A joint display is used to present the analysis of atode data. For nochihodo, quantitative findings are shown through AntConc's Key Word in Context (KWIC) feature, which reveals the frequency of both atode and nochihodo. In contrast, the File View feature in AntConc (a corpus analysis toolkit) demonstrates its more complex uses, enabling qualitative analysis by classifying its semantic functions (Haspelmath, 1997; Kamiya, 2002).

### Joint display ‘atode’ in Japanese

The following is the ‘atode’ data found by AntConc in the KWIC feature.

(1). アイスを食った後でもわかるくらいにサーモンの脂は甘かった。

Aisu o **tabeta ato de** mo wakaruru kurai ni sāmon no abura wa umakatta.

The salmon fat was so sweet you could tell even after eating ice cream (Leipzig Corpora Collection, 2023).

Typing ‘atode’ in the KWIC feature in AntConc revealed 34 occurrences in the 2023 Japanese news corpus (340,114 tokens), as shown in Figure 1.

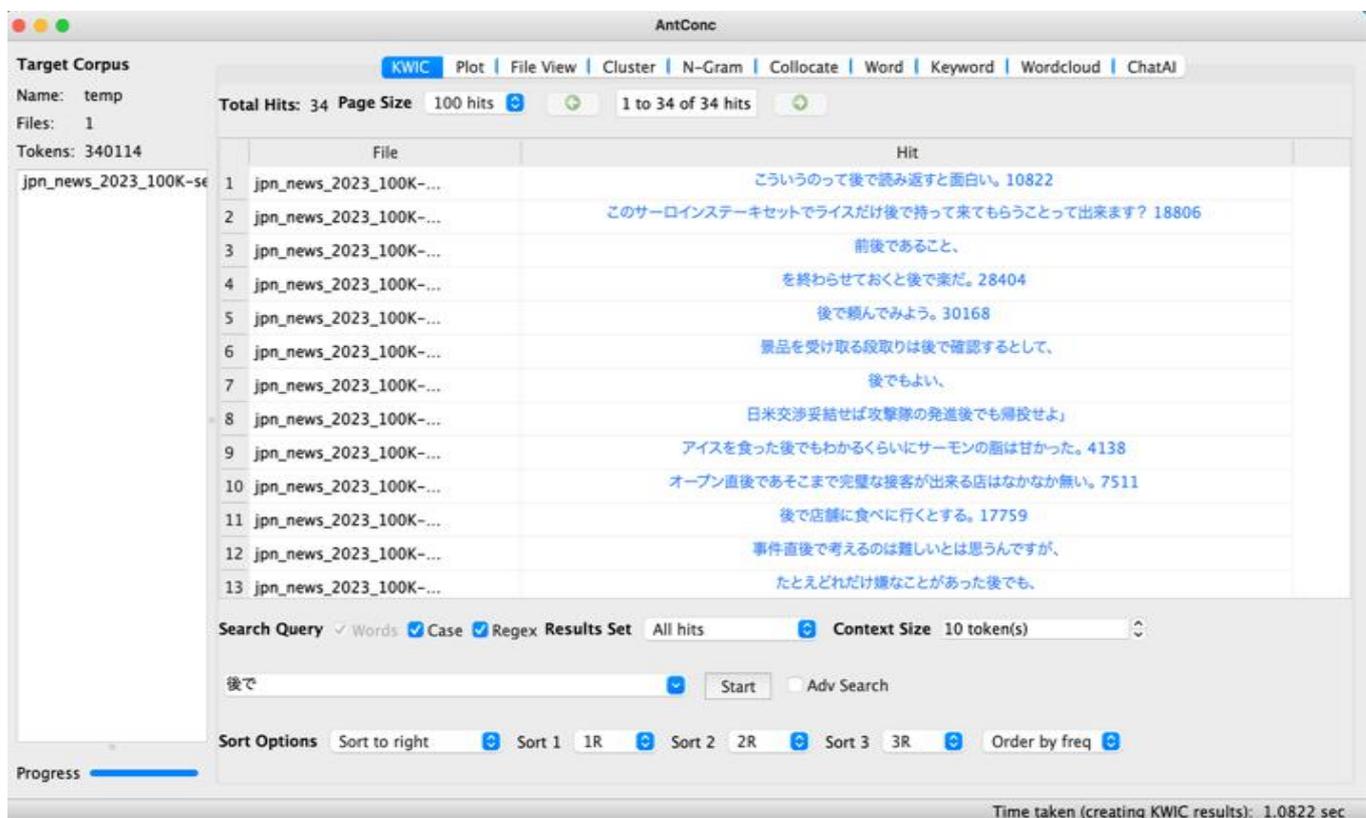


Figure 1. Atode concordance

Source: Antconc (version 4.3.1) (Anthony, 2024).

Data metadata (1) detected by AntConc in the File View feature. The use of complex sentences with regex searches is shown in Figure 2.



Figure 2. Atode metadata

Source: Antconc (version 4.3.1) (Anthony, 2024).

'Atode' in data (1) means 'later', 'afterwards', or 'then' (Kamiya, 2002; Matsuura, 1994). It is a temporal adverbial in Japanese, indicating that one event follows another. Here, the first event is 'finished eating ice cream'; the second is that 'the salmon fat still tastes sweet,' showing that the effect of the first event persists into the second. Thus, the sequence is: first, eating ice cream is completed; second, as a result, the salmon fat continues to taste sweet. Data (1) is classified as sequential posterior durative, emphasizing both the order and the persistence of the outcome (Haspelmath, 1997; Kamiya, 2002; Sato, 2014). Temporally, this is an atelic event (Haspelmath, 1997), as indicated by the ongoing nature of 'the salmon fat still tasted sweet' following the first event—there is no definite endpoint. 'Atode' is typically used in informal situations, as shown by the everyday scenario of 'eat ice cream' (Kamiya, 2002; Sato, 2014).

**Table 1 presents the classification of Joint display of data (1).**

Table 1 Joint display data (1)

<p><b>Integration and Interpretation</b></p>		<p>‘Atode’ refers to events that happen one after another in informal contexts. The expression typically emphasizes that these events are sequential and lack a set endpoint (atelic events). Antconc identified 34 occurrences of ‘atode,’ with 247,498 complex atode words found in a total of 340,114 words in the file.</p>
<p><b>Qualitative Findings</b></p>	<p>Source</p> <p>Semantic function</p>	<p>(Leipzig Corpora Collection, 2023)</p> <p><i>Sequential-durative location (Posterior)</i></p>
<p><b>Quantitative Findings</b></p>	<p>File Tokens</p> <p>File Types</p>	<p>340114</p> <p>247498</p>
<p><b>Data (1)</b></p>	<p>File Hits</p> <p>Types of Text</p>	<p>34</p> <p>txt</p>
		<p>アイスを食った後でもわかるくらいにサーモンの脂は甘かった (Leipzig Corpora Collection, 2023).</p>

(2). コレを食った後で普通のチーズバーガーに戻ると非常にショボく感じてしまうため、食べ比べは控えることをオススメしたい。

Kore o tabeta atode futsū no chīzubāgā ni modoru to hijō ni shobo ku kanjite shimau tame, tabe kurabe wa hikaeru koto o osusume shitai.

**After eating** this, returning to a regular cheeseburger makes it feel rather disappointing, so I would advise against comparing them (Leipzig Corpora Collection, 2023).

The keyword ‘atode’ typed into the KWIC feature in AntConc, as in data (1), was detected 34 times, with a total of 340,114 tokens, as shown in Figure 3.

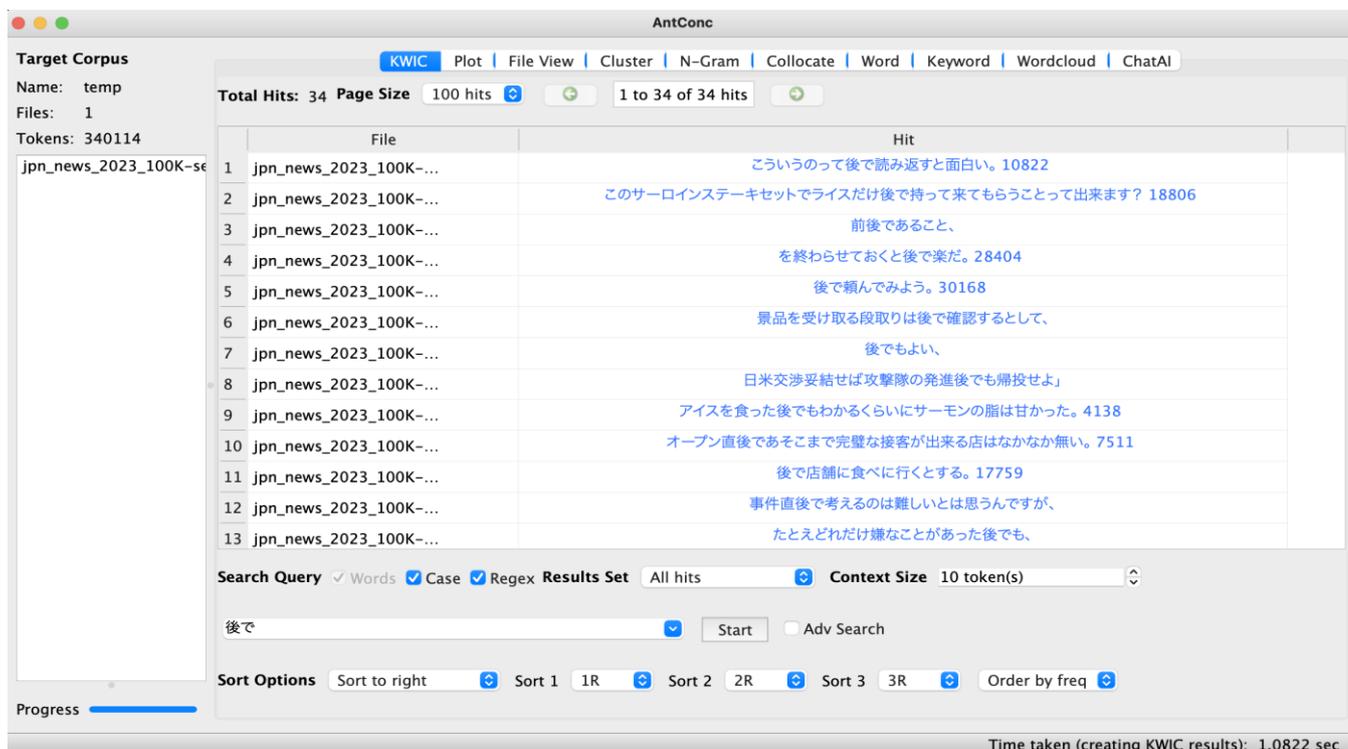


Figure 3. Concordance of Atode

Source: Antcon (version 4.3.1) (Anthony, 2024).

AntConc detects metadata (2) in the File View feature. Regex searches can detect the use of complex sentences, as shown in Figure 4.

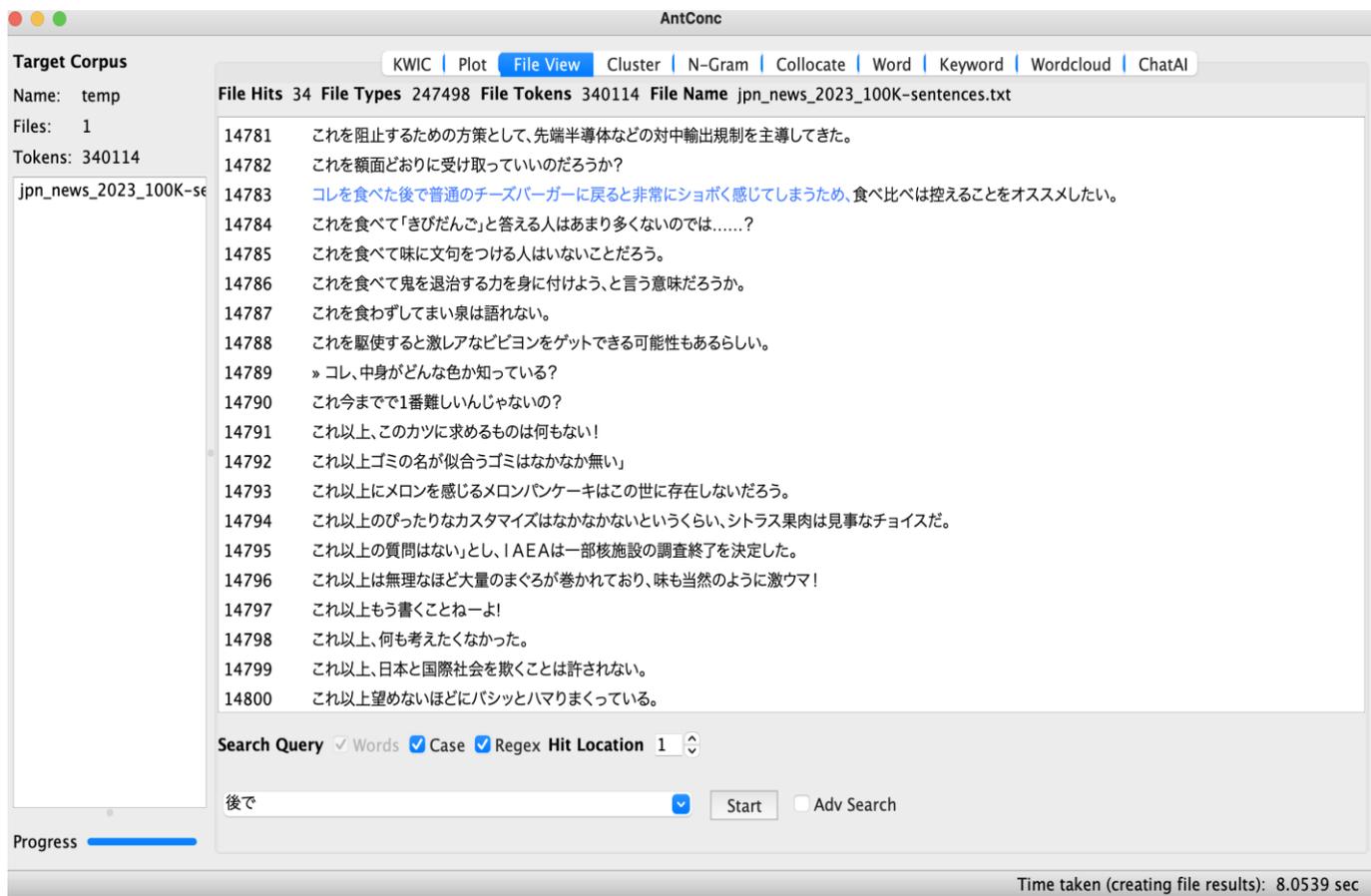


Figure 4. Atode metadata

Source: Antcon (version 4.3.1) (Anthony, 2024).

The meaning of 'atode' in data (2) is the same as in data (1): 'then,' 'afterwards,' or 'later' (Kamiya, 2002; Matsuura, 1994). The sequence goes: first, 'after eating this,' then, 'eating a cheeseburger, and the taste is different.' Since the second event follows the first, the sentence in data (2) shows a sequential posterior durative (Haspelmath, 1997; Kamiya, 2002; Sato, 2014). The time frame in data (2) is atelic. 'After eating this' is followed by 'then eating a cheeseburger, and the taste was different,' so the second event is ongoing and the endpoint is unclear (Haspelmath, 1997). This situation happens in everyday talk, so 'atode' in data (2) appears in informal contexts (Kamiya, 2002; Sato, 2014).

**Table 2 contains the classification of joint display with the atode data (2).**

**Table 2 Joint display data (2)**

<p><b>Integration and Interpretation</b></p>		<p>'Atode' data (2) indicates events that occur sequentially in informal contexts (sequential posterior durative). 'Atelic events' here refer to actions without a clear endpoint. The analysis tool 'Antconc' was detected 34 times. Out of 340,114 words in the file, there were 247,498 occurrences of 'complex atode words,' which refers to words containing multiple 'atode' forms.</p>
<p><b>Qualitative Findings</b></p>	<p>Source</p>	<p>(Leipzig Corpora Collection, 2023)</p>
<p><b>Quantitative Findings</b></p>	<p>Semantic function</p>	<p><i>Sequential-durative location (Posterior)</i></p>
<p><b>Data (2)</b></p>	<p>File Tokens</p>	<p>340114</p>
<p></p>	<p>File Types</p>	<p>247498</p>
<p></p>	<p>File Hits</p>	<p>34</p>
<p></p>	<p>Types of Text</p>	<p>txt</p>
<p></p>		<p>コレを<b>食べた後</b>で普通のチーズバーガーに戻ると非常にショボく感じてしまうため、食べ比べは控えることをオススメしたい(Leipzig Corpora Collection, 2023).</p>

(3). オープン直後であそこまで完璧な接客が出来る店はなかなか無い。

Ōpun chokugo de asoko made kanpekina sekkyaku ga dekiru mise wa nakanaka nai.

It's rare to find a shop that can deliver such impeccable service so soon **after opening** (Leipzig Corpora Collection, 2023).

AntConc's KWIC feature detects the concordance ‘atode’ as data (3), which, like data (1) and (2), reads ‘chokugo de’ and appears 34 times out of 340,114 tokens, as shown in Figure 5.

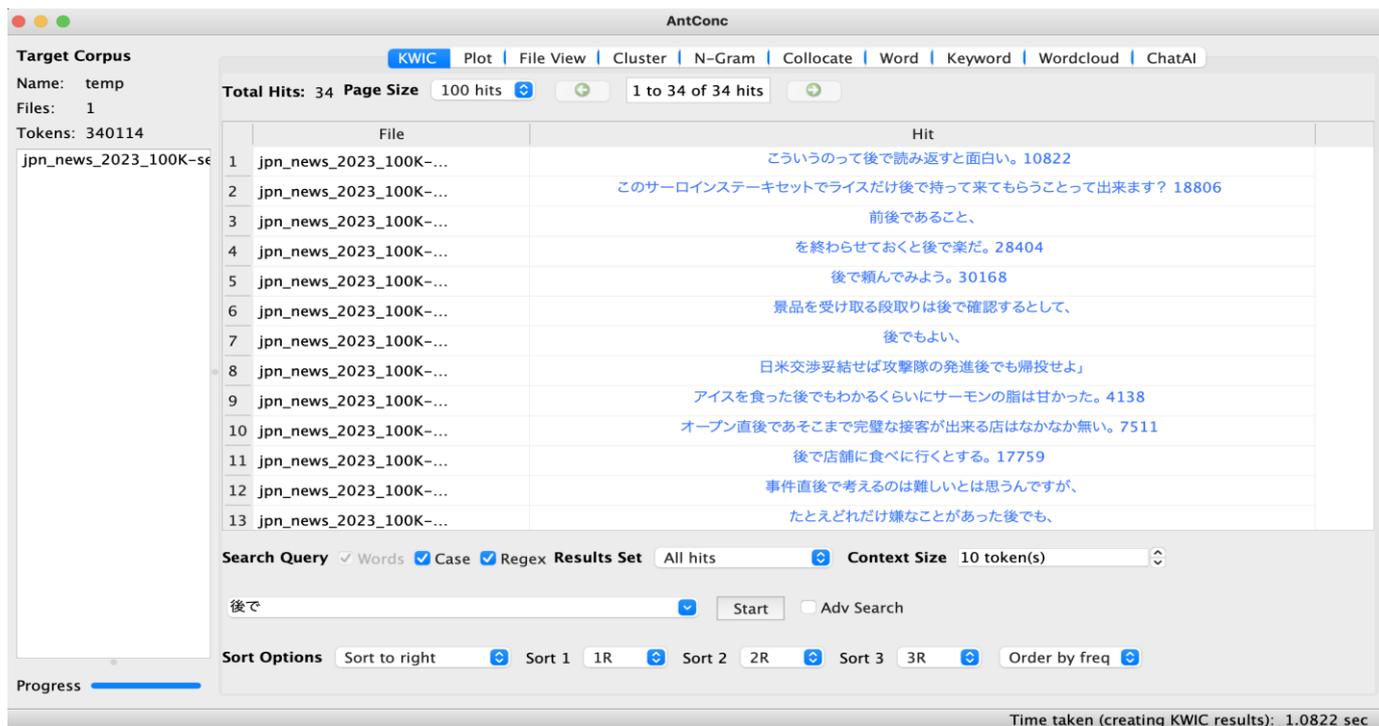


Figure 5. Concordance of Atode

Source: Antconc (version 4.3.1) (Anthony, 2024).

The use of more complex sentences from data metadata (3) is found in AntConc in the View File feature with regex search, as shown in Figure 6.

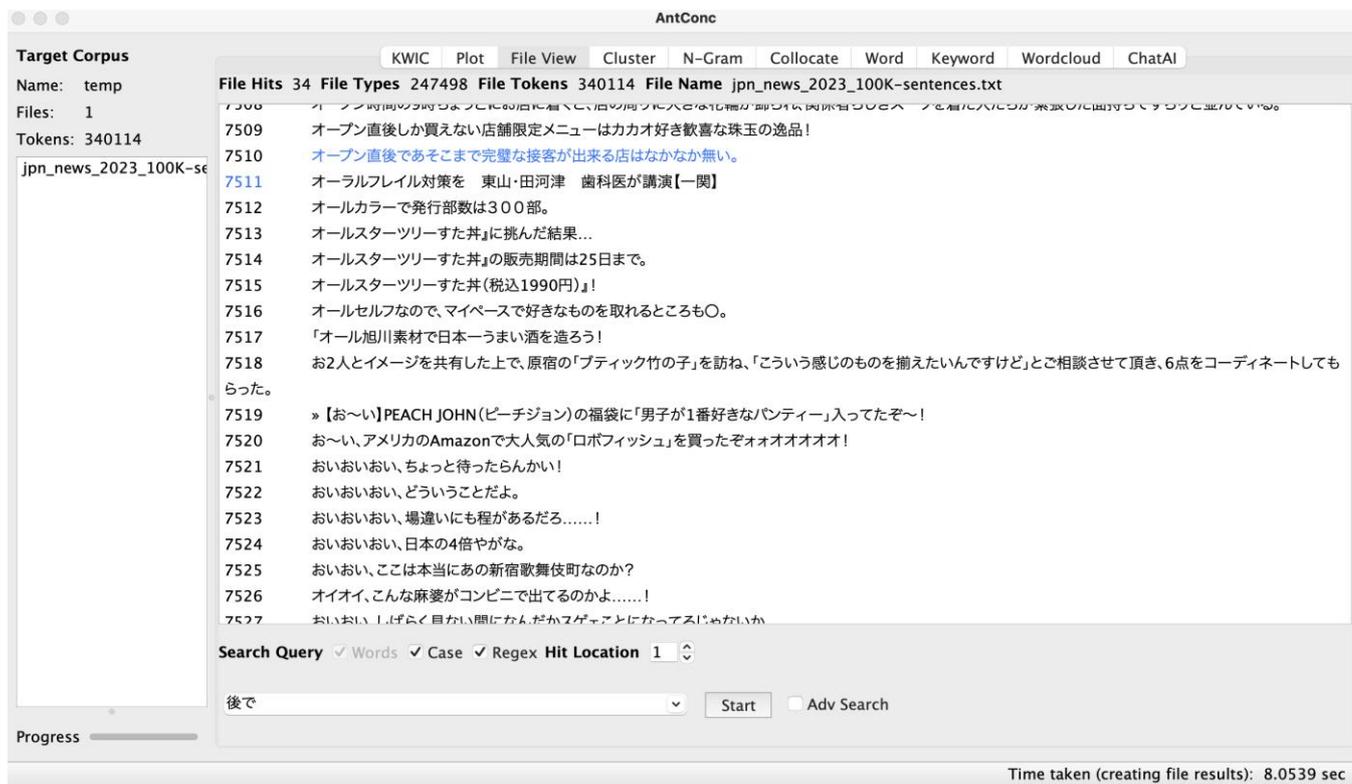


Figure 6. Atode metadata

Source: Antconc (version 4.3.1) (Anthony, 2024).

The sentence in data (3) indicates the sequence of events following the reference time. First, ‘オープン直後’ means ‘after opening’, showing the shop had just opened. Then, ‘あそこまで完璧な接客ができる店’ means ‘a shop that serves its customers very well’. Thus, the sequence is: the shop opens, then provides excellent service (Haspelmath, 1997; Kamiya, 2002; Sato, 2014). The second event represents a situation with a clear endpoint, placing data (3) within the telic time frame (Haspelmath, 1997). This situation also occurs in everyday, informal contexts (Kamiya, 2002; Sato, 2014).

**Table 3 contains the classification of joint display with the atode data (3).**

Table 3 Joint display data (3)

<p><b>Integration and Interpretation</b></p>		<p>The ‘atode’ data (3) reads ‘chokugo de’ as the first event, and the second event occurs sequentially in an informal context (sequential posterior). The time range is included in the telic event.</p> <p>Antconc was detected 34 times, and a total of 340,114 words in the file had 247,498 complex ‘atode’ words.</p>
<p><b>Qualitative Findings</b></p>	<p>Source</p>	<p>(Leipzig Corpora Collection, 2023)</p>
<p><b>Quantitative Findings</b></p>	<p>Semantic function</p>	<p><i>Sequential location (Posterior)</i></p>
	<p>File Tokens</p>	<p>340114</p>
	<p>File Types</p>	<p>247498</p>
	<p>File Hits</p>	<p>34</p>
<p><b>Data (3)</b></p>	<p>Types of Text</p>	<p>txt</p> <p>オープン直後であそこまで完璧な接客が出来る店はなかなか無い (Leipzig Corpora Collection, 2023).</p>

**Joint display ‘nochihodo’ in Japanese**

The following is the data for ‘nochihodo’ found by AntConc in the KWIC feature.

(4). 後ほど地下 2 階の食品売り場も覗いてみたが、こちらも同様にイイ感じだった。

Nochihodo chika 2-kai no shokuhin uriba mo nozoite mitaga, kochira mo dōyō ni ī kanjidatta.

**Later**, I also took a look at the food section on the basement level two, and that too was rather nice (Leipzig Corpora Collection, 2023).

Figure 7 shows the frequency of occurrence of ‘nochihodo’ eight times, consisting of 340,114 tokens, based on data concordance (4) by typing ‘nochihodo’ in the KWIC feature in AntConc.

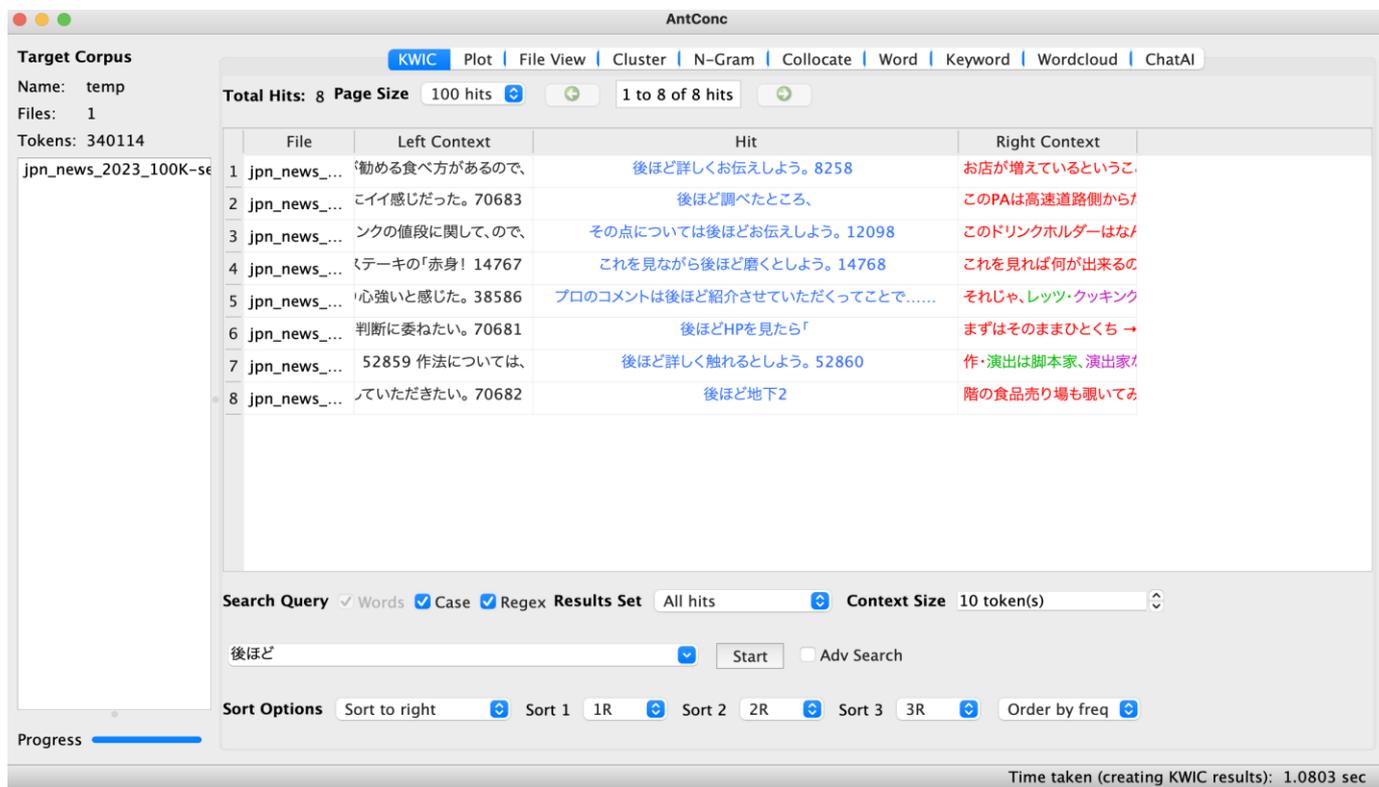


Figure 7. Concordance of Nochihodo

Source: Antconc (version 4.3.1) (Anthony, 2024).

Figure 8 shows that AntConc uses more complex sentences from metadata (4) in the View File feature with regex searches.

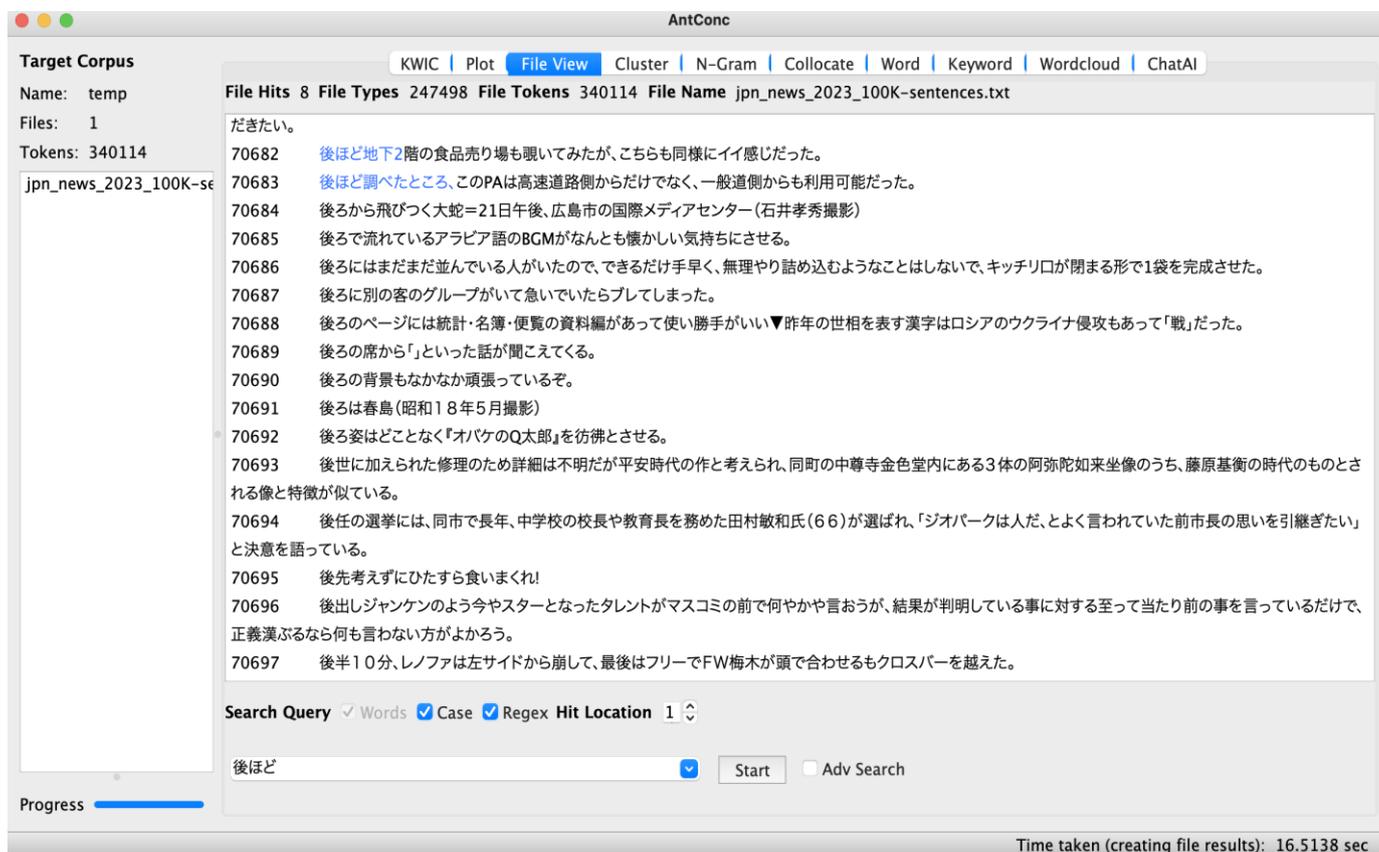


Figure 8. Nochihodo metadata

Source: Antconc (version 4.3.1) (Anthony, 2024).

‘Nochihodo’ in data (4) is a Japanese temporal adverbial meaning ‘after that’ or ‘later’ (Kamiya, 2002; Matsuura, 1994). In the sentence, one event happens, then the person visits the food market in the basement. This expresses a posterior durative sequence: the initial event ends before the market visit begins. ‘Looking around’ is durative, describing a continuing, indefinite activity with no clear endpoint. The sequence in data (4) is atelic and occurs in a formal context (Haspelmath, 1997; Kamiya, 2002; Sato, 2014).

**Table 4 contains the classification of joint display with the nochihodo data (4).**

Table 4 Joint display data (4)

<p><b>Integration and Interpretation</b></p>	<p>Data from ‘nochihodo’ (4) indicate that, in a formal context, the first event occurs, followed by the second event in a sequential posterior durative pattern. The atelic event spans the intervening time. Antconc was found eight times, and, out of 340,114 total words in the file, 247,498 were complex ‘nochihodo’ words.</p>	
	<p><b>Qualitative Findings</b></p>	<p>Source</p>
<p>Semantic function</p>		<p><i>Sequential-durative location (Posterior)</i></p>
<p>File Tokens</p>		<p>340114</p>
<p>File Types</p>		<p>247498</p>
<p>File Hits</p>		<p>8</p>
<p><b>Quantitative Findings</b></p>	<p>Types of Text</p>	<p>txt</p>
	<p><b>Data (4)</b></p>	<p>後ほど地下 2 階の食品売り場も覗いてみたが、こちらも同様にイイ感じだった (Leipzig Corpora Collection, 2023).</p>

(5). お店が勧める食べ方があるので、後ほど詳しくお伝えしよう。

O-ten ga susumeru tabekata ga aru node, nochihodo kuwashiku otsutae shiyou.

The shop has a recommended way of eating it, so I shall explain that in detail later (Leipzig Corpora Collection, 2023).

Figure 9 shows eight occurrences of ‘nochihodo’, with a total of 340,114 tokens. This is based on data concordance (5) by typing ‘nochihodo’ in the KWIC feature in AntConc.



Figure 9. Concordance of Nochihodo

Source: Antcon (version 4.3.1) (Anthony, 2024).

In the View File feature, AntConc uses more complex sentences from metadata (5), as shown in Figure 10.



Figure 10. Nochihodo metadata

Source: Antcon (version 4.3.1) (Anthony, 2024).

‘Nochihodo’ in data (5) is the same as in data (4) and functions as a temporal adverbial in Japanese, meaning “later” or “after that” (Kamiya, 2002; Matsuura, 1994). In this context, the first event is the recommended food becoming available at this restaurant. The second event, which follows, is my providing further explanation. The word ‘later’ signals that the explanation comes after the food's availability, marking a posterior durative sequence. ‘Will provide further explanation’ refers to an ongoing, indefinite situation without a clear endpoint. This atelic event occurs during the time frame of data (5) in a formal situation (Haspelmath, 1997; Kamiya, 2002; Sato, 2014).

**Table 5 contains the classification of joint display with the nochihodo data (5).**

Table 5 Joint display data (5)

<p><b>Integration and Interpretation</b></p>		<p>According to data from ‘nochihodo’ (5), the first event occurred, followed by the second in a formal setting (one after the other). The atelic event, an action without a clear endpoint, occurred within a set period.</p> <p>To analyze the corpus, Antconc was used to identify occurrences of 'nochihodo' words. The search yielded eight results, revealing that out of the 340,114 words in the file, 247,498 were complex instances of ‘nochihodo’.</p>
<p><b>Qualitative Findings</b></p>	<p>Source</p>	<p>(Leipzig Corpora Collection, 2023)</p>
	<p>Semantic function</p>	<p><i>Sequential-durative location (Posterior)</i></p>
<p><b>Quantitative Findings</b></p>	<p>File Tokens</p>	<p>340114</p>
	<p>File Types</p>	<p>247498</p>
<p><b>Data (5)</b></p>	<p>File Hits</p>	<p>8</p>
	<p>Types of Text</p>	<p>txt</p> <p>お店が勧める食べ方があるので、後ほど詳しくお伝えしよう (Leipzig Corpora Collection, 2023).</p>

**Discussion:**

In the joint display of quantitative findings, the number of occurrences for ‘atode’ and ‘nochihodo’ varies, with 'nochihodo' being the least frequent at eight instances, while ‘atode’ appears most frequently, with 34 instances. Turning to the qualitative findings, ‘atode’ is identified as a posterior marker within the semantic function classification of sequential and sequential-durative location. In contrast, “nochihodo” is also marked as posterior, but it is found only in a sequential-durative location. Furthermore, the time range for ‘atode’ includes both telic and atelic events and typically occurs in informal situations. On the other hand, ‘nochihodo’ appears solely in atelic events and in formal situations (Haspelmath, 1997; Kamiya, 2002; Sato, 2014).

The classification of the semantic functions of the Japanese temporal adverbs ‘atode’ and ‘nochihodo’ can be seen in Table 6.

**Table 6 Classification of the semantic functions of ‘atode’ and ‘nochihodo’**

No.	Classification	Temporal Adverbial
1.	Sequential (Posterior), telic range	Atode
2.	sequential-durative location (Posterior), atelic range	Atode, nochihodo

**Conclusion:**

Based on quantitative data from the 2023 Japanese news corpus, the use of “atode” is more prevalent than ‘nochihodo’ among Japanese people. Both ‘atode’ and ‘nochihodo’ share semantic similarities, as they are included in sequential-durative location (posterior). Their time range falls under atelic events, which are indefinite and lack a clear endpoint. The difference is that ‘atode’ is also found in a sequential location (posterior) with telic events and is used in informal situations. In contrast, ‘nochihodo’ is only seen in sequential-durative location (posterior) and in formal situations.

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