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## 投稿論文

# Prosody and Subject Ellipsis in *It Turns Out That*-Clause Construction

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### 【Summary】

This paper discusses the prosody of what is called *it turns out that*-clause construction. It has been observed that while the construction typically has the formal subject *it* that refers to the following *that*-clause, it can also appear without the subject, and the two versions, *it turns out that*-clause construction (the full version) and the one without the formal subject *it* (the elliptical version), have been described and analyzed in semantic terms. The question to be addressed is whether they differ prosodically. The results of the analyses of pitch and pauses in the spoken data reveal that, in the elliptical version, the downward pitch movement from *turns* to *out* is greater and the pause duration between *out* and its following word are longer than those of the full version. It is argued that, in terms of prosody, the phrasal verb in the elliptical version is more like a compound serving as a comment clause. Prosodic variations observed in the data of the full version are also discussed.

**Key words** *it turns out that*-clause construction, subject ellipsis, pitch, pause

### Introduction

This paper discusses the prosody of *it turns out that*-clause construction, as is called in Otake (2013b). This construction contains the phrasal verb *turn out*, which is syntactically classified as the same group of verbs and phrasal verbs as *seem*, *appear*, *happen*, and *come about* in that they may be followed by a *that*-clause, or an extraposed subject.

(1) It seems that you are mistaken.

(Quirk *et al.* 1985: 1183)

While this type of *that*-clause is cataphorically referred to by the formal subject *it* that usually appears as the sentential subject, the formal subject in *it turns out that*-clause construction can be replaced by other nominals and it can be deleted without any nominal occupying that position:

- (2) a. Forrest reports enemy have burned Chattanooga & fled—the truth turns out that he has never been within three miles of the place & the enemy are still there ...
- b. First thing of course was to find the dogs. Which turns out, they were holed up back of the—the place where the little kids go, ...
- c. And that adjustment is really hard, especially for those who have post-traumatic stress disorder or traumatic brain injury. That turns out that one unfortunately common result is suicide.
- d. 'Course, we found out what was going on in the end. Lee Jordan's dad had had a bit of trouble getting money off Bagman as well. Turns out he's in big trouble with the goblins.

(Otake 2013a: 10-14; underlines in original)

Otake (2013a: 4) claims that, in spite of its high fre-

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quency in use<sup>1</sup>, previous studies of *it turns out that*-clause construction have been inadequate in that they fail to describe its actual usages, and he attempts to provide a semantic explanation to the construction and consider the mechanism of the ellipsis of the formal subject. He argues that the subject can be deleted if the semantic cohesion between the preceding sentence and the one of the construction is reinforced by such discourse markers as *weird thing is* and *the long and short of it* intervening the two sentences<sup>2</sup>:

- (3) a. “We inspected the car, but it contained no bomb or weapons,” Marine Sgt. Michael Shahinian, 25, said. “Weird thing is, turns out the call came from this guy Bobby Adcock, who was two grades above me at Bakersfield High School.”
- b. So when I saw a BBC headline about a ‘tipsy gene’ protecting against alcoholism I had to learn more. The long and short of it: turns out my being a lightweight could be a good thing.
- (Otake 2013a: 19-20; underlines in original)

However, it is not clear why this is so, considering the fact that, as Otake (2013a) himself notes, these types of discourse marker can also appear in cases where the formal subject *it* actually occurs in this construction.

In terms of prosody of *it turns out that*-clause construction, there seem to have been few studies. As for the stress assignment of phrasal verbs composed of a verb and particle in general, it is pointed out that the primary stress is assigned on both of the elements (Watanabe 1994: 95). In case of *turn out*, however, the description of its stress assignment varies among linguists:

- (4) a. túrn óut          b. túrn óut

Konishi and Minamide (2001: 2308) assign the primary stress on the second element and Takebayashi (2002: 2649) on both of the elements. Indeed, Inoue and Yagi (2008: 56) argue that the descriptions of stress assignments on idiomatic expressions in English-Japanese dictionaries may be inconsistent and inaccurate, and that, for English language teaching in Japan, more descriptive prosodic analyses of the

current English are necessary.

Reviewing the previous studies concerning *it turns out that*-clause construction, I would like to address the question whether the two versions, *it turns out that*-clause construction (the full version) and the one without the formal subject *it* (the elliptical version) differ prosodically. The purpose of this investigation is twofold. One is to describe prosodic properties of each version, and the other is to discuss the results of the prosodic analyses in detail.

The organization of this paper is as follows. Section 2 describes the method of data collection and its analyses. Section 3 shows the results of the analyses and illustrates a representative example of each version. Section 4 discusses of the results in detail. Section 5 summarizes the discussion and concludes the paper.

## Method

In order to investigate the prosody of the two versions of *it turns out that*-clause construction, I collected a total of 30 pieces of spoken data (a half of them contains the full version and the other half the elliptical version) at *Scientific American*, an American science magazine, whose website offers podcasts that report scientific articles. Using a speech analysis software, *Praat*, I judged the pitch (Hz) of *turn* and *out* and calculated the pitch difference between them. I also measured the pause duration (second) between *out* and its following word. I analyzed the results by *t*-test to see if there is any statistically significant difference between the two versions in pitch and pause.

## Results

The results of the investigation are listed in Tables 1 and 2 below, which reveal that, in the elliptical version, the downward pitch movement from *turns* to *out* is greater and the pause duration between *out* and its following word are longer than those in the full version ( $t=2.01$ ,  $df=28$ ,  $p<.05$  and  $t=2.79$ ,  $df=28$ ,  $p<.01$  respectively). The typical example of each version, No. 13 and No. 18, is shown along with its linguistic context in (5) and (6) and their pitch analyses in Figures 1 and 2 below.

Table 1

*Pitch of (A) Turns and (B) Out, Pitch Movement between (A) and (B), and Pause Duration between (B) and Its Following Word in the Full Version*

No.	Pitch (Hz)			Pause (Sec.)
	(A) turns	(B) out	(A) - (B)	
1	145.0	137.0	8.0	0.02
2	178.9	155.6	23.3	0.00
3	206.6	177.7	28.9	0.05
4	183.5	120.6	62.9	0.10
5	165.3	238.9	-73.6	0.07
6	204.7	191.0	13.7	0.00
7	231.1	174.6	56.5	0.00
8	101.0	72.6	28.4	0.05
9	151.1	247.5	-96.4	0.02
10	168.1	128.4	39.7	0.03
11	134.2	243.8	-109.6	0.09
12	136.2	131.6	4.6	0.00
13	175.6	173.8	1.8	0.00
14	227.7	210.3	17.4	0.00
15	221.1	218.2	2.9	0.05
Ave.	175.3	174.8	0.6	0.03

Table 2

*Pitch of (A) Turns and (B) Out, Pitch Movement between (A) and (B), and Pause Duration between (B) and Its Following Word in the Elliptical Version*

No.	Pitch (Hz)			Pause (Sec.)
	(A) turns	(B) out	(A) - (B)	
16	244.0	82.5	161.5	0.31
17	184.8	154.4	30.4	0.00
18	184.0	149.7	34.3	0.13
19	217.8	183.1	34.7	0.02
20	219.5	194.5	25.0	0.10
21	154.1	182.7	-28.6	0.12
22	146.8	130.2	16.6	0.00
23	226.8	192.7	34.1	0.08
24	187.0	122.0	65.0	0.11
25	180.5	79.1	101.4	0.08
26	86.9	137.3	-50.4	0.44
27	223.7	171.8	51.9	0.19
28	192.8	164.6	28.2	0.07
29	157.3	137.6	19.7	0.00
30	210.4	167.9	42.5	0.21
Ave.	187.8	150.0	37.8	0.12

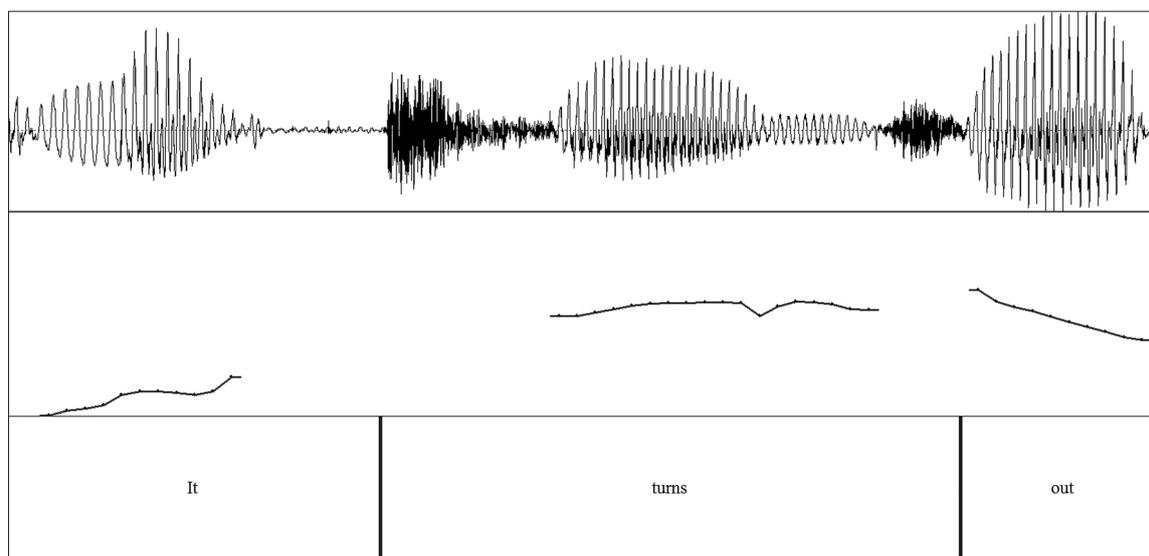


Figure 1 *Pitch Analysis of No. 13*

(5) No. 13

Now it's this latter muscle that's involuntary, so the crows feet smile is considered the real spontaneous emotion and is known as the Duchenne smile. It turns out the real thing has a lot of power.

(<http://www.scientificamerican.com/podcast/episode/what-makes-an-honest-smile-honest-10-12-11/>; underline added)

(6) No. 18

And the type of plants that thrived after the impact were different as well. Blonder and his colleagues studied thousands of fossil leaves from North Dakota, spanning about a million years both before and after the impact. ... Turns out that after the impact, the fossil record has more deciduous-looking leaves...

(<http://www.scientificamerican.com/podcast/episode/dino->

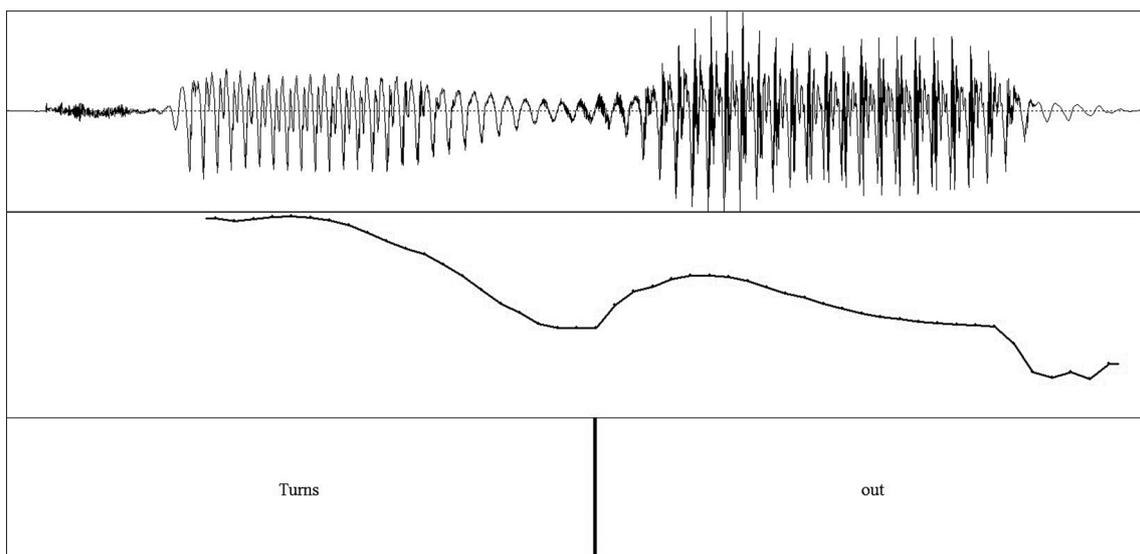


Figure 2. Pitch Analysis of No. 18

devastator-also-ravaged-veggies1/; underline added)

Based on the analyses in this section, it can be argued that, in the elliptical version, the stress assignment of *turns out* is characterized as the relatively high pitch on *turns* and the pause duration between *out* and its following word suggests the separation of *turns out* from the rest of the sentence, both of which are in sharp contrast with those of the full version.

In the next section, I discuss the results presented in more detail.

## Discussion

In this section, I discuss the prosodic differences observed in the previous section and argue that *turns out* in the elliptical version is more like a compound functioning as a comment clause as is defined by Quirk *et al.* (1985). I also discuss some specific examples of the full version that seem prosodically similar to those of the elliptical version and point out that their prosodic property is due to a rhythmic reason.

### 4.1 The status of *turns out* in the elliptical version

The results of the analyses show that there are prosodic differences between the two versions in the pitch movement and the pause duration. In the elliptical version, the pitch on *turns* is higher than that of *out*, and hence the downward

contour takes place, and the phrasal verb is separated from the rest of the sentence by a pause. These differences are most likely due to the possibility that, unlike the one in the full version, *turns out* in the elliptical version is more like a compound independent from the rest of the sentence serving as a comment clause. In what follows, I show the general characteristics of compounds and comment clauses, and discuss *turns out* in the elliptical in those terms.

First, it is well-known that, in a concatenation of two nouns, the positions of the primary and secondary stresses depend on whether it is a phrase or a compound; the former receives the primary stress on the second element and the latter on the first element.

#### (7) a. Phrase

blàck bóard dârk ròm

#### b. Compound

bláckbòard dârk ròom

*Turns out* in the two versions of *it turns out that*-clause construction can be considered parallel to the contrast between (7a) and (7b) above. In terms of the stress assignment, *turns out* in the elliptical version is similar to that in (7b) and hence the phrasal verb can be treated as a compound. Indeed, look at (8a) and (8b) below, in which the stress assignment of the concatenations of a verb and a particle and their corresponding compound nouns are shown<sup>3</sup>:

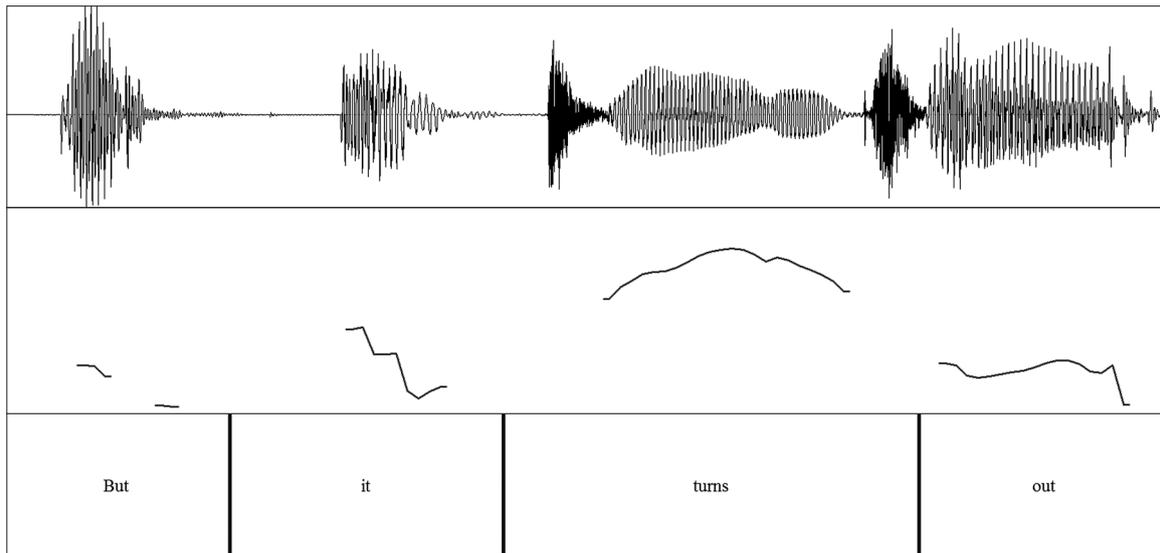


Figure 3 Pitch Analysis of No. 4

(8) a. Verb and Particle

brèak dówn stánd bÿ tàke óff  
(Konishi and Minamide 2001)

b. Compound Noun

brèak dòwn stándbÿ táke òff  
(Namiki 1985: 92)

Therefore, *turns out* in the elliptical version can be said to be compound-like.

Second, the pause between *out* and its following word in the elliptical version shows the detachment of *turns out* from the rest of the sentence. That further implies that *turns out* can be considered a comment clause, not a main verb of the sentence. Quirk *et al.* (1985: 1112) define a comment clause as a parenthetical disjunct that may appear at various positions with a separate tone unit. Consider (9) below, in which the thin vertical lines and the thick vertical lines represent the beginning and the end of the tone unit respectively:

- (9) a. You |know (that) I think you're WRÒNG|. [You know is a matrix clause]  
b. You KNÓW,| I think you're WRÒNG|. [You know is a comment clause]  
(Quirk *et al.* 1985: 1113)

*Turns out* in the two versions of *it turns out that*-clause

construction can be considered parallel to the contrast between (9a) and (9b) above. In terms of the pause duration forming tone units, *turns out* in the elliptical version can be seen as a comment clause.

4.2 Variations in the full version

Although the difference between the average of the pitch movements in the full version and the elliptical version is statistically significant, a careful look at Tables 1 and 2 suggests that the former contains more inconsistent data than the latter. That is, some of the data in the full version are opposite to its general tendency. Here, I discuss why that is the case.

Consider the data of No. 4 in Table 1. Its pitch movement and the pause duration are 62.9 Hz and 0.10 seconds, which means a downward movement with a longer pause duration. This may be due to a rhythmic reason. Look at the sentence and its linguistic environment in (10):

(10) No. 4

Take, for example, bees. These flying foragers are renowned for their ability to remember which flowers are best and where to find them. But it turns out bees can be bollixed. (<http://www.scientificamerican.com/podcast/episode/animals-can-be-given-false-memories/>; underline added)

In No. 4, the construction in question is preceded by the

**Table 3**

*Pitch Movement between Turns and Out, Pause Duration between Out and Its Following Word, and the Words Preceding the Full Version*

No.	Pitch Movement (Hz)	Pause(Sec.)	Preceding Word
2	23.3	0.00	<i>Well</i>
3	28.9	0.05	<i>But</i>
4	62.9	0.10	<i>But</i>
5	-73.6	0.07	<i>But</i>
6	13.7	0.00	<i>But</i>
7	56.5	0.00	<i>So</i>
14	17.4	0.00	<i>Because</i>
Ave.	18.4	0.03	—

conjunction *but*, which may lead to the succession of the two function words, *but* and *it*, neither of which is stressed. Rhythmically, in that case, *turns* rather than *out* is predicted to be stressed. If *out* were to be stressed instead of *turns*, there would be a series of three unstressed words and it would be undesirable. Table 3 below lists the result of the analyses of the seven instances in which the construction is preceded by a function word. It shows that, with the exception of No. 5, the explanation above applies to all the instances<sup>5</sup>.

Given this argument is on the right track, it can be argued that the pitch of *turns out* in *it turns out that*-clause construction depends on the presence of its preceding words, or the formal subject *it* and a function word, and their realization in pitch<sup>4</sup>.

To summarize, the results of the prosodic analyses in this paper suggest that, in terms of the stress assignment of *turns* and *out* and the pause duration between *out* and its following word, the elliptical version is more like a compound and a comment clause detached from the subordinate clause. Prosodic variations observed in the full version may be due to the preceding word affecting rhythm.

## Conclusion

This paper discussed the prosody of the two versions of *it turns out that*-clause construction, the full version and the elliptical version. In order to answer the question whether they differ prosodically, the relevant pitch and pauses were analyzed. The results revealed that, in the elliptical version, the downward pitch movement from *turns* to *out* is greater

and the pause duration between *out* and its following word are longer than those of the full version, which implies that, in terms of prosody, the phrasal verb in the elliptical version is more like a compound and a comment clause which is separated from the rest of the sentence.

In conclusion, it must be reminded that a more sufficient amount of data is necessary to strongly support the argument of this paper. It is also important to discuss theoretical implications of this study. I leave these tasks for the future research.

## Acknowledgement

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## Notes

1. In order to investigate the frequency of phrasal verbs used in conversations by native speakers in the United States, Lee (2015) conducts a corpus-based study, the result of which shows that *turn out* is ranked as 13th among the top 25 phrasal verbs in an academic spoken corpus.
2. The other discourse markers Otake (2013a) notices are: *the funny thing is*, *anyway*, *in any event*, and *in the end*. In the present paper, however, neither of these nor any markers whatsoever are found preceding the construction in the elliptical version. In the full version, as is shown in 4.2, some examples have a conjunction and an interjection preceding the construction.
3. According to Takebayashi (2002: 311), the primary stress is assigned on both elements of the combination of the verb and particle, *break down*, which is the same kind of inconsistency as in (4) in Section 1.
4. The presence/absence of the conjunction *that* can affect the prosody of *turns out* in each construction, and it can be interrelated to the ellipsis of the formal subject *it*. While the conjunction *that* appears seven times out of the 15 examples investigated in the full version, it appears four times in the elliptical version. I leave these issues for the future research.

5. In No. 5, although the construction is preceded by *but*, the pitch movement between *turns* and *out* is upward. This might be attributable to the strong accent on *but* in this particular instance, which is not the case in the other six instances.

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