

This talk presents two facts about *that*-relatives. First, head nominals such as *the only*, *the very* and the superlative which allow only *that*-relatives are focused, and overtly move to the spec of FocP inside the relative clause in the split-CP system by Rizzi (1997). For the conveniences of discussion, these head nominals are classified as category 1. In addition to that, it is also claimed that head nominals such as *no* and *every* which allow both *that*- and *wh*-relatives are focused, and overtly move to the spec of FocP inside the relative clause in *that*-relatives. Although it is said that *no* and *every* prefer *that*-relatives in literatures, they can choose both *that*- and *wh*-relatives actually. These head nominals are classified as category 2. Second, head nominals classified as category 1 and 2 require the covert movement to the spec of FocP in the matrix clause for the semantic reason.

Examine following examples containing head nominals of category 1 and 2:

- (1) John read the {*only/ very/ most difficult*} book {*that/??which*} Mary wrote.
 (2) John read (*no/every*) book {*that/which*} Mary wrote.

Category 1 requires only *that*-relatives while category 2 allows both *that*- and *wh*-relatives. Aoun and Li (2003) distinguish the derivation of *that*-relatives from that of *wh*-relatives. Examine the following example:

- (3) a. The picture of himself_i (that) John_i painted is impressive.
 b. The picture of himself_i (that) John_i likes is impressive.
 c.* The picture of himself_i which John_i painted is impressive.
 d.* The picture of himself_i which John_i likes is impressive.

Aoun and Li (2003: 111)

An anaphoric expression *himself* must be c-commanded by its antecedent *John*. Aoun and Li (2003) analyzes that in the case of *that*-relatives the head nominal *the picture of himself* is generated inside the relative clause where *John* c-command it, and is moved to the spec of CP. On the other hand, in *wh*-relatives, the head nominal is base-generated in the matrix clause. This causes the ungrammaticality of (3)c and (3)d. Before analyzing the targeting position of head nominals in *that*-relatives in (1) and (2), examine the following example concerning the spec of FocP in the split-CP.

- (4) [_{FocP}What [_{FocP} never again will you do]]? Radford (2004: 329)

Radford (2004) argues that only one spec is available for the spec of FocP. In this derivation, *what* and *never again* moves to the same spec of FocP, so (4) becomes ungrammatical. With this in mind, examine the following example of category 1:

- (5) a. This is the very book (that) students will enjoy only very rarely.
 b.* This is the very book (that) only very rarely will students enjoy.
 c. This is the very book which only very rarely will students enjoy.

(5)b is an inverted sentence of (5)a. The ungrammaticality of (5)b derives from the fact that the head nominal (*the*) *very book* and the negative adverb expression *only very rarely* occupies the same spec of FocP inside the relative clause. As shown in (4), the spec of FocP cannot have two constituents. In (5)c, the head nominal does not move to the spec of FocP.

Next, examine the following example of category 2:

- (6) a. I read every book (that) students will enjoy only very rarely.
 b.* I read every book (that) only very rarely will students enjoy.
 c. I read every book which only very rarely will students enjoy.

The same explanation to category 1 can be applied to category 2. In (6)b, when the head nominal (*every*) *book* and the negative adverb moves to the spec of FocP where only one constituent is allowed, the sentence becomes ungrammatical. Regarding the determiner *every*, it is assumed to be added after the movement of *book* to the spec of FocP. In (6)c, only the negative adverb occupies the spec of FocP, so the sentence is grammatical. The head nominal is not moved to the spec of FocP in *wh*-relatives.

After the completion of the matrix clause, the head nominal of category 1 and 2 covertly moves to the spec of FocP in the matrix clause. For instance, in category 1, it is done through percolation. Examine the following example:

- (7) John read [_{DP} the [_{FocP} very book_i that Mary wrote *t_i*]]

In (7), it is assumed that the head nominal *very book* moves to the spec of FocP inside the relative clause, and the focus feature of the head nominal *very book* percolates upwards up to DP. As a result, whole DP is focused. This triggers the covert movement of DP including the head nominal to the spec of FocP in the matrix clause. From the top of the sentence, the head nominal can look out across the sentence as a *wh*-phrase does in *wh*-questions. To put it shortly, the focused head nominal introduces alternatives from which to choose, and the selection becomes possible after the covert movement to the spec of FocP in the matrix clause.

References

- Aoun, Joseph and Yen-hui A. Li (2003) *Essays on the representational and derivational nature of Grammar: The diversity of WH-Construction*, MIT Press, Cambridge, Massachusetts.
- Radford, Andrew (2004) *Minimalist Syntax: Exploring the Structure of English*, Cambridge University Press, Cambridge.
- Rizzi, Luigi (1997) "The Fine Structure of the Left periphery," in L. Haegeman (ed.) *Elements of Grammar*, Kluwer Academic Publishers, Dordrecht.
- Rooth, Mats (1992) "A theory of focus interpretation," *Natural Language Semantics* 1, Kluwer Academic Publishers, Netherlands.

A constructional approach to synonyms: a case study of *apparently* and *seemingly*

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In English, it has been generally described in the literature that there are two close synonymous adverbs: *apparently* and *seemingly*. Both of them function as evidential markers as shown in (1):

- (1) a. Apparently¹, she went to a particular pub.
(W_fict_prose, HWE)
b. Seemingly, two separate conditions must be satisfied to achieve proper balance.
(W_ac_tech_engin, K90)

According to *Oxford Thesaurus of English*, *apparently* is a prime synonym of *seemingly* and vice versa as seen in (1). In *Oxford English dictionary* (2nd edition), either of them is also used to define the other. *Apparently* means “to external appearance; seemingly” (s.v. *apparently*) and *seemingly* “to external appearance; *apparently*” (s.v. *seemingly*).

Huddleston and Pullum (2002: 768-9) classified both of them into the same “modal adverb” category. *Wordnet 3.1* also places them in the same class and regard them as synonyms of each other.

Previous studies are (i) based mainly on meaning, (ii) focusing on their similarities but not their differences. That is, although they describe their semantics in detail, they have hardly addressed their syntactic distribution (in corpus-linguistic terms, collocation and colligation). The present paper, therefore, focuses on distribution because the adverb is a part of speech which occur multiple places as shown in (2).

- (2) a. [Initial] Apparently there’s a device but the RAOC team are dealing with it.
(W_fict_prose, HTJ)
b. [Medial] He apparently slipped and has fallen between the floors.
(W_fict_prose, JXY)
c. [End] This was not her usual choice of milliner, but it possessed only dark-coloured had in
Broadstairs apparently.
(W_fict_prose, H8A)
d. [Parenthetical] They’re divorced now, apparently, and Paul’s married someone else, but at the
time he was going to Sonia and marry me.
(W_fict_prose, JXY)

The present paper adopts usage-based construction grammar (Bybee 2010, Hilpert 2014) as the theoretical framework. It assumes that the basic unit of language is a construction, a form-meaning pair. Language as a whole is a large database of concrete examples and abstract constructions. The point is, although form and meaning pairing is crucial, neither form nor meaning can be fully predictable from the other. Therefore, independent of semantics, form distribution is also necessary for full description. The research question here is, therefore, whether or not *apparently* and *seemingly* are similar or different in formal distribution.

The data has been garnered from BYU-BNC, an online version of the *British National Corpus*. For each of the adverbs, 1,000 examples are randomly sampled. Then, each example is manually tagged with relevant information: (i) in which position it occurs (i.e. initial, medial, end, parenthetical) and (ii) which element it modifies (e.g. verb, adjective).

The result is represented in Table 1. *Apparently* and *seemingly* show different distribution. *Apparently* occurs more frequently in initial, end and parenthetical position than *seemingly*. From a functional point of view, *apparently* have developed as an evidential modal adverb more than *seemingly*.

	<i>apparently</i>	<i>seemingly</i>
initial	198	9
end	22	3
medial	723	966
parenthetical	57	20
metalinguistic	0	2
total	1000	1000

Table 1. Frequency of *apparently* and *frequency* according to position

¹ All underlines in the examples here are mine.

On the other hand, *seemingly* is used almost exclusively in the medial position. For the examples of *apparently* in each of the positions, see (2). For the examples of *seemingly*, see (3).

- (3) a. [Initial] Seemingly, two separate conditions must be satisfied to achieve proper balance. (W_ac_tech_engin, K90)
b. [End]The players retain it, seemingly. (W_newsp_brdsht_nat_misc, AJJ)
c. [Medial] He climbed seemingly endless stairways leading him ever upward. (W_fict_prose, HUA)
d. [Metalinguistic] Even words like 'seemingly' or 'probably' are out of place if the law is clear. (W_non_ac_polit_law_edu, FRA)
e. [Parenthetical] She did this with great vigour at, seemingly, every opportunity. (W_non_ac_soc_science, CGS)

As for modified element, there is also a great difference between the two adverbs. For example, *Apparently* modifies verbal predicatives in the medial position (364/723 examples).

- (4) a. Her blood was there, but she had apparently forgotten about it. (W_fict_prose, GV2)
b. The Queen apparently lost her patience. (W_biography, G3R)

It is sometimes used as an independent reply as shown in (5).

- (5) Apparently. (W_fict_prose, G0A)

Seemingly in the medial position, on the other hand, strongly prefers to adjectives (697/966 examples). In particular, *seemingly* is frequently collocated with negative adjectives, often followed by nouns, as shown in (6).

- (6) a. His words came out in a seemingly endless flow of support and approbation. (W_fict_prose, HNK)
b. However, the new minister on arrival soon found that he was faced with a seemingly impossible task. (W_religion, CCL)

This suggests that *seemingly [neg]adjective (noun)* construction has been firmly established in English.

In sum, although *apparently* and *seemingly* are similar in meaning in expressing modality and evidentiality, they show rather different distribution in form in Present-day English. From a constructional point of view, this result supports for bottom-up, probabilistic, neither top-down nor clear-cut, nature of language. These subtle differences should be learned individually (Hilpert 2014).

References

- Biber, Douglas et al. (1999) *Longman Grammar of Spoken and Written English*, Longman, London.
Bybee, Joan (2010) *Language, Usage and Cognition*, Cambridge University Press, Cambridge.
Davies, Mark. (2004) *BYU-BNC: The British National Corpus*. <<http://corpus.byu.edu/bnc>>
Hilpert, Martin (2014) *Construction Grammar and Its Application to English*, Edinburgh University Press, Edinburgh.
Huddleston, Rodney and Geoffrey K. Pullum (2002) *The Cambridge Grammar of the English Language*. Cambridge University Press, Cambridge.
Princeton University (2010) *About "WordNet"*. Princeton University. <<http://wordnet.princeton.edu>>
Quirk, Randolph, Sydney Greenbaum, Geoffrey Leech and Jan Svartvik (1985) *A Comprehensive Grammar of the English Language*. Longman, London.

Dictionaries and Corpora

BYU-BNC

Oxford English Dictionary

Oxford Thesaurus of English

Wordnet 3.1.

On the Existence of Multi-Phonological Words
From the Viewpoint of Stress Movement in Prefixes

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This presentation focuses on the different effects of prefixation and suffixation on stress placement in English. It is generally assumed that prefixation does not affect stress placement in this language, but that suffixation does. This difference can be explained by the adjacency condition proposed by Sato (1990) (see also Nishihara and van de Weijer (2012)).

When a word and suffix are affected by the adjacency condition, movement of stress occurs. The different effects of different suffixes on stress in English can be explained by the adjacency condition as follows:

- (1) a. [[[DEFinite] ive] ϕ] Class I (movement of stress) deFInitive
b. [[[DEFinite] ϕ] ness] Class II (no movement of stress) DEfiniteness

In the first word, the suffix *-ive* is immediately adjacent to the root, and stress can move. In the second word, there is an empty unit between the root and the suffix *-ness*, and stress cannot move across this. In other words, when a word and a suffix occur within the same Phonological Word, stress shift can occur. These structures can therefore also be interpreted as differences in Phonological Word (PW) structure, as suggested by researchers such as Szpyra (1989) and Kean (1978):

- (2) a. (definite) ive)PW (movement of stress)
b. (definite)PW (ness)PW (no movement of stress)

In prefixed words, stress does not move although other phonological processes may apply:

- (3) a. [in [balance]] (no movement of stress, but nasal assimilation occurs)
→ [im [balance]]
b. [un [balance]] (neither movement of stress, nor nasal assimilation occurs)

Nasal assimilation occurs when a Class I prefix (*in-*) is added, while it does not occur when a Class II prefix (*un-*) is attached. Using the adjacency conditions as explained in (1) these forms can be represented as in (4):

- (4) a. [ϕ [in [balance]]] (nasal assimilation occurs, because of adjacency)
b. [un [ϕ [balance]]] (nasal assimilation does not occur, because of empty unit)

Can the rule of stress shift be distinguished from other phonological phenomena, such as assimilation, in terms of the Phonological Word structure? When these structures are represented by using Phonological Words (PWs), it is not clear why one allows stress movement and the other does not:

- (5) a. (in)PW (balance)PW
 b. (un)PW (balance)PW

On the other hand, in order to explain whether or not nasal assimilation occurs when a prefix, another PW structure would seem to be necessary:

- (6) a. (in (balance))PW (nasal assimilation occurs)
 →(im (balance))
 b. (un)PW (balance)PW (nasal assimilation does not occur)

It seems that stress placement in English words is independent from other phonological phenomena, such as nasal assimilation and other types of assimilation. Stress placement does not seem sensitive to Phonological Word structure. If we do not accept a distinction between different types of Phonological Words based on Class I and Class II prefixes confirming (6a, 6b), we could suggest that the Phonological Word structure is different in prefixed forms such as (5a, 5b) to account for stress shift.

In sum, I propose that we have to accept the existence of Multi-Phonological Words, i.e. both traditional Phonological Words exist (based on the application of nasal assimilation) and Phonological Word Minus (PW=M) (based on the blocking of stress movement). The summary of this analysis is given in (7):

(7)	< stress movement >	< phonological change >
Class I Suffix PW	YES	YES
Class II Suffix PW	NO	NO
Class I Prefix PW=M	NO	YES
Class II Prefix PW	NO	NO

References

Kean, M-L. (1978) "The Linguistic Interpretation of Aphasic Syndrome." *Cognition* 5, 9-46.
 Nishihara, T and J. van de Weijer (2012) "On the Role of Adjacency in Morphological Stress Shift." *JELS* 29, 293-296.
 Sato, Y. (1990) "Adjacency in Phonology." *The Meiji Gakuin Review* 75, 85-89.
 Szpyra, J. (1989) *The Phonology-Morphology Interface*. London: Routledge.

Elaboration on Labeling Algorithm: Agreement for Feature Sharing

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This paper provides a refined definition of agreement for feature sharing in Labeling Algorithm. It proposes that feature sharing for labeling requires agreement whereby two unvalued features of XP and YP mutually get deleted (valued). It argues that only this definition of agreement can successfully rule out illicit movement.

In Labeling Algorithm, Chomsky (2013, 2015) claims that feature sharing is essential to labeling of {XP, YP}, in which two non-heads XP and YP are merged. He implies that feature sharing requires agreement rather than matching, although he does not discuss in detail how they are differentiated. Chomsky (2015:13, fn.16) provides a brief definition of agreement, as in (1).

(1) Agreement holds for a pair of features <valued, unvalued>.

This definition has typically been adopted for both A-movement and A'-movement, and according to this definition, {DP, TP} and {wh-XP, CP} are labeled as follows:

(2) $\alpha = \langle \varphi, \varphi \rangle$ (3) $\alpha = \langle Q, Q \rangle$

However, the definition in (1) encounters two problems. One is a conceptual problem regarding the ambiguity between agreement and matching. Paired features such as <phi, u phi> in (2) and <Q, u Q> in (3) are identical features. According to Chomsky (2000:122), matching is identity. A mere description of paired identical features is not sufficient to distinguish agreement from matching. In principle, matching as well as agreement holds for <phi, u phi> and <Q, u Q>. The other is an empirical problem regarding illicit movement. As pointed out by Goto (2015), the definition in (1) wrongly predicts that illicit A-movement in (4a) should be permitted.

(4) a. * John seems likes cats.
 b. [_{alpha} John T seem [_{beta} t T like cats]]

(5) $\alpha = \langle \varphi, \varphi \rangle$

If <[phi], [u phi]> induces agreement, not only the embedded {_{beta} DP, TP} but also the matrix {_{alpha} DP, TP} is labeled as <phi, phi>, as shown in (5). The same problem is found in illicit A'-movement in (6a).

(6) a. * Which cat do you wonder John likes?
 b. [_{alpha} which cat C you wonder [_{beta} t C John likes]]

(7) $\alpha = \langle Q, Q \rangle$

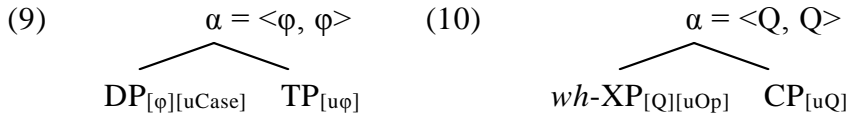
If <[Q], [u Q]> induces agreement, the matrix {_{alpha} wh-DP, CP} is labeled as <Q, Q>, as shown in (7). As far as labeling is concerned, (4a) and (6a) are not excluded.

For these reasons, the definition in (1) is not considered as the best definition of agreement for feature sharing. Following the implication of Chomsky (2013:45), this paper proposes an alternative definition of agreement in (8) by scrutinizing the mechanism of *Agree* in Chomsky (2000) inter alia.

- (8) In {XP, YP}, where XP is lexical and YP is functional, agreement takes place if
- i. {XP, YP} bears a set of features <[alpha][u beta], [u alpha]>. Namely, XP bears a valued feature [alpha] and an unvalued feature [u beta]. YP bears [u alpha], an unvalued counterpart of [alpha].

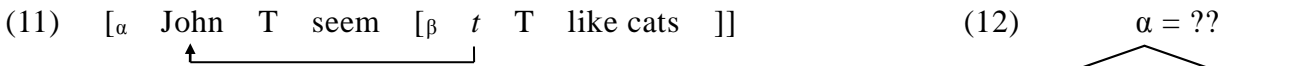
- ii. [u α] and [u β] are active in the sense that they are undeleted.
- iii. [u α] and [u β] mutually get deleted (valued) under identity between [α] and [u α].

In conjunction with (8), this paper proposes agreement mechanisms in (9) and (10), whereby a unified way of labeling applies to both A-movement and A'-movement.

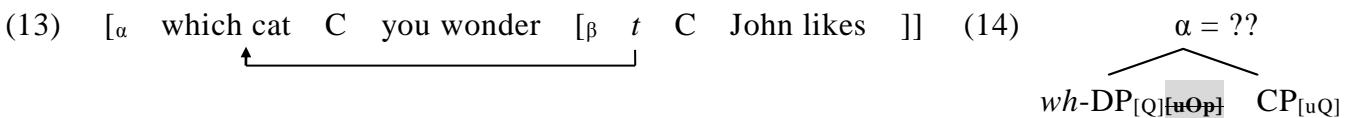


In (9), subject-DP bears valued φ -features [φ] and an unvalued case feature [uCase]; TP bears unvalued φ -features [u φ]. [u φ] and [uCase] get deleted under identity between [φ] and [u φ], and { α DP, TP} is labeled as $\langle \varphi, \varphi \rangle$. In (10), wh-XP bears a valued Q-feature [Q] and an unvalued operator feature [uOp]; CP bears an unvalued Q-feature [uQ]. [uQ] and [uOp] get deleted under identity between [Q] and [uQ], and { α wh-XP, CP} is labeled as $\langle Q, Q \rangle$. (8ii) ensures that once [uCase] and [uOp] are deleted, subject-DP and wh-XP are no longer capable of inducing agreement.

This paper argues that the definition in (8) must be maintained if we take account of illicit movement discussed above, i.e., the ungrammaticality of illicit movement is accounted for only in terms of (8). According to (8) and (9), agreement does not apply to the matrix { α DP, TP} in (11).



The most crucial in (11) is that [uCase] has already been deleted by agreement in the embedded { β DP, TP}. Due to the deleted [uCase], subject-DP cannot induce agreement with the matrix-TP, and the matrix { α DP, TP} is not labeled, as shown in (12). The same account is given to (13).



According to (8) and (10), agreement does not take place in the matrix { α wh-DP, CP}, as shown in (14), since [uOp] has already been deleted by agreement in the embedded { β wh-DP, CP}. Consequently, the matrix { α wh-DP, CP} is not labeled.

Finally, this paper clarifies theoretical implications and consequences of the definition in (8). It shows what kind of theoretical treatment should be given to quirky subjects in English, Icelandic and Japanese.

Selected References

Chomsky, Noam (2000) “Minimalist Inquiries: The Framework,” *Step by Step: Essays on Minimalist Syntax in Honor of Howard Lasnik*, ed. by Roger Martin, David Michaels and Juan Uriagereka, 89-155, MIT Press, Cambridge, MA. | **Chomsky, Noam (2013)** “Problems of Projection,” *Lingua* 130, 33-49. | **Chomsky, Noam (2015)** “Problems of Projection: Extensions,” *Structures, Strategies and Beyond: Studies in Honour of Adriana Belletti*, ed. by Elisa Di Domenico, Cornelia Hamann and Simona Matteini, 3-16, John Benjamins, Amsterdam. | **Goto, Nobu (2015)** “On the Necessity of Labeling in Narrow Syntax: Exploring a Third Approach,” Paper Presented at Keio Linguistic Colloquium, March 14th.