

A Combinatory Dictionary of English Discourse Connectives, Based on Relevance Theory

Abstract

In this paper, I would like to propose a new dictionary based on Relevance Theory which is a good tool to account for the combination of English discourse connectives (henceforth DCs). First, I will show that all the existing combinatory/ordinary/CD-ROM dictionaries are insufficient for giving any explanation for the combination of DCs. Second, I will consider how the single DC *so* can be described in the relevance-theoretic framework. Finally, I want to suggest that a relevance-theoretic dictionary can provide explanations for the combination of DCs such as *so therefore* and, *and so therefore*.

1. Introduction

The purpose of this paper is to propose a dictionary based on Relevance Theory (Henceforth RT) which is a good tool to describe combination of English DCs. According to Wilson and Sperber (1993:21), DCs are defined as follows: "Discourse connectives impose constraints on implicatures: they guide the search for intended contexts and and contextual effects." Because of the limitation of space, I will mainly deal with the single DC *so* (Cf. Blakemore 1988) and show why this lexical item can combine with other DCs such as *anyway*, *after all*, *well*, and *then*. In addition to these DC combinations, I want to investigate the combination of the single DC *so* and some other conceptual connectives like *as a result*, and *therefore*.

Cf. "discourse markers or signals: *well*, *I mean*, *you know*, *yes*, etc. While they may have little INFORMATION value, and are seldom reproduced in FORMAL writing, they are nevertheless part of the native speaker's communicative fluency." (Wales 1989:130-1)

2. Insufficiency of previous combinatory dictionaries

In this section, we shall show how insufficient some existing combinatory dictionaries are in order to describe the combination of DCs like *so anyway*.

2.1. *The BBI Combinatory Dictionary of English* (1986) does not contain the following entry words: *so, anyway, after all, then*.

2.2. *A Dictionary of English Collocations* (1994:1650–1653) does not contain the following combinations in the entry *so*:

so anyway, so well, so ...after all, so...then, so as a result

2.3. *Dictionary of Link Words in English Discourse* (1986:101) only gives the examples and definitions for the combination of *so therefore* and *so consequently* as follows:

“*So, therefore* = ‘I infer that, as a consequence,...’
So, consequently is also frequently heard in informal conversation.”

All these things make it clear that previous combinatory dictionaries are not amenable to describing the combination of DCs. That is, a so-called combinatory dictionary normally cannot go into the same detail as Relevance Theory could do.

Before going into the next section, let us just compare two general dictionaries *RHD-CD* and *CIDE*. Roughly speaking, *CIDE*'s examples often contain more than one DC in one sentence example:

(1) *So* we're not going away this weekend, *after all*.

But *RHD-CD* rarely exhibits example sentences containing more than one DC.

3. Insufficiency of previous CD-ROM dictionaries

In this section, we shall gather some data on DCs from some CD-ROM dictionaries such as *COBC-CD* and *OED2-CD* and then point out some insufficiencies in their explanation of collocations. (Cf. Fillmore and Atkins 1994.)

In order to evaluate CD-ROM dictionaries, we have to consider the following questions:

- (i) Is it easy to access the combination of DCs?
- (ii) Does a CD-ROM dictionary provide relevant linguistic facts which go beyond the normal monolingual dictionaries?

A closer investigation of these questions reveals that there are some big problems with DCs as follows:

- a. *COB-CD* does not contain the following headwords: *so ,then*
- b. *COB-CD* does not contain the following combinations: *after all, as a result*
- c. There is no information which provides comprehensive and accurate analyses of the distinction between conceptual and procedural meanings, uses of each DC and the combination of DCs.

3.1 A Comparison with *COB-CD* and *OED2-CD*

Let us now take a look at how the possibility of DCs is actually handled in each CD-ROM dictionary.

	COBC-CD		OED2-CD	
	examples	no results found	examples	no results found
SO		+	103714	
AFTER ALL		+	505	
WELL	263732		28604	
ANYWAY	18673		224	
THEREFORE	19001		5798	
THEN		+	34068	
AS A RESULT		+	664	
CONSEQUENTLY	2114		707	

Diagram 1 designates the results of each single DC in *COB-CD* and *OED2-CD*.

In Diagram 2, the results of combination of DCs are shown. In *COBC-CD*, I have looked for the collocate list and the list of stopwords for each DC. In *OED2-CD*, I have checked the text search, that is, searching the whole Dictionary for each DC.

It is important to emphasize that too many marks ? in this diagram come from the insufficiencies of these CD-ROM dictionaries with respect to the description of the combination of CDs.

	<i>COBC-CD</i>		<i>OED2-CD</i>		
			Collocation	Stopwords	Text search
SO THEREFORE				526	3
SO CONSEQUENTLY	?		?	?	10
SO AS A RESULT	?		?	?	1
SO...THEN	?		?	?	?
SO THEN	?		?	?	59
SO...AFTER ALL	?		?	?	1(?)
SO...HUH	?		?	?	?
AND SO THEREFORE	?		?	?	1
SO ANYWAY				1438	?
SO WELL				8586	780

Diagram 2

3.2 Problems with example sentences

A close examination of the examples given in *COB-CD* and *OED2-CD* demonstrates that there are some insufficiencies:

- (i) Examples marked by %% indicate that their combinations cannot be easily accessed, but we can find these examples by using a lot of processing effort.
 - (ii) Examples marked by ?? are not appropriate combinations of DCs and so they are insufficient.
 - (iii) Examples marked by ## designate that neither dictionary contains any appropriate examples. (Examples marked by ## are due to *COB2*.)
- (2) ificant increase in heroin use, *so therefore* no new policies are necessary - Th-*COB-CD*
- ??(3) like *so, therefore*, it is followed by *as*.-*OED2-CD*
- (4) 1721 We both have spent our stock of love, *So consequently* should be free.-*OED2-CD*

%%(5) ust a hint of reflections - *And so* there's less difference, effective-
COBC-CD

##(6) '*So* you won't watch the show again *then*'?

4. Insufficiency of previous social approaches to DCs

In this section, I will briefly look at some social approaches to DCs and their insufficiencies. (Cf. Fraser 1990)

4.1 Grice (1989:359–65)

Gricean approach based on social pragmatics shows that *so/therefore* can be analyzed as follows:

- (7) A: It's raining.
B: *So* the grass is wet.

What was said by (7): (a) It's raining. (b) The grass is wet.
What was conventionally implicated by the use of *so*:

(a) explains (b)

Some insufficiencies of this Gricean analysis of *so* are:

- (i) There is no clear distinction between *so* and *therefore*;
- (ii) They cannot explain the data in which the premise like (7A) is given not by some previous utterance but by some visual perception:
 - (8) <The speaker sees someone arrive home laden with parcels.>
So/Therefore you've spent all your money.
 - (9) A: Your clothes smell of perfume.
B: *So* (what)?/**Therefore* (what)?
- (iii) They cannot explain the difference in *so* and *therefore* in that sometimes *so* in the conclusion like (10) is not followed by any proposition:
 - (10) It's been a busy day, *so*/**therefore*.....

4.2 Stenstrom (1994)

Based on the following definition of discourse markers, Stenstrom classifies the DCs: "Discourse markers are used to organize and hold the truth and to mark boundaries in the discourse." (Stenstrom 1994:63)

Stenstrom's classification of DCs:

p.73 <links> *so*; p.160 <return markers> *anyway, so*; p.86 <frames> *anyway, well*

Some insufficiencies of Stenstrom's approach to DCs:

- (i) Each DC has a lot of different (i.e. polysemous) functions, and so it is difficult to capture the generalization for each entry. For example, there is no explanation for common characterization or function of *so, anyway* and so on.
- (ii) There is no way to compute from a single DC to the combination of DCs such as *well I mean you know*. In short, each entry or discourse marker has been given as an idiomatic expression.

5. Some results of the relevance theoretic study

Finally, I will briefly outline some relevance theoretic approaches to DCs and suggest how we can deal with some problematic combinations in Relevance Theory (=RT).

5.1 DCs and RT

RT can draw a clear distinction between conceptual and procedural meanings. From the next seven distinctions of information conveyed by an utterance, it follows that many linguistic facts and combination of DCs in English, which we cannot understand clearly before, can receive a natural explanation within the framework of RT.

We shall use RT as a descriptive framework and analyse distinct uses of a DC while providing a common core of procedural meaning.

The meaning of a linguistic expression is procedural if and only if it encodes information about computations (i.e. about how the utterance is to be processed). (Cf. "Procedural knowledge often cannot be stated explicitly: e.g. I know how to ride a bicycle because I have some set of

procedures that allow me to adjust my weight in space in order to stay upright.” (Eysenck & Keane 1990:251))

The meaning of a linguistic expression is conceptual if and only if encodes a concept (i.e. an element of a conceptual representation. (Cf. Declarative knowledge: e.g. I know that a bicycle has wheels, a frame, a carrier, handlebars and a bell.)

Types of communicated information (Cf. Wilson and Sperber 1993):

a) Conceptually encoded information conveyed by an utterance:

- (i) lower-level explicatures
- (ii) higher-level explicatures
- (iii) implicatures (e.g. *please*)

b) Procedurally encoded information conveyed by an utterance:

- (iv) constraints on lower-level explicatures (e.g. pronouns)
- (v) constraints on higher-level explicatures (e.g. *huh*)
- (vi) constraints on implicatures (e.g. *so*)
- (vii) constraints on contextual assumptions (e.g. *even*)

5.2 DCs as constraints on implicatures

5.2.1 DCs and contextual effects Cf. Blakemore (1992:137–142), Blass (1993)

Blakemore’s advantages:

- (i) inferential *so* is procedural and constraints the hearer’s processing (*So* always prefaces conclusions), while *therefore* is conceptual and encodes a higher-level explicature.

(11) He is an English man. He is, *therefore*, brave.
 <P. *Therefore* Q. = P. It is consequence of P that Q>
 Blakemore (1992:153)

- (ii) Unlike *therefore*, *so* is not always associated with proof on justification; *so* contrasts with *therefore* in that it can be used to introduce a proposition which does not have a linguistic antecedent.

- (iii) *So* is often a less formal means of conveying the connection expressed by *therefore*;
- (iv) Blakemore's analysis explains why *so* and *therefore/consequently* can cooccur in some spoken data.

5.3 *So therefore/And so therefore*

An entry word for procedural *so*: <P. *So* Q>

Procedural meaning of *so*: Process Q as a conclusion.

An example sentence:

- (12) It rained. *So* the grass is wet.

An entry word for conceptual *so*: <*do so*; manner adverbial *so*>

Conceptual meaning of *so*: 'in such a way'

An example sentence:

- (13) I hoped he would reserve the room before my arrival but he didn't *do so*.

An entry word for conceptual *and so*: <P, and so Q>

Conceptual meaning of *and so*: 'and as a result'

(Cf. Blakemore 1992:153, Carston 1993)

An example sentence:

- (14) It started to rain *and so/and as a result* we stopped the game

A combinatory entry : <P. *So therefore* Q>

Procedural + conceptual combinatory meaning of *so therefore*:

'process Q as a conclusion' + 'It is a consequence of P that Q'

(Note: First, inferential conclusion and then conceptual conclusion, resulting in the speaker's careful way of reaching the conclusion.)

An example sentence:

- (15) It was to do with the fact that if Britain lost the Falkland Islands, they would lose British soil nearer to Antarctica than Argentinian soil. *So therefore*, Britain had to hang on to the Faulklands in order to have a claim on Antarctica.-*English Journal (=EJ)*, June 1988, p.175

A combinatory entry:<P. *And so therefore* Q>

Conceptual + conceptual combinatory meaning of *and so therefore*:

‘And as a result’ + ‘It is a consequence of P that Q’

(Note: two conceptual conclusions, resulting in strengthening the first conclusion.

Example:

- (16) I mean, like all other Asians we’ve had experience during the war, but since the past, I think, 15 years, we have all these Asian countries neighbours, have had every close ties already without Japan. *And so therefore*, if we are all sending troops and we are sacrificing our soldiers, we feel that Japan also should help.-*EJ*, July 1993, p.25

5.4 *So...after all*

A combinatory entry:<*So...after all*>

Procedural + procedural meaning of *so ...after all*:

‘process Q as a conclusion based on some concrete evidence’

‘process Q as a denial of expectation P’

(Note: to show the speaker’s doubt because of interpreting Q as both a conclusion and a denial of expectation.)

Examples:

- (17) *So*, for studying a foreign language, the foundation is essential *after all*. -*Hiraganatimes* April, 1994, p.8
- (18) The needle broke. *So, after all*, the niece had to change the needle,...-Longman/Lancaster Written Corpus

5.5 *So...then*

A combinatory entry: <P. *So Q then*>

Procedural + procedural meaning of *so...then*:

'Process Q as a conclusion based on some concrete evidence'+

'Process Q as a conclusion based on some hypothetical reasoning'

(Note: to show the speaker's weaker certainty of the conclusion Q, because of the change from a strong certainty to a hypothetical certainty.)

<Imagine that I have arrived home laden with parcels.>

(19) *So*, you've spent all your money, *then*.

(20) EJ:*So then* here comes big question.-EJ, June 1993, p.16

5.6 *Well...then/*so*

An impossible combinatory entry: *<*Well...so*>

Procedural + procedural meaning of *well...so*:

'Renegotiate the relevant background assumptions'+

'Process Q as a conclusion based on some concrete evidence'

(Note: This combination is unacceptable, since in order to renegotiate the assumptions, we normally depend on some non-concrete evidence or hypothetical situation.)

A combinatory entry of *well...then*: <*well...then*>

Procedural + procedural meaning of *well...then*:

'Renegotiate the relevant background assumptions'+

'Process Q as a conclusion based on some hypothetical reasoning'

(Note: Acceptable because of some hypothetical reasoning for renegotiating the existing assumptions.)

Example sentences:

(21) If you want to cover the Finance Ministry, *well, then/*so* you've got to join the *kisha* club...-EJ, June 1993, p.5

(22) Michiko: The weather is usually really good in October.
Joe: *Well*, I'll try for October, *then/*so*.-EJ

(Note that *so...well* is acceptable in that the conclusion based on concrete evidence can be followed by some renegotiation of the existing assumptions.)

(23) *So*, I thought, *well*, I just suddenly said...-*EJ*, July 1993, p.12

5.8 *So anyway/So...anyway*

A combinatory entry of *so anyway*<*so Q anyway*>

Procedural+procedural meaning of *so anyway*:

'Process Q as a conclusion based on some concrete evidence'+

'Process Q as an irrelevant proposition'

(Note: Q can be interpreted as an irrelevant conclusion.)

Examples:

(24) George: What if they told me I was no good...I guess that would be pretty hard for somebody to understand.

Marty: Uh, no. No, not hard at all. *So anyway*, George...about Lorraine.-*Back to the Future III*, p. 40

(25) *So* how do you win this game *anyway*?-*E.T.*, p.14

5.9 *So as a result*

A combinatory entry of *so as a result*: <P.*So as a result Q*>

Procedural + conceptual meaning of *so as a result*:

'Process Q as a conclusion based on some concrete evidence'+

'It is as a result of Q that P'

(Note: Q is interpreted as an inferential and conceptual conclusion just like *so therefore*.)

An example sentence:

(26) *So as a result*, you see that they really are under a lot of pressure...-*EJ*, Aug, 1993, p.28

5.10 *So...huh*

A combinatory entry: <*So...huh?*>

Procedural + procedural meaning:

'Process Q as a conclusion based on some concrete evidence'+

'Process X's opinion of Q with a dissociative attitude'

(Note: often ironically interpreted because Q is first strongly concluded but later the speaker implicitly shows a strong doubt about its certainty.)

An example sentence:

(27) Jan: Are you serious?

Mary: I'm serious.

Jan: *So* you're going to work eight to noon, *huh?*

Mary: Monday, eight to eleven.

6. Conclusion

In conclusion, we have argued that all the existing dictionaries such as combinatory dictionaries, general dictionaries and also CD-ROM dictionaries are not good enough to present a statement of the way in which the combination of DCs are used and we have suggested that a relevance-theoretic approach to the description of the combination of DCs is needed in order to capture the true nature of these linguistic facts.

It is hoped that the present paper becomes a first step along a relevance-theoretic lexicographic research on the explanation for the combination of DCs in English.

Data

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