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# **Understand** in Conceptual Semantics

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O. INTRODUCTION. This paper presents a semantic analysis of the polysemous verb *understand* (Wheeler 1989, 1993) which (i) specifies the meaning of each sense, (ii) explains the relationship between the senses, and (iii) shows why these and no others comprise the meanings of *understand*. Further, this analysis explains aspects of the syntax and pragmatics of the English verb *understand*.

Understand poses a particular and even strident methodological challenge for lexical semantics. Denoting an interior state, this verb of cognition is not backed by a chorus of observational grounding to help motivate the verb's sense statement. The linguist can not look out in the world to see, hear, or touch an instance of understanding to suggest aspects of its meaning. Instead, the analysis

of the meaning of such verbs proceeds (as it should) a cappella.

To diagnose the semantics of *understand*, I rely on syntactic patterning as evidence of semantic content. In particular, I turn to its syntactic alternations (Levin 1993). In variation on Levin's theme, instead of examining alternations in which *understand* <u>itself</u> participates, I examine the syntactic alternations in which the <u>direct objects</u> (and adjuncts) of the senses of *understand* participate. These alternations inform us of the semantics accruing to the <u>position</u> of object argument to *understand*. <sup>1</sup> This information will be shown to constitute the heft of the lexical conceptual structure (LCS) of *understand*.

I represent my findings within the framework of Conceptual Semantics (Jackendoff 1983, 1990). In doing so, I make no claim as to the innateness or the

universality of the semantic components proposed.

I begin by summarizing earlier work delineating three senses of the English verb understand (Wheeler 1989, 1993, ms).

- 1. THE VERB UNDERSTAND -- ITS SENSES. Understand is an interior state verb; specifically, a verb of cognition. Like 75% of the more than 240 monolexemic verbs of cognition in English, understand is a two-place, transitive predicate. It occurs productively in the following syntactic frames:
  - (1) a. NP1 V NP2
    - b. NP1 V wh- + S
    - c. NP1 V S'
    - d. NP1 V NP2 + adjunct/complement

Examples (2) - (5) illustrate these patterns, respectively, and also list typical object arguments.

(2) Marie understands NP2. the problem, the situation, the issue, the idea, the news, the factor involved, the importance of dealing with the way the system was structured, the wisdom of the decision, the patterns that form in their own behavior, the new organization and its requirements, the psychology of the project members, the company's customs, each business well, the market,

the instructions, the scorecard at her company, the invention's nuances and history

- (3)They understand wh + Show to win the game, why it wasn't managed better. what is wrong with the old one, how vital good management is to their company
- (4) a. They understand that their progress in the company depends on the results they achieve, not on their eloquence in meetings.
  - b. Understand that big machines, separated equipment, and long conveyor systems disconnect people, obscure opportunities for merging processes, and result in divided accountability!
  - c. I understand that ever more techno-business is moving into Utah.
- (5) a. By poetical colors, the neoclassicist understands words, elegant phrases, figures of speech [Webster's Third New International Dictionary ].
  - b. I understand the phrase literally.
  - c. I understand her suggestion as a complaint.
  - d. I understand her suggestion to be sarcastic.

In Wheeler 1989 and 1993, I explored whether understand shows restrictions in the syntactic environments in which each subcategorial frame could occur. What proved distinctive was the ability of understand to occur under main verb negation, in imperative form, or intransitively. Accordingly, I delineated use classes<sup>2</sup> reflecting these distinctions. Accruing to each class is one or more characteristic lexical substitutes for *understand*.

Class I (COMPREHEND): I understand the problem/idea/why John left.

Subcategorization: [ \_\_\_\_\_ NP/wh- interrogative] Syntactic distribution: √neg; \*imperative<sup>3</sup>; √intransitive Lexical substitutes: see, get it, grasp, comprehend

Class II (REALIZE): She understands that the rent is due on the first.

Subcategorization:

[ $\sqrt{\text{neg}}$ ;  $\sqrt{\text{imperative}}$ ;  $\sqrt{\text{intransitive}}$ Syntactic distribution:

Lexical substitutes: realize

Class III (READ + MANNER): I understand the phrase literally ...

Subcategorization: [ \_\_\_\_\_ NP X; {X=adjunct/complement}]

\*neg; √imperative; \*intransitive Syntactic distribution: Lexical substitutes: take, interpret, read, view

Thus, I have proposed an operational definition of sense: each sense of a lexeme will exhibit a characteristic pairing of

i) subcategorization frame and

syntactic distribution potential (ability to occur intransitively, under main verb negation, in imperative mood, etc.).

The senses so identified, will manifest distinct lexical substitutes.

2. THE ALTERNATIONS OF UNDERSTAND. In treating the semantics of understand, I begin with the COMPREHEND reading, the most frequent sense of this verb. This reading occurs in the frame [NP1 V NP2/wh - S] [e.g. She understands the problem/the news/the situation, etc.). I will demonstrate that the NP2 argument to understand exhibits syntactic distribution characteristic of arguments selected by verbs of material composition. This patterning is key to the semantics of the COMPREHEND sense of understand.

Verbs such as consist, constitute, comprise, form, and make occur in the frame [NP1 V NP2] and denote aspects of material composition. Jackendoff observes that 'sentences describing composition always involve a relationship between a whole and its parts' (1990:120). Verbs of material composition differ according to whether they select the whole or parts as NP1. For example, consist and constitute are mirror-images of each other: consist selects as NP1 an argument denoting a whole, and as NP2, an argument denoting parts to that whole [see (6)a]. The part/whole relations are reversed for constitute/comprise/form/make as seen in (6)b. These verbs select as NP1 an argument denoting parts and as NP2, an argument denoting the whole.

- (6) a. The triangle consists of three lines.
  - b. Three lines constitute/comprise/form/make a triangle.

The NP2 argument of *understand* occurs as argument to verbs of material composition. In particular, it occurs in the position of arguments denoting a whole in a part/whole relationship [see (7) - (8)]. Thus, the object argument to *understand* occurs as NP2 to *constitute*, or *comprise*, and as NP1 to *consist*:

- (7) a. Storing important documents constitutes/comprises the purpose of the table.
  - b. His father's coming home constitutes/comprises the news.
  - c. That the wires don't connect constitutes/comprises the problem.
- (8) a. The purpose of the table consists in storing important documents. b. The problem consists of the wires not connecting.

I conclude, therefore that the COMPREHEND sense of *understand* selects as direct object, a whole in a part/whole relationship. As such, the conceptual structure of this reading will reflect the semantics of predicates of material composition.

#### 3. THE CONCEPTUAL SEMANTICS OF MATERIAL COMPOSITION

3.1 THE SEMANTICS OF VERBS OF MATERIAL COMPOSITION. Prefatory to treating the semantics of *understand*, I step back and describe the semantics of material composition within Conceptual Semantics.

Jackendoff integrates the field of material composition

by subsuming it with Identification under a supercategory that might go under the name *Character* ... Predicates of Character tell about the object itself: what category it belongs to and what properties it has (Identification), and what it is made of (Composition) (1990:118).

Stative predicates of composition are analyzed as encoding 'a variety of the function BE, with a Theme and a "reference object." (Jackendoff 1990:119). As standard in Conceptual Semantics, the function is annotated with a semantic field feature, here *Comp*, signifying Composition. Further, the field feature supports a diacritic reflecting whether the verb of material composition selects an NP1 denoting a whole in a part-whole relationship, (BE<sub>Comp</sub>+), or a part in a part-whole relationship, (BE<sub>Comp</sub>). The resulting field structure is represented as in Figure 1 (adapted from Jackendoff 1990:118).

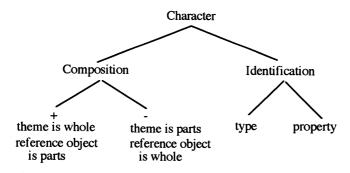


Figure 1

The Lexical Conceptual Structures (LCS) corresponding to verbs of material composition in (6)a-b are given in the bottom lines of (9)a-b (Jackendoff 1990:119-120).

- a. [NP1 consist NP2]: NP1 denotes whole; NP2 denotes parts
   The triangle consists of three lines.
   -DIR
   [sit BE<sub>comp</sub>+([TRIANGLE], [Place AT[3 LINES]])]
  - b. [NP1 comprise NP2]: NP1 denotes parts; NP2 denotes whole
     The three lines constitute/comprise/form/make a triangle.
     -DIR
     [Sit BE<sub>comp</sub> ([3 LINES], [Place AT[TRIANGLE]])]

The LCS of (9)a states that *consist* encodes an undirected situation (a state); in particular, *consist* encodes a relation of composition, (BE<sub>Comp</sub><sup>+</sup>), selecting as first argument a whole and as second argument, parts of that whole. The LCS of (9)b states that *comprise* encodes an undirected situation (a state), specifically, a relation of composition, (BE<sub>Comp</sub><sup>-</sup>), and selects as first argument the parts to the whole named in second argument position.

3.2 OBJECT ARGUMENT TO UNDERSTAND ENCODES SEMANTICS OF MATERIAL COMPOSITION. Extending this analysis to understand and reflecting the syntactic and semantic patterning described in (6) - (8), I propose that the COMPREHEND reading encodes BE<sub>Comp</sub><sup>+</sup> as seen in (10)b.

(10) a. I understand the purpose of the table.

b. -DIR
[Sit BE<sub>comp</sub>+ ([THE PURPOSE OF THE TABLE], [Place AT[Y]])]

Example (11) renders the lexical entry for understand as in I understand the purpose of the table:

This lexical entry states that *understand* is subcategorized for two arguments, subject (unspecified, by convention) and object,  $\langle NP \text{ or } wh^- + S \rangle_k$ . The Lexical Conceptual Structure (LCS) says that the being denoted by  $NP_i$ , the subject of *understand*, perceives an undirected situation (a state); specifically, a relation of composition holding between a whole and parts. The function, PERCEIVE is adapted from Miller and Johnson-Laird (1976:115). Since *understand*'s subcategorized object is indexed to the first argument of the function  $BE_{Comp}^+$  ([X], [AT[Y]]), this LCS specifies that *understand* selects a direct object denoting a whole in a part/whole relation.

In effect, understand selects as semantic object the function CONSIST(X, Y) where X is indexed to understand 's subcategorized direct object. Since the parts are not indexed to any syntactic structure in the lexical entry, these are encoded as semantically implicit. Thus, NP<sub>i</sub> asserts they perceive the whole. The LCS (i) presupposes the existence of the parts [see (12)] and (ii) entails that NP<sub>i</sub> knows the identity of those parts [see (13)]. Note that in (13), Storing important documents fills the NP1 argument position to constitute, the position corresponding to parts in a part/whole relationship. An asterisk in (12) - (13) marks semantic infelicity.

Existence of parts is presupposed

(12) a. I understand the purpose of the table.

b. I don't understand the purpose of the table.

c. \*There is nothing that constitutes the purpose of the table.

Presupposition: Something constitutes the purpose of the table.

Knowledge of identity of parts is entailed

A: I understand the purpose of the table.

B: What is it? What is the purpose of the table?

A: (i) Storing important documents constitutes the purpose of the table.

(ii) \*I don't know (what constitutes the purpose of the table).

(iii) \*Something constitutes the purpose of the table.

Entailment: NP1 knows the identity of the parts.

This analysis is of consequence for our understanding of how meaning is distributed across lexical items in a sentence. The predicate PERCEIVE is fairly unelaborated semantically. Instead, the real semantics of *understand* resides in the semantics of its subcategorized object argument.

There is more to be said about the semantics of the COMPREHEND reading. The LCS for *understand* proposed thus far would incorrectly predict that (14) receives an interpretation as in (15) corresponding to the LCS of (16).

- (14) She understands the book.
- (15) She perceives that the book consists of parts (i.e. pages, cover, spine).
- (16) understand

  V

  \_\_\_\_\_\_<the book><sub>k</sub>

  -DIR

  \_\_\_\_\_\_the book><sub>k</sub>

  -DIR

  [Sit PERCEIVE ([ SHE i ], [Sit BEComp<sup>+</sup>

  ([Sit /Thing THE BOOK ]<sub>k</sub>,

  [Place AT [PAGES, COVER, SPINE]])])]

However, the actual interpretation of (14) is not (15) but as illustrated in (17).

- (17) a. I understand what the author is saying.
  - b. I understand the import of the book.
  - c. I understand the point of the book.
  - d. I understand why the book was written.

To interpret this data, I first discuss semantic coercion. Semantic coercion [(so dubbed by Pustejovsky 1991 but widely discussed previously by Jackendoff (1983, 1990, 1992, ms.), Levin and Rapoport (1988), Langacker (1984), Nunberg (1978), Sells (1985) and Wheeler (1989, ms.) among others] operates on an utterance such as (18) to render an interpretation as in (19)b.

- (18) Reagan thinks bananas.
- (19) a. What is Kissinger's favorite fruit?
  - b. Reagan thinks (that Kissinger's favorite fruit is) bananas.

By itself, example (18) is ungrammatical: the lexical entry of the verb *think* specifies a sentential object argument but occurs in (18) with a noun phrase argument. However, in the context of (19)a, (18) receives an interpretation as suggested in (19)b which satisfies the lexical constraints on *think*. (Sells 1985).

When an utterance violates the lexical specifications of a verb, hearers seek to <u>construe</u> an interpretation which *does conform* with those specifications. The lexical item <u>coerces</u> and a hearer <u>construes</u> a conforming interpretation. Thus, we can follow the trail of hearer construal, to induce what lexical specifications must be guiding that construal.

Returning to example (14), we see the telltale signs of semantic coercion: Example (14) manifests a noun phrase object denoting a concrete entity, but the interpretation in (17) shows either a wh - interpretative or an NP headed by abstract nouns such as import or point. If the hearer has construed an interpretation distinct from (15) and (16), then the LCs as written does not yet fully reflect our semantic competence of understand. Accordingly, I refine the ontological specifications on the X argument of  $BE_{Comp}^+$  as in (20) to reflect the relevant structure of the construed utterance meaning:

# (20) [Sit PERCEIVE ([NP<sub>i</sub>], [Sit BE<sub>Comp</sub> + ([Sit /-Mat X]<sub>k</sub>, [Place AT[Y]])])]

The conceptual category [- Mat] (short for non-Material Entity) represents an extension of the category Material Entity proposed in Jackendoff 1992. As such, it captures the generalization that *understand* selects as object an abstract entity (-Mat) or a situation (wh - S).

- 4.0 EXPLAINING THE RANGE OF UNDERSTAND'S SENSES. The relationship between the senses of understand lies in this verb's structuring of the Character field. I have shown the COMPREHEND sense to encode the function  $BE_{comp}^+$ . I will now demonstrate that the remaining senses of understand encode the remainder of the subcategories of the semantic field of Character (see Figure 1).
- 4.1 THE REALIZE SENSE. The COMPREHEND reading of understand selects an object argument encoding a whole in a part/whole relationship. We have seen that verbs of material composition (consist vs. comprise) differ by whether they select a whole or a part as subject. Since two classes of verbs contrast in this fashion, it is reasonable to inquire whether distinct senses of a single verb could contrast in the same way. I argue that they do and that it is precisely this contrast which adheres between the COMPREHEND and the REALIZE readings of understand.

In the REALIZE sense, understand occurs in the frame [NP1 V that + S]. Understand is instantiated in this frame in (21) [see also (22)].

- (21) Why should it be difficult to agree on objectives? Doesn't everyone understand that CARE is in business to help poor people overseas? That the Salvation Army helps the homeless? That the Girl Scout program fosters goodwill and socially constructive attitudes? The problem is that these broad statements of purpose are not objectives at all. They are only concepts. And they certainly do not encourage the measurement of progress. (The Harvard Business Review Jan.-Feb., 1987:14, emphasis added).
- (22) Doesn't everyone understand
  - a. that CARE is in business to help poor people overseas?
  - b. That the Salvation Army helps the homeless?
  - c. That the Girl Scout program fosters goodwill and socially constructive attitudes?

As seen in (21), the sentential objects identified in (22)a-c bear the reference of the NPs objectives, broad statements of purpose, and concepts [see (23)].

- (23) a. Why should it be difficult to agree on objectives?
  - b. ... these broad statements of purpose are not objectives at all.
  - c. They are only <u>concepts</u>. (emphasis added)

Example (23)c may be glossed as in (24)b.

Recall that *comprise* and *constitute* select a subject argument denoting parts in a part-whole relationship [see (24)c]. Objects of the REALIZE reading occur as subject to *constitute* or *comprise* and therefore encode parts in a part-whole relationship [see (24)b].

- (24)?That CARE is in business to help poor people overseas, that the Salvation Army helps the homeless, that the Girl Scout program fosters goodwill and socially constructive attitudes constitute /comprise concepts.
  - b. That CARE is in business ..., that the Salvation Army helps the homeless, that the Girl Scout program fosters goodwill ..., these comprise concepts/objectives/broad statements of purpose.
  - c. Three lines constitute/comprise a triangle.

Accordingly, I conclude that the REALIZE sense of understand selects as object a part in a part/whole relationship and I propose (25) as the LCS of the REALIZE reading of understand.

REALIZE SENSE (25)understand  $< that + S>_k$ [sit PERCEIVE ([NPi], [sit BEComp ([sit X]k, [Place AT[Y]])])]

The LCS states that the being denoted by NPi, the subject of understand, perceives an undirected situation (a state); specifically, a composition relationship holding between parts and a whole. In particular, since the first argument of the function BE<sub>Comp</sub> is indexed to the subcategorized direct object, this LCS states that understand' selects as direct object the part (or parts) in a part/whole relation.

Parallel to the lexical entry for the COMPREHEND reading, since the whole is not indexed to any syntactic structure in the lexical entry, it is encoded as semantically implicit. But what comprises the implicit whole? First, the short Example (24)b shows that concepts, objectives, and statements of purpose denote the whole in the relevant part/whole relationship. Of course, these NPs are precisely those that the COMPREHEND sense selects as object argument, NPs denoting a whole in a part-whole relationship.

Issues of prototypicality or canonicity suggest a longer answer. The standard way of referring to part/whole relationship is by naming the whole. For example, given an assembled jigsaw puzzle, it would odd to say The picture on all those

pieces is interesting instead of The picture on that puzzle is interesting.

While the REALIZE and COMPREHEND readings of understand both select (BE<sub>Comp</sub>) as semantic object, it is the COMPREHEND reading which invokes this relationship in a prototypical or canonical fashion. The COMPREHEND reading invokes the part/whole relationship in the usual way, by naming the whole and presupposing the parts. But the REALIZE reading invokes this relationship nonprototypically, by naming the parts, and presupposing the whole. This nonprototypical mode of invoking the part/whole relationship is part of what makes the REALIZE reading appear less clearly associated with a part/whole relationship than the COMPREHEND reading.

I suspect another factor is also at work. It appears that the implicit semantic argument is less crucial to the REALIZE reading than it is to the COMPREHEND reading. Thus, if someone asserts I understand the problem, it is critical that they actually know the identity of the components of that problem, else they don't understand it. However, if someone asserts I understand that the mortgage is due

on the first, the real crux of the matter lies in the part as specified. I explore

possible explanations for this in Section 5.

In any case, the central point remains; the COMPREHEND and REALIZE senses of *understand* select an object argument encoding a relationship of composition, and that these senses vary by whether it is the whole or the part which is realized in object position.

4.2 THE [READ + (MANNER)] SENSE. This sense of *understand*, manifest in examples such as (5), occurs in the frame [NP1 V NP2 + adjunct/complement].

The syntax and semantics of identificational predicates provide the key to the syntax and semantics of this sense of *understand*. Identificational predicates (e.g. *is*, *become*, *turn into*, *etc.*) occur in the frame [NP1 V NP2/Adj]. NP2 and Adj indicate what category NP1 belongs to or what properties it manifests [see (26) - (27)].

- (26) Elise is a pianist
  -DIR
  [Sit BE<sub>Ident</sub> ([Thing Token ELISE], [Place AT<sub>Ident</sub>([Thing Type PIANIST])])]
- (27) The light is red.
  -DIR
  [Sit BE<sub>Ident</sub> ([LIGHT], [AT<sub>Ident</sub>([Property RED])])]

The NP2 argument to *understand* in (5) occurs as NP1 to the identificational predicate *be* in (28). Filling out the distributional parallel, *understand*'s adjunct in (5) occurs as NP2 or Adj. in (28). The semantics parallel these syntactic patternings: just as NP2/Adj to identificational predicates in (26) - (27) encode the type or property of the entity denoted by NP1, so the adjunct to *understand* in (5) occurring as NP2/Adj to identificational *be* [in (28)] also encodes the type or property of the entity denoted by NP1 [see (28)].

- (28) a. The phrase is literal.
  - b. Her suggestion is a complaint.
  - c. Her suggestion is sarcastic.

Therefore, I conclude that *understand* in this reading selects an NP2 and adjunct encoding an identificational relation. I rename this as the IDENTIFICATION reading of *understand*. <sup>4</sup>

Accordingly, omitting certain coding complexities, I propose (29) as the analysis for the IDENTIFICATION sense.

(29) IDENTIFICATION SENSE understand V

\_\_\_\_NP\_k {as NP/Adj}\_m {to be NP/Adj}\_m
-DIR -DIR

[sit PERCEIVE ([NP]], [Sit BE\_Ident ([+/-Mat X]\_k, [Place AT\_Ident[Type/Property Y]]\_m)])]

This lexical entry says that the IDENTIFICATION reading of understand occurs with an NP direct object, followed by either as + NP or as + Adj or by to be + CAP = CAP

NP or to be + Adj. The LCS states that the being denoted by NP<sub>i</sub>, the subject, perceives a non-directed situation (a state); specifically, a relation of identity holding between X and Y such that Y identifies the [TYPE] or a [PROPERTY] of X.

5. EXPLAINING THE SYNTAX AND PRAGMATICS OF UNDERSTAND. Aspects of the syntax and pragmatics of understand follow directly from the semantic analysis proposed, specifically from the semantic component PERCEIVE and from

 $BE_{Comp}$ 

It is in the nature of perceiving and part/whole relationships that one may perceive a whole, without also perceiving the parts comprising that whole. As such, we would expect the COMPREHEND reading to be felicitous under negation. Indeed, that is just what we find. To assert *I don't understand the problem* is to assert perception of the whole (problem) while denying knowledge of identity of the parts.

Relevant to the near non-occurrence of COMPREHEND in imperative, Miller & Johnson-Laird find that PERCEIVE 'contains neither a causal nor an intentional component'. Even if the whole is named, one can not command perception of constitutive parts. Thus, if some interlocutor does not already perceive that particular parts comprise a whole, perception of that relationship can not be compelled by simply naming the whole. Accordingly, the COMPREHEND reading

is infelicitous in imperative form.

In the REALIZE reading, understand is specified to select a sentential complement. This object argument corresponds, in the LCS to the parts constituent of the function BEComp. The fact that a hearer can far more readily reason to some whole when presented the parts, than they can reason to parts when presented a whole, may well explain why the REALIZE sense does occur in imperative form. For example, the REALIZE reading [e.g. Understand that the mortgage is due on the first!] selects as direct object a sentential complement corresponding to the parts constituent of the LCS. The hearer, presented with parts, can readily induce a whole; the whole may be quite general (e.g. requirement, problem, issue, etc.), but it nonetheless completes the composition circuit specified by the LCS. Accordingly, the REALIZE sense of understand is felicitous in imperative. This pattern of reasoning may also explain why the implicit whole is less important to the REALIZE sense than the implicit parts to the COMPREHEND sense.

The pragmatics of PERCEIVE explains aspects of the pragmatics of understand. For example, since my spouse and I have long used a Krupps II Primo cappuccino maker, it would be odd for me to assert to him of this cappuccino maker, I understand how to make cappuccino. The semantics of PERCEIVE involves attending to and forming a judgment of a thing (Miller and Johnson-Laird 1977). However, judgment forming is only appropriate when a judgment is missing or faulty. So, if our existing judgment of a thing is not amiss, it is pragmatically bizarre to judge it again. This explains the pragmatic oddity of I understand how to make cappuccino in this context.

Of course, if confronted with a different machine, or a different audience, the pragmatics are back in order -- it is contextually appropriate form a judgment; accordingly, PERCEIVE is again pragmatically appropriate, and *I understand* 

how to make cappuccino is pragmatically felicitous.

6. SUMMARY & CONCLUSION. I have explained the relation between the senses of *understand* and have motivated why just these senses and no others

comprise the meanings of that verb. Three-ways polysemous, each sense of the verb encodes one subcategory of the semantic field of Character: the COMPREHEND reading encodes BE<sub>comp</sub>+; the REALIZE reading, BE<sub>comp</sub>-; and the IDENTIFICATION reading encodes either BE<sub>Ident (Type)</sub>, or BE<sub>Ident (Property)</sub>.

To assert that someone understands something is to assert that they perceive the character of that thing in precisely the ways embodied in the subcategories of the semantic field, Character. This analysis explains the selectional restrictions on that verb, the relationship between its three senses, and

aspects of its syntactic and pragmatic patterning.

Finally, this analysis provides evidence on how meaning is distributed across lexical items. In the case of the English verb *understand*, I have shown that the heft of its meaning resides in the semantics accruing to the position of its subcategorized object argument.

### **FOOTNOTES**

<sup>1</sup>While responding to a question Thomas Shannon asked, I realized that evidence from syntactic alternations (in which the object argument participates) tells us about the semantics of that subcategorized argument *position* and not about the semantics of any particular object argument *per se*. While there will, of course, be a relationship between these, the two are nonetheless distinct.

<sup>2</sup>Although Wheeler 1993 identified four senses of *understand*, this finding was revised in Wheeler (ms.) where I demonstrated that the previously identified HEARSAY reading (*I understand your aunt is coming*) is a pragmatic variant of the REALIZE sense.

<sup>3</sup>While understand does occur in examples such as Understand the problem before you proceed! this use of the verb is ill-formed under main-verb negation and in intransitive form. That is, the affirmative imperative use does not exhibit the full syntactic distribution characteristic of the COMPREHEND reading: it is not paired with a negative imperative (Don't understand the problem before you begin!) and does not occur in intransitive form (Understand!), suggesting that if the imperative exemplifies the COMPREHEND reading of understand, it is a peripheral instance.

Further, the use of understand in Understand the problem! is similar to that of know in Know the answer!. Like understand, know is a non-volitional, stative predicate, and as such is analyzed as typically ill formed in imperative. Its imperative occurrence is non-prototypic and accordingly, does not vitiate the broader generalization that know is hostile to imperative. I suggest the same holds for understand. While these uses are readily interpretable, I do not, at this

point, have an account of how hearers garner an interpretation.

4The NP2 argument to the IDENTIFICATION reading is often one typical of the COMPREHEND reading of *understand* as in (i). (Thomas Shannon reminded me of this point).

(i) She understands the phrase/comment as literal/sarcastic.

However, as seen in (ii), while the given NP2 does not meet the semantic constraints of the COMPREHEND sense, it is nonetheless felicitous as NP2 to the IDENTIFICATION reading [as in (iii)].

- (ii) a. \*She understands the table.
  - b. \*She understands the book. (under the reading sans semantic coercion)
- (iii) a. She understands the book to be a gift.
  - b. She understands the table to be red/the dividing line.

However the felicity of the utterance characteristically varies with the complement/adjunct structures represented [see (iv)].

- (iii) a. ?She understands the book as a gift.
  - b. ??She understands the table as red/the dividing line.

There is clearly more to be said about the relationship between the COMPREHEND and the IDENTIFICATION readings of *understand*.

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