The Effect of Consciousness-Raising of Metaphorical Meanings on College Students*

Heechul Lee · Jaewoo Shim**

(Chonbuk National University)

Lee, Heechul & Shim, Jaewoo. 2011. The Effect of Consiousness-Raising of Metaphorical Meanings on College Students. *The Linguistic Association of Korea Journal.* 19(3). 67-90. This study has explored the potential effects of consciousness-raising of semantic metaphors in a pre-experimental research design. Thirty one subjects from a pre-service English teacher program responded to a pretest. The pretest measured subjects' acceptability of a series of metaphorical meanings related to 'Theories are buildings' metaphors. Following the pretest, the subjects were introduced to a short lecture aimed at drawing their attention to how metaphorical meanings are created and extended from literal meanings. One week after the pretest and lecture, the subjects were given a posttest with items that were parallel to those of the pretest. The comparison of the two measures revealed that the treatment of consciousness-raising increased the number of subjects whose person ability was higher than item difficulties by 42%. In addition, the analysis of hierarchy of items from the pretest indicated three tiered groups of metaphorical meanings of conventional mapping, increased calculations, and novel extensions. The hierarchical order of items attested the degree of metaphorical extensions within the cognitive semantics.

Key Words: semantic metaphor, consciousness-raising, Rasch analysis

1. Introduction

In information-processing models of second language acquisition, researchers have drawn on studies of cognitive psychology to understand the roles of input.

For example, in his monitor model, Krashen (1983) stated that comprehensible input may facilitate acquisition, given the affective filter is low. Later, Long (1985) argued that conversational modifications such as comprehension and clarification checks may maximize comprehensible input, which in turn may facilitate acquisition. However, under the assumption that not all of language input may have equal value in being noticed by the learner, Schmidt (1990) proposed that input that is noticed may become available for intake in which processes such as hypothesis testing, hypothesis confirmation, and hypothesis refusal take place. As for the aspects that make it possible for input to become noticed, Schmidt (1990) suggested that frequency, perceptual saliency, instruction, the current state of the interlanguage system and task demand made differences in input being noticed. Assisting learners to notice linguistic elements as input has been practiced at pedagogical level as well. These practices include underlining or highlighting linguistic input so that learners' attention can be drawn to it.

Another practice of more systematic exposure to linguistic input known as grammar consciousness raising task has been proposed by Ellis (2003). In a grammar consciousness-raising task, the teacher provides examples of grammatical items and asks learners to come up with rules. A third approach is to provide corrective feedback when learners produce errors in meaning focused classroom activities. The rationale behind providing corrective feedback is that learners will notice the gap between his interlanguage and the correct target form and this noticing of the gap will eventually facilitate second language acquisition. However, despite a body of literature on the relation between noticing of linguistic forms and acquisition processes, there has been some lack of research studies that have dealt with the relation between noticing semantic features and acquisition processes. With an eye toward drawing attention to the importance of consciousness-raising of meaning components in second language acquisition processes, this study addresses the effects of consciousness-raising of semantic features on learners' expanding metaphorical meanings to new sentences. Specifically, the research questions of this study are as follows.

1) Does consciousness-raising of semantic metaphors help learners expand the knowledge for judging the acceptability of new sentences?
2) Are there some semantic extension features easier to make than other features? If so, what are the characteristics of those features?

2. Literature Review

2.1. Consciousness-raising of linguistic forms

Consciousness-raising(CR, hereafter) refers to any effort to help learners notice a specific grammatical feature with the main objective to develop learners' implicit knowledge of grammar (Ellis, 2003)). CR may be provided in a proactive focus on form session in which the teacher isolates a linguistic feature that may cause a problem while learners engage in communicative tasks. Also, CR may be given in a reactive focus on form session in which the teacher draws learners' attention to a problematic linguistic form presented while learners were communicating in real time. As for the procedure (Table 1), learners are guided to become conscious of a grammatical feature provided in a sample, which they may have not paid much attention to. Then, learners are led to compare a grammatical feature noticed in the input to their interlanguage knowledge. CR is more likely to have a delayed effect on acquisition than result in immediate acquisition because CR is directed at the formation of explicit knowledge and the change of explicit knowledge to implicit knowledge needed to communicate in real time may occur over time as learners restructure their interlanguage.

Table 1. Consciousness Raising Task (Ellis, 2002)

1. Here is some information about when three people joined the company they now work for and how long they have been working here.

Name	Date Joined	Length of Time
Mrs Regan	1945	45 yrs
Mr. Bush	1970	20 yrs
Ms. Thatcher	1989	9 mths
Mr. Baker	1990	10 days

2. Study these sentences about these people. When is 'for' used and when is 'since' used?
a. Ms. Regan has been working for her company for most of her life.
b. Mr. Bush has been working for his company since 1970.

c. Ms. Thatcher has been working for her company for 9 months.
d. Mr. Baker has been working for his company since February.

3. Which of the following sentences are ungrammatical? Why?
a. Ms. Regan has been working for her company for 1945.
b. Mr. Bush has been working for his company for 20 years.
c. Ms. Thatcher has been working for his company for 20 years.
d. Mr. Baker has been working for his company since 10 days.

4. Try and make up a rule to explain when 'for' and 'since' are used.

5. Make up one sentence about when you started to learn English and one sentence about how long you have been studying English. Use 'since' and 'for'.

2.2. Semantic meaning as part of grammar

In the area of grammar pedagogy, Larsen-Freeman (2001) proposed that the teacher should include grammatical meaning and use as he or she analyzes grammatical form. Her proposal has equated the dimensions of meaning and use to linguistic form as shown in the diagram below.
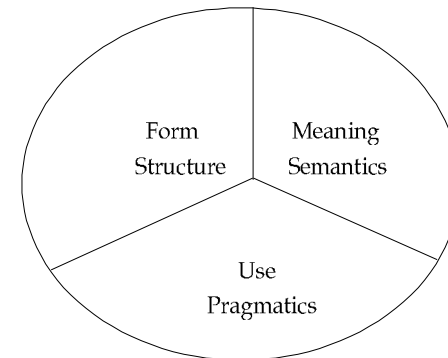

Figure 1. Dimensions of grammar (Larsen-Freeman, 2001)

For example, the forms of passives usually take 'be+ past participle' followed by 'by'. According to Greenbaum and Quirk (1990), passive forms are often used when they do not want to avoid the agent or when the identification of the agent is unimportant or obvious from the context. Greenbaum and Quirk (1990) also pointed out that the use of passive forms give scientific and technical writing the objective tone that the writers wish to convey. Larsen-Freeman's approach to grammar teaching has been a sharp contrast to conventional grammar teaching and grammar books that usually consider morphological and syntactical aspects of grammar only. However, despite the wedging of a grammar feature into three dimensions, the analysis of meaning usually follows the analysis of form. Because of the secondary treatment of meaning in teaching grammar, the contribution of semantics to second language acquisition seems to have been limited to acquisition of vocabulary items. However, an approach to focus on semantic meaning as an integral part of teaching grammar would enrich learning experiences of second language as manifested in cognitive semantic analysis represented by Lakoff and Johnson (1980).

2.3. Metaphor in cognitive semantics

A metaphor is a device with which concrete concepts are mapped onto abstract ones in the way we understand our empirical world. One of the metaphors studied by Lakoff and Johnson (1980) is 'Theories are buildings'. Lee (2000) added to the ones shown in Lakoff and Johnson other examples involving inference, entailment, and those resulting from novel extensions of the metaphor. The metaphor is made possible by mapping the source domain of buildings onto the target domain of theories. The structure of the source domain is composed of the elements of buildings, the properties of the elements, the people involved in the building, relevant knowledge about the building. The structure of the source domain is discussed in detail as follows:

(a) The elements of the source domain: foundation, framework, back doors, roof, buttress, keys, rooms, closet, plumbing, etc.
(b) The properties of the elements:
    (1) foundation: solid, shaky, (un)stable, etc.
    (2) framework: solid, shaky, (un)stable, etc.

    (3) walls: (un)stable, to fall apart, etc.
    (4) A door has a key hole.
    (5) Back doors are an alternative way to get in or to sneak in.
    (6) Closets are used to store or hide things.
    (7) A building is composed of rooms and floors.
(c) Participants: architects, wreckers, construction crew, contractors, inhabitants, painters, advertising agents
(d) The relevant knowledge about the source domain:
    (1) A *foundation* is the base on which buildings are constructed.
    (1-1) The *foundation* of a building is mapped onto basic ideas or assumptions.
    (2) On top of a *foundation*, the *framework* of a building is constructed.
    (2-1) A *framework* is mapped onto an outline of a theory.
    (3) Buildings cannot stand up without *foundations* and/or *framework*.
    (4) If a *foundation* or *framework* is not *solid (strong)* enough to support a building, the building may be *shaky* or *collapse*.
    (4-1) For a building to be *shaky* is mapped onto for a theory to be fishy.
    (5) Buildings that have *collapsed* cannot serve their functions.
    (5-1) If a theory is *wrong*, it is not worth anything.
    (6) When a building does not satisfy its function due to its *collapse*, it is *exploded*(or *blown*)and replaced by another one.
    (6-1) A theory which is wrong is discarded or replaced.
    (7) For weak buildings to keep *standing* up, more *support* is needed to *shore up* or *buttress* the buildings.
    (7-1) *Support* of a building is additional evidence for a theory.
    (8) Weak buildings can be *buttressed*.
    (8-1) *Buttress* is mapped onto extra facts and evidence *supporting* weak points of a theory.
    (9) We need to *construct* a *strong* building.
    (9-1) To construct a *strong* building is mapped onto to develop tenable or indisputable theory.

The structure of the source domain as above may be mapped onto some aspects of theories. For example, the foundation of a building may be mapped

onto basic ideas or assumptions of a theory, framework onto an outline of a theory, keys onto clues or hints leading to the understanding of a theory, and support of a building onto additional evidence for a theory (Figure 2).
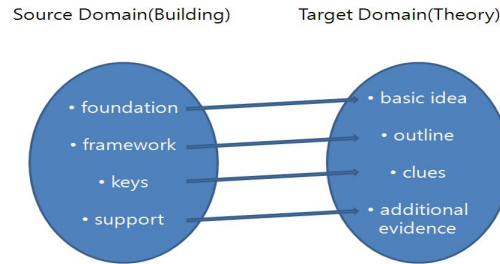

Figure 2. Diagram of metaphor

3. Methodology

3.1. Subjects

The subjects of this study were 31 tertiary learners of English, whose majors were English education. As English education majors, their levels of English were high enough to take their academic courses in English. A random sample of their writing during their midterm exam has been attached in Appendix 2.

3.2. Instrumentation

The instrument (Appendix 1) was designed by the two researchers of this study. The instrument included metaphorical mapping of words related to the 'Theories are buildings' metaphor. A total of 28 items were tested for metaphorical meanings, while 12 non-metaphorical meanings of words were added in order to distract the subjects from guessing. The total of 40 items including non-metaphorical items were equally divided into two sets, which then were used for the pretest and the posttest. Those non-metaphorical meanings were not analyzed in this study. A sample of items with metaphorical meanings are as follows:

Item 4. The theory needs more **solid** arguments.
Item 7. There are a lot of **closets** in your theory.
Item 14. Her theory is **transparent**.

3.3. Procedure

Before the pretest, the subjects were explained of the objectives of the study and were assured that their answers would not be graded. The pretest was conducted by a researcher during his regular class. In 1 week after the pretest, the subjects were introduced to the 'Theories are buildings' metaphor by the other researcher in a structured consciousness-raising of meaning activity. The subjects were posttested immediately after the lecture. The steps for consciousness- raising involved the following steps:
1. The researcher isolated specific metaphorical mapping.
2. The researcher provided the learners with related semantic data.
3. The researcher guided the learners to think about metaphorical extension.
4. The researcher explained some principles related to metaphorical extension deductively.

3.4. Data analysis

The responses of the subjects were analyzed by Winsteps, a software program based on Rasch analysis. Rasch analysis transforms the original data into natural log data to create true intervals between data points (Lord, 1980; McNamara, 1996, William & Slawski, 1980). Specially, Winsteps program provides logit scores for person ability and item difficulty that extend from -3 to +3, making it possible to cross-exam person ability and item difficulty scores simultaneously (Li & Olejnik, 1997; Wright & Masters, 1982).

4. Results

4.1. Item difficulty and person ability from the pretest

The results from the item person map (Figure 3) indicated that the abilities

of the subjects matched well with item difficulties. As shown specifically in Table 2, item difficulty ranged from -1.83 (the most easy item) to 2.35 (the most difficult item).

Logit	Persons	Items
3		
	xx	
		item 5(collapse)
2	xxx	
		item 13(plumbings)
	xx	
		item 7(closets)
1	xxx	
		item 11(remodel), item8(sold)
	xxxx	item 3(fall apart)
	xxxx	item 12(blow)
0		item 10(transfer)
	xxxx	
	xxxx	item 4(solid)
	x	
-1	xx	
	xx	item 1(form), item 14(foundation), item 2 (support)
		item 6(framework)
-2		item 9(key)

Figure 3. Person ability and item difficulty map from the pretest

Only two people (less than 1 percent) were above the odds of getting the most difficult item correct. In the map above, Xs refer to each individual or person. The two persons' abilities were 2.8, which were above item 5, whose item difficulty was 2.35. Accordingly, the odds of the two persons getting item 5 (collapse) correct were more than 50%.

Table 2. Item Statistics

ITEM STATISTICS: MISFIT ORDER

ENTRY NUMBER	TOTAL SCORE	COUNT	MEASURE	MODEL S.E.	INFIT MNSQ	INFIT ZSTD	OUTFIT MNSQ	OUTFIT ZSTD	PT-MEASURE CORR.	PT-MEASURE EXP.	EXACT MATCH OBS%	EXACT MATCH EXP%	ITEM	G
13	8	31	1.75	.46	1.41	1.6	1.56	1.4	A .11	.43	64.5	78.3	ITEM13	0
2	25	31	-1.29	.48	1.28	1.1	1.42	.9	B .07	.32	74.2	80.6	ITEM2	0
11	13	31	.83	.41	1.00	.0	1.11	.5	C .44	.46	71.0	71.1	ITEM11	0
10	18	31	.01	.40	1.06	.4	1.00	.1	D .39	.43	61.3	69.2	ITEM10	0
3	14	31	.66	.41	1.05	.4	1.00	.1	E .42	.45	67.7	69.9	ITEM3	0
14	25	31	-1.29	.48	1.03	.2	.92	.0	F .31	.32	80.6	80.6	ITEM14	0
6	26	30	-1.76	.56	.96	.0	.81	.0	G .32	.28	86.7	86.6	ITEM6	0
12	16	31	.34	.40	.95	-.3	.86	-.6	g .51	.45	61.3	69.0	ITEM12	0
5	15	31	2.35	.37	.94	-.2	.90	-.3	F .54	.49	77.4	67.4	ITEM5	0
1	25	31	-1.29	.48	.93	-.2	.87	-.1	e .38	.32	80.6	80.6	ITEM1	0
8	13	31	.83	.41	.93	-.4	.85	-.6	d .53	.46	71.0	71.1	ITEM8	0
4	21	31	-.49	.42	.92	-.4	.76	-.7	c .49	.48	71.0	71.5	ITEM4	0
7	11	31	1.17	.42	.87	-.7	.78	-.8	b .57	.45	80.6	73.5	ITEM7	0
9	27	31	-1.83	.56	.79	-.5	.47	-.7	a .48	.27	87.1	87.1	ITEM9	0
MEAN	18.4	30.9	.00	.45	1.01	.1	.95	-.1			73.9	75.5		
S.D.	6.1	.3	1.30	.06	.16	.6	.26	.6			8.3	6.4		

As in Table 2, all of the items followed Rasch expectations as indicated by infit and outfit indices, which fell between -2 and +2. There was little gap between percents of exact and matched expectations, indicating all of the items behaved according to Rasch modeling expectations.

Table 3. Summary statistics for person ability and item difficulty

```
SUMMARY OF 31 MEASURED PERSONS
---------------------------------------------------------------------
|          RAW                      MODEL     INFIT       OUTFIT      |
|        SCORE    COUNT   MEASURE    ERROR   MNSQ  ZSTD   MNSQ  ZSTD  |
|--------------------------------------------------------------------|
| MEAN     8.3    14.0      .45       .66     .98   .0    .95    .1   |
| S.D.     2.6     .2      1.08       .08     .31  1.0    .45    .9   |
| MAX.    13.0    14.0     2.70       .91    1.71  2.2   2.01   1.7   |
| MIN.     4.0    13.0    -1.30       .61     .52 -2.0    .25  -1.8   |
|--------------------------------------------------------------------|
| REAL RMSE   .70  ADJ.SD   .83  SEPARATION  1.18  PERSON RELIABILITY  .58 |
|MODEL RMSE   .67  ADJ.SD   .85  SEPARATION  1.28  PERSON RELIABILITY  .62 |
| S.E. OF PERSON MEAN = .20                                          |
---------------------------------------------------------------------

      VALID RESPONSES:  99.8%
PERSON RAW SCORE-TO-MEASURE CORRELATION = .99 (approximate due to missing data)
CRONBACH ALPHA (KR-20) PERSON RAW SCORE RELIABILITY = .62 (approximate due to missing data)

    SUMMARY OF 14 MEASURED ITEMS
---------------------------------------------------------------------
|          RAW                      MODEL     INFIT       OUTFIT      |
|        SCORE    COUNT   MEASURE    ERROR   MNSQ  ZSTD   MNSQ  ZSTD  |
|--------------------------------------------------------------------|
| MEAN    18.4    30.9      .00       .45    1.01   .1    .95   -.1   |
| S.D.     6.1     .3      1.30       .06     .16   .6    .26    .6   |
| MAX.    27.0    31.0     2.35       .56    1.41  1.6   1.56   1.4   |
| MIN.     8.0    30.0    -1.83       .37     .79  -.7    .47   -.8   |
|--------------------------------------------------------------------|
| REAL RMSE   .47  ADJ.SD  1.21  SEPARATION  2.60  ITEM   RELIABILITY  .87 |
|MODEL RMSE   .45  ADJ.SD  1.22  SEPARATION  2.69  ITEM   RELIABILITY  .88 |
| S.E. OF ITEM MEAN = .36                                            |
---------------------------------------------------------------------

UMEAN=.000 USCALE=1.000
ITEM RAW SCORE-TO-MEASURE CORRELATION = -.93 (approximate due to missing data)
433 DATA POINTS. LOG-LIKELIHOOD CHI-SQUARE: 437.98 with 388 d.f. p=.0404
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Reliability scores for person ability and item difficulty were .62 and .88 respectively (Table 3). Person ability reliability refers to the consistency the subjects would manifest in their order of ability if they were given a similar test like this one. The reliability for person ability in the pretest was somewhat low. In other words, the probability of getting the same pattern of item responses from another group of subjects with equal ability was not high, which indicated

that some caution should be used in interpreting the result beyond the subject group of this study. Item difficulty reliability refers to the consistency the items would get if they were given to a different group of learners who share the similar characteristics.

4.2. Item difficulty and person ability from the posttest

As shown in Figure 4 and Table 4, item difficulty scores for the posttest ranged from -1.59 to +1.59 with most items grouped between .33 and 1.59.

Logit	Persons	Items
3	xxxxx	
	xxxxx	
2		
	xxx	
		item 7(enter)
	xx	item 10(explode), item 14(shore up)
1		item 12(backdoor)
	xxx	item 1(shaky), item 8(rooms)
	xxxx	item 6(advertising agent), item 9(buttress)
	xxxxx	
0		item 13(monument)
	x	item 4(airtight)
	xxx	
-1		
		item 11(stable), item 5(stand or fall)
-2		

Figure 4. Person ability and item difficulty map

In addition, there was a noticeable increase in the number of subjects who were above the most difficult item. That is, 13 subjects, 42% of the total subjects had higher odds of answering item 7.

Table 4. Item difficulty statistics

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ITEM STATISTICS: MISFIT ORDER

-------------------------------------------------------------------------------------
|ENTRY  TOTAL                 MODEL|  INFIT  |  OUTFIT  |PT-MEASURE |EXACT MATCH|      |
|NUMBER SCORE COUNT MEASURE  S.E. |MNSQ ZSTD|MNSQ ZSTD|CORR.  EXP.| OBS%  EXP%| ITEM  G |
|-----------------------------------+---------+---------+-----------+-----------+---------|
|   5    28    31   -1.49    .63|1.18  .5|2.30  1.4|A-.03  .24| 90.3  90.3| ITEM5  0 |
|  12    17    31     .91    .41|1.31 1.7|1.52  1.9|B .21  .48| 61.3  71.5| ITEM12 0 |
|   9    20    30     .33    .43|1.17 1.0|1.40  1.2|C .27  .43| 60.0  71.9| ITEM9  0 |
|  11    28    31   -1.49    .63|1.16  .5|1.39   .7|D .06  .24| 90.3  90.3| ITEM11 0 |
|  13    22    31     .03    .43| .91 -.4|1.20   .6|E .44  .41| 77.4  72.9| ITEM13 0 |
|  10    15    31    1.24    .41|1.10  .6|1.18   .5|F .41  .49| 74.2  72.3| ITEM10 0 |
|   7    13    31    1.59    .42|1.08  .5|1.10   .5|G .43  .49| 67.7  73.2| ITEM7  0 |
|   6    20    31     .39    .42|1.07  .5| .98   .1|g .40  .44| 67.7  71.3| ITEM6  0 |
|   4    23    31    -.16    .45| .92 -.4| .89  -.1|f .44  .39| 74.2  74.9| ITEM4  0 |
|   3    29    31   -1.95    .75| .89  .0| .42  -.3|e .33  .20| 93.5  93.5| ITEM3  0 |
|   2    29    31   -1.95    .75| .87  .0| .39  -.3|d .35  .20| 93.5  93.5| ITEM2  0 |
|   1    18    31     .74    .41| .74 -1.6| .84  -.6|c .64  .47| 87.1  71.3| ITEM1  0 |
|  14    15    31    1.24    .41| .76 -1.4| .67  -1.6|b .68  .49| 80.6  72.3| ITEM14 0 |
|   8    19    31     .57    .42| .64 -2.4| .54  -1.9|a .73  .45| 90.3  71.2| ITEM8  0 |
|-----------------------------------+---------+---------+-----------+-----------+---------|
| MEAN  21.1  30.9    .00    .50| .99 -.1|1.05   .2|          | 79.2  77.9|          |
| S.D.   5.3    .3   1.18    .12| .19 1.0| .49  1.0|          | 11.5   9.0|          |
-------------------------------------------------------------------------------------
```

The items in the posttest also followed Rasch model expectations. All of the items except for item 8 were between -2 and +2 infit and outfit ZSTD, meeting the criteria. As for item 8, although its infit ZSTD was -2.4, its outfit ZSTD was -1.9. The researchers decided to include item 8 for this analysis because it was within outfit ZSTD criterion. The comparison between exact and match expectation rates also indicated that the items followed Rasch model expectations.

Table 5. Summary statistcs

```
SUMMARY OF 31 MEASURED PERSONS

---------------------------------------------------------------------------
|        RAW                    MODEL |    INFIT    |    OUTFIT   |
|       SCORE    COUNT  MEASURE  ERROR | MNSQ  ZSTD | MNSQ  ZSTD |
|---------------------------------------+------------+------------|
| MEAN    9.5    14.0    1.19     .73 |  .99   .0  | 1.05   .1  |
| S.D.    2.5     .2     1.14     .16 |  .23   .8  |  .70   .8  |
| MAX.   13.0    14.0    3.04    1.06 | 1.62  2.0  | 3.68  2.3  |
| MIN.    6.0    13.0    -.32     .61 |  .64  -1.7 |  .44  -1.3 |
|---------------------------------------+------------+------------|
| REAL RMSE  .77 ADJ.SD  .84 SEPARATION 1.09 PERSON RELIABILITY .54 |
|MODEL RMSE  .75 ADJ.SD  .87 SEPARATION 1.16 PERSON RELIABILITY .57 |
| S.E. OF PERSON MEAN = .21                                        |
---------------------------------------------------------------------------

     VALID RESPONSES: 99.8%
PERSON RAW SCORE-TO-MEASURE CORRELATION = .99 (approximate due to missing data)
CRONBACH ALPHA (KR-20) PERSON RAW SCORE RELIABILITY = .62 (approximate due to missing data)

    SUMMARY OF 14 MEASURED ITEMS

---------------------------------------------------------------------------
|        RAW                    MODEL |    INFIT    |    OUTFIT   |
|       SCORE    COUNT  MEASURE  ERROR | MNSQ  ZSTD | MNSQ  ZSTD |
|---------------------------------------+------------+------------|
| MEAN   21.1    30.9     .00     .50 |  .99  -.1  | 1.05   .2  |
| S.D.    5.3     .3     1.18     .12 |  .19  1.0  |  .49  1.0  |
| MAX.   29.0    31.0    1.59     .75 | 1.31  1.7  | 2.30  1.9  |
| MIN.   13.0    30.0   -1.95     .41 |  .64  -2.4 |  .39  -1.9 |
|---------------------------------------+------------+------------|
| REAL RMSE  .53 ADJ.SD 1.06 SEPARATION 1.99 ITEM  RELIABILITY .80 |
|MODEL RMSE  .51 ADJ.SD 1.07 SEPARATION 2.08 ITEM  RELIABILITY .81 |
| S.E. OF ITEM MEAN = .33                                          |
---------------------------------------------------------------------------

UMEAN=.000 USCALE=1.000
ITEM RAW SCORE-TO-MEASURE CORRELATION = -.99 (approximate due to missing data)
433 DATA POINTS. LOG-LIKELIHOOD CHI-SQUARE: 396.96 with 389 d.f. p=.3792
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The person ability reliability and item difficulty reliability was .57 and .81 respectively. The reliability for person ability was low due to a small sample size.

4.3. The hierarchical order of items from the posttest

The analysis of hierarchical relations among metaphorical meanings was investigated by comparing logit scores along the Logit Scale (FIGURE 3). Three

groups of items were formed. The first group of easiest items included such items as item 2, item 3, item 11 and item 5. The second group of mediocre items, either not too easy or not too difficult included item 4 and item 13. The third group of items that were rather difficult were item 9, item 6, item 8, item 1, item 12, item 10, item 14, and item 17.

5. Discussions

5.1. The effect of treatment of consciousness-raising of semantic meaning

The results of the Rasch analyses showed that 42% of the subjects were able to apply their knowledge of semantic metaphors to new sentences, mediated by the consciousness raising task in the study. In the pretest before the treatment, less than 1% of the subjects was matched to the most difficult item. The pretest result indicated that most of the subjects did not recognize the possibility of extending word meanings to theory-related metaphors. The subjects' person ability logit mean score was only .45 and the item difficulty logit mean score was .00. These numbers indicated that on average the subjects had almost 60% odds of selecting correct choices about metaphorical extension. Given that they were not familiar with or were not formally introduced to the concepts such as source domain or target domain, the pretest result was not surprising: they were expected to perform poorly.

However, after the treatment procedure in which one of the researchers provided rules of metaphor extension and examples of them, their improvement on uses of metaphors was observed; 13 out of 31 subjects (42%) were confident in handling the most difficult metaphorical expression and the rest of less difficult items; the logit mean score of subjects' abilities (1.19) was higher than item difficulty logit mean score (.00). The increase of logit score of .74 from pretest to posttest can be translated as, on average, about 10% increase in the probability of success.

In addition, 4 subjects who scored all the items correct were excluded from the analysis. Assuming that the 4 subjects' perfect scores might have been due to the effect of treatment, 54% of the subjects could be considered as being above all of the items.

5.2. The hierarchical order of items observed in the pretest

The hierarchical order of items was observed in the pre-test of this study. According to the person ability and item difficulty map of Figure 2, the items can be grouped in three. One group was composed of such five items as item 1, item 14, item 2, item 6, and item 9, all of which were located below negative one in item difficulty. Another group comprised such seven items as item 7, item 11, item 8, item 3, item 12, item 10, and item 4, most of which were located between positive one and negative one in item difficulty. The other group included item 5 and item 13, both of which were positioned far over positive one in item difficulty. Items in the first group were related to conventional mapping of the 'Theories are buildings' metaphor. On the other hand, items in the second group had evidence of cognitive calculations in mapping from the source domain to the target domain. The last group formed metaphors involving inferences, entailments, and novel extensions. Therefore, the pre-test results showed that the order of difficulties in metaphorical mapping may be empirically observed. Metaphors relating to basic mapping were easiest to apply. Metaphors containing inferences and entailments were easier than those containing novel extensions. The degree of difficulty to which L2 learners would face in mapping is explained from 1) to 7) below. Specifically, 1) to 5) are of examples of cognitive calculations in the mapping, while 6) to 7) are of novel extensions of metaphor.

1) *There are a lot of closets in your theory. (item 7)*
   Closets in a building are places where things are stored or hidden.
   Hiding things in closets metaphorically correspond to hiding relevant facts which may function against the current argument or hiding bad parts of the argument in a theory.

2) *I sold my theory to them. (item 11)*
   In order to sell buildings to others, sellers need to convince prospective buyers that they are worth buying. We convince people of our theory.

3) *My answers to the homework assignment will remodel the theory. (item 8)*

If a building is too old or does not serve its function, it is remodeled. Something may add on to the building for a better function. If a theory is too old to keep up with contemporary phenomena, or has defects in it, it can be revised. Something more can be added on to the theory, too.

4) *A strong wind can blow the theory over.*
   If a building is weak, it can be blown over by a wind. Likewise, a theory can be blown over when its argument is too weak.

5) *Her theory is transparent. (item 10)*
   If you look inside of the windows of a simple building, you can see everything in it. A transparent theory has nothing new and is not complicated.

6) *Complex theories usually have problems with the plumbing.*
   Large office buildings with complex structure need long, sometimes winding line of plumbing which connects sources of supply to points of demand. Since the line of plumbing is long, winding, and branching to many rooms, it is likely to be interrupted, break down, and cause problems as we experience. In a theory, likewise, there must be a line of reasoning and thinking starting from assumptions, basic ideas, and hypotheses. They link facts with conclusions or points in the theory in a logical or plausible manner. Complex theories are likely to have a complicated, long line of thinking and reasoning to connect many subparts of the theory to each other and the line is difficult to extend without being interrupted.

7) *The argument collapsed. (item5)*
   Through our knowledge about the source domain of the building, the sentence above entails the following:
   (i) The foundation of the argument was not strong enough. That is, basic ideas or assumptions of the argument were inconsistent or incoherent.
   (ii) The framework of the argument was not strong enough. That is,

the outlining was inconsistent or incoherent.
   (iii) The walls of the argument were not strong enough. That is, the argument lacked in relevant facts supporting it.
If basic ideas or assumptions on which a theory is based are wrong, inconsistent, or incoherent, there are a limited number of alternatives for action as follows:
   (i) The whole theory is disputed or discarded and started again with new basic ideas and assumptions followed by the developing of subsequent parts of the theory.
   (ii) The theory is provided with additional facts or evidence to compensate for its weak points.
   (iii) The theory is left alone. It may be worthless and thrown away.

6. Conclusion

The study reported in this paper explored the relation between consciousness-raising of semantic metaphors and learners' extension of their semantic knowledge to other samples of sentences. Our objective of the study was to understand whether or not consciousness raising tasks could be applied to the dimension of meaning. The results of the study showed that consciousness-raising of metaphorical meanings helped learners to apply their knowledge of metaphors to new sentences as shown by the increased number of subjects, who were more likely to correctly answer metaphorical extensions. Thus, the results of this study suggested that noticing of how metaphors are created assist learners in improving their rates of accepting new metaphorical meanings. This improvement on the knowledge of metaphorical extensions, in return, could help learners to understand semantic meaning as an integral part of grammaring (Larsen-Freeman, 2001).

The findings of this study can have some implications for pedagogy of English. First, the teacher may organize their form-focused activities so that semantic aspects of language can become isolated and noticed. By deductively raising consciousness of meaning dimension, the teacher can assist learners to be aware of how meanings can expanded or restricted. Secondly, the teacher may

become a collector of samples of sentences that can overtly explain semantic differences by using collocation programs available on the internet. Yet, the teacher should remember that the use of collocation programs offers learners opportunities to survey both grammatical forms and semantic meaning inductively. For example, the collected language samples may be given to learners so that they themselves detect differences in semantic meanings. This type of inductive presentation of semantic data may facilitate discussions of semantic meanings among learners than a deductive presentation.

In addition, a caution is necessary as to the design of the study. As noted earlier, a pre-experimental research design was employed for the study mostly because of a limited number of subjects. Since we cannot rule out any extraneous variables such as learning between pretest and posttest and no availability of another group for comparison, the generalization of the results of the study is limited.

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Appendix 1. The pretest instrument

The following questions are designed to understand acceptability of meanings of underlined words. For this test of acceptability, please indicate acceptable or unacceptable by circling either choice.

Question Number	Sentences for the Acceptability Test
1	Is that the foundation for your theory? Acceptable or Unacceptable
2	The theory needs more support. Acceptable or Unacceptable
3	We need some more facts so that the argument may not fall apart. Acceptable or Unacceptable
4	The theory needs more solid arguments. Acceptable or Unacceptable
5	The argument collapsed. Acceptable or Unacceptable
6	So far we have put together only the framework of the theory. Acceptable or Unacceptable
7	There are a lot of closets in your theory. Acceptable or Unacceptable
8	My answers to the homework assignment will remodel the theory. Acceptable or Unacceptable
9	The instructor gave us a key to the argument. Acceptable or Unacceptable
10	Her theory is transparent. Acceptable or Unacceptable
11	I sold my theory to them. Acceptable or Unacceptable
12	A strong wind can blow the theory over. Acceptable or Unacceptable
13	Complex theories usually have problems with the plumbing. Acceptable or Unacceptable
14	I haven't figured out yet what the form of the argument will be. Acceptable or Unacceptable

Appendix 2. The Posttest instrument

The following questions are designed to understand acceptability of meanings of underlined words. For this test of acceptability, please indicate acceptable or unacceptable by circling either choice.

Question Number	Sentences for the Acceptability Test
1	The argument is shaky. Acceptable or Unacceptable
2	We need to construct a strong argument for that. Acceptable or Unacceptable
3	He found a hole in her theory. Acceptable or Unacceptable
4	His argument is air-tight. Acceptable or Unacceptable
5	Her theory is as stable as a house of cards. Acceptable or Unacceptable
6	I am an advertising agent of her theory. Acceptable or Unacceptable
7	I entered the theory. Acceptable or Unacceptable
8	Her theories have lots of small rooms. Acceptable or Unacceptable
9	We need to buttress the theory with solid arguments. Acceptable or Unacceptable
10	Here are some more facts to shore up the theory. Acceptable or Unacceptable
11	The theory will stand or fall depending on the strength of that argument. Acceptable or Unacceptable
12	I could understand the theory through the backdoor. Acceptable or Unacceptable
13	His theory is monumental. Acceptable or Unacceptable
14	They exploded his latest theory. Acceptable or Unacceptable

Appendix 3. A sample of subjects' English proficiency produced during a midterm exam

Sungsoo

CLL uses 'counselling language theory' to teach languages. Also, CLL is described as humanistic techniques which engage in a whole person. The other thing is that CLL has a language alternation. In a language alternation, message is presented in the native language first, and then again is presented in the target language. At the beginning of the class, teacher translates what students want to say into the target language. At this point, the teacher is like a human computer. The teacher who uses CLL in class should be very fluent in using English. Speaking of the roles, the teacher is like a counselor. And students become a member of community and they interact with other community members.

Eunhee

CLL is a learner-centered method. This teaching method doing in small circle. Teacher introduce himself/herself to students and students introduce himself/herself each other. Students say L1 whatever they want to say. Teacher translates it into L2 (target L). This atmosphere is very comfortable, and students inhibition is very low. Teacher is to be a human computer, repetition the target language. This method is considered affective aspect. So it's very humanistic. And we call the method is whole-person method. Students share own feeling and experience with the teacher and each other. And student report with a group to whole class.

Hyunmi

Community language learning is based on counseling-learning in educational field. Also, CLL is a described as humanistic approach as it engages in whole-person: the development of cognitive, affective, and physical aspects of human. In addition, CLL adopts the concept of language alteration. Language alteration means that at first language is presented in L1 and later it is offered again in L2. Also, psychological requirements for successful learning in CLL is SARD; security, aggression, retension, reflection, discrimination. From these

features, CLL is applied in language lesson as follows: students are asked to form a small circle to create comfortable and stress-free environment. They are not required to use a target language from the beginning. Students also can choose what they want to learn. So, first, a student whisper a message and a teacher translates it into a target language. Then, the student repeats it again in the target language and this process is kept going. In this time, the teacher plays a role of human computer. That is, the teacher should translate students message into the target language several times until they can produce the utterance correctly. After they do this activity, the dialogue is recorded and transcribed. This material is later analyzed and studied. Also, it is used as a material for following activities for reading and writing.

Heechul Lee
Department of English Education
College of Education
Chonbuk National University
664-14 Tokchin-dong 1-ga, Jeonju, 561-756, Rep of Korea
Phone: 82-63-270-2719
Email: hclee@jbnu.ac.kr

Jaewoo Shim
Department of English Education
College of Education
Chonbuk National University
664-14 Tokchin-dong 1-ga, Jeonju, 561-756, Rep of Korea
Phone: 82-63-270-2729
Email: shimjw@jbnu.ac.kr.