

Universals in the Acquisition of Adjectives in Second Language Acquisition

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Abstract

Second language acquisition has become one of the most important fields in applied linguistics. As the field of second language acquisition gained popularity, the majority of its research was on the acquisition of syntactic structures. Consequently, as research grew, more language elements received more attention which led to advances in the pedagogical aspect of language itself-

Vocabulary and lexical semantics play an important role in a language. The lexicon is one of the core elements which contributes to a learner's language development. As Zimmerman (1997, p5) states: " Vocabulary is central to a language and of crucial importance to the typical language learner". Hunt and Beglar (2005) assert that " the heart of language comprehension and use is the lexicon". Semantics has increasingly received more attention in many areas such as syntax, second language acquisition, linguistic universals, the lexicon, sociolinguistics, and psycholinguistics. This study investigates the developmental acquisition of lexical semantics with a focus on the universality of acquisition-

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المبادي العامة لاكتساب الصفات في اكتساب اللغة الثانية

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ملخص

أصبح اكتساب اللغة الثانية واحدة من أهم فروع علم اللغويات التطبيقية .
وركز معظم البحوث في هذا المجال علي اكتساب بني الجمل النحوية وتلعب كل
من الحصيلة اللغوية وعلم الدلالة اللفظي دوراً مهماً في اللغة . فالألفاظ هي واحدة
من أهم ما يساهم في تطوير لغة متعلم لغة الجديدة .
وتزايد الأهتمام بعلم الدلالة في مجالات متعددة مثل علم تركيب الجمل
واكتساب اللغة الثانية والمباديء العامة للغويات والمفردات وعلم اللغة الاجتماعي
وعلم اللغة النفسي . وتركز هذه الدراسة علي اكتساب الدلالات اللفظية مع إشارة
خاصة لعالمية اكتساب اللغة ومبادئها العامة .

LITERATURE REVIEW

The research related to this investigation relates to various aspects such as vocabulary acquisition, lexical semantics, meaning, and learning styles. Several authors (Folse, 2004; Walters, 2004; Hunt and Beglar, 2005) agree that in the past there was very little research conducted in the field of ESL vocabulary. What it means to "know" a word is a complicated issue. Folse (2004 p.18) provides a list of criteria including: 1. polysemy, 2. denotation and connotation, 3. Spelling and pronunciation, 4. part of speech, 5. Frequency, 6. Usage and collocation. Moras (2001) provides six additional items required for advanced students which include: 1. boundaries between conceptual meaning, 2. Homonymy, 3. Homophony, 4. Synonymy, 5. Translation, and 6. Register, style and dialect -

Nation (2001) points out that there are many aspects of "knowing a word" including: form, meaning, and use. Others suggested that world knowledge includes knowing the word's meaning, form, collocation, and register (Tsang and Schmit, 2008). How many words a learner needs to know to be able to perform well at any given language proficiency level is referred to as the " the lexical threshold" (Laufer, 1997, p31) which is the amount of vocabulary necessary to read authentic second language texts. Such vocabulary includes "words whose forms and common meanings are recognized automatically regardless of context" (p22). She concludes after reviewing relevant research that 3000 word families or 5000 lexical items are the minimum threshold necessary for passing an ESL test. It was also suggested that learners are required to acquire no less than 2000 word families to meet the baseline of learning a language (Nation, 2006-'

Empirical research includes Prince's (1996) study on the acquisition of nouns which found that learners recalled more words learnt in L1 translation than in L2 context, especially in the early stages of acquisition. It suggests that direct L1 definitions in the

early stages of L2 acquisition can link learners to their familiar experience and culture. Waring (1997) investigated learners' perception and vocabulary learning styles and found that mnemonic devices, visual imagery, and phonetic conception were most commonly used among the study participants when they attempted to remember the words-

Other studies on semantically and thematically related words include Hoshino's (2010) study on 46 participants which found that learners can recall the meanings of the target words more easily if the words were presented in semantically related sets compared to thematically related sets, unrelated sets, or pairs of synonyms and antonyms. Tinkahm's (1997) study on 48 ESL students found that semantic clustering is essential in vocabulary learning. It also found that thematic sets were beneficial as well. On the other hand, Lam's (2011) study on grouping words in semantic and thematic sets does not bring any significant difference to vocabulary acquisition in general. The only difference was found in the fact that the students learnt verbs in the thematic sets more easily than in the semantic sets-

One of the issues appealing to some linguists is the existence of semantic universals. Even though research in this area requires a great deal of effort and many resources, there have been studies that bring light to this question. One of these studies (Berlin and Kay, 1969) illustrates that as opposed to the relativistic view in investigating the color systems of world languages, a prototypical approach, represented in the focus of each color, points out a hierarchy showing a set of implicational universals. For instance, if a language has a term for "green," it must have one for "red"||-

Another study (Anderson, 1978) examining body-part terminology found that the hierarchy representing those terms would not exceed six levels, and that the universals of categorization indicate the important role of the perceptible properties round and long and the spatial location (upper body vs. lower body). For

example, a language may possess a name for "head" or "knee," each of which round; however, the term would refer to the head, which is in the upper body, when used in a neutral context. These phenomena according to this study, appear in first language acquisition. Terms for parts of the upper body were acquired before those of the lower body, parts of the head before limbs, and "knee" (front) before "elbow" (back). This study, moreover, reports that in Greenberg's research on linguistic universals, it is evident that if a language gives different weights to a pair of adjectives (happy vs. unhappy or high vs. low), the positive one will be unmarked. This phenomenon is explained by morphemic complexity and contextual neutralization -

Lexical items or categories have also been investigated with regard to their nature and domains. Labov (1973.) rejected the approach describing a category through an all-or-nothing feature system. In his study, he examined categorical domains using a set of concrete nouns such as cup, mug, bowl, and pitcher. He indicates that boundaries may not be defined only through their distinctive features, and that boundaries between word meanings can be clear-cut, non-existent, variable, or overlapping-

A deeper and more elaborate examination of categoriality and category prototype was done by Rosch et al. (1976) in which it is argued that a category may have one or more "good" or "central" members and that members of a class may have different statuses; In addition, the status of a member would be based on its relation to the "central" members. For example, a "robin" would be seen as a "good" exemplar of the category bird, while a "bat" would have a much lower status-

Unlike the studies previously mentioned, there have been investigations of the prototypicality of intangible categories. Coleman and Kay (1981) empirically studied the concept of lies by creating scenarios containing one or more of the following elements⁹

- a) falsity+
- b) intent to produce untrue information, and
- c) intent to deceive-

After giving the questionnaire to the subjects, the results showed that stories with more elements received higher rating, and while factual falsity was the least important element, "intent to deceive" was the most important one-

Another study (Takahashi et al., 1988) examined second language acquisition of lexico-semantics from a prototypical point of view, employing a different methodology. They studied the verbs TAKE, KEEP, and HOLD by giving an American group and three Japanese groups varying in English proficiency a list for each word containing twenty other verbs and asking them to rate each verb (e.g. grasp) on a scale ranging from "least similar" to "most similar" to the target word. The results showed that those verbs were distinguished by the native speakers much more than by all of the three Japanese groups, indicating no progress in the acquisition. In addition to the "underextension" in explaining giving less senses to each verb, "discrepancy" between the mental representations of the American and the Japanese groups was seen as a basis for suggesting a possible "ceiling point" reached in advanced stages beyond which a native-like conception of semantically related categories is reached-

However, (Hartford et al., 1987), in their study of TIRED and NERVOUS, found steady progress in the process of acquisition. They devised situations or scenarios containing English prototypes, Arabic prototypes, and "in-between" ones. Their subjects were an American group and three Arabic groups with varying levels of English proficiency. The subjects were asked to rate how well the adjective described how "they" would feel in that situation. The results showed that while the American prototype for NERVOUS contained "anxious/uneasy" and "worried" components, the Arab English one contained in addition an "angry" component. As for TIRED, the Arabs were more willing to accept a "sick" component

in addition to the "physically tired" one. Moreover, the higher the Arabic group's English proficiency, the more native-like its prototypical conception becomes-

The studies reviewed looked at lexico-semantics from various angles. However, it is apparent that insufficient research looked at second language acquisition from a universal point of view. Therefore, it would be beneficial to investigate that aspect and incorporate the findings into the larger frame already established within the linguistic research-

PURPOSE OF THE STUDY

This study empirically investigates the prototypical meanings of the categories SOPHISTICATED, AGGRESSIVE, DECENT, and INTERESTING in relation to the universality of the sequence in second language acquisition. Specifically, if an adjective possesses more than one prototypical meaning, which one is acquired first?, what parameters seem to control the nature of the acquisition?, and what is the nature of the process of acquiring more than one prototypical meaning of a category >

The meanings of each of the adjectives investigated, in spite of the relative difficulty in providing precise definitions, are as follows9
a) SOPHISTICATED may mean either "highly complex or developed in form" (as in describing advanced equipment) or "worldly wise or knowledgeable" (Webster's Dictionary, 1979) as in describing a well educated person who knows about many things and has a very "particular" taste-

B. AGGRESSIVE may mean "boldly hostile" or "bold and active" (Webster's, 1979) (as in describing a person who is not shy at all and does not hesitate to confront anyone. Even though this may have a negative connotation, it does not include, a "hostility" component -'

C. DECENT may be defined as "respectable", "proper and fitting", "fair and kind" (as pictured in this study by an ideal family that is upright, moral, kind, and respected or "adequate" (Webster' s, 1979) (as in "getting a decent score" or "having a decent meal -'!

D. INTERESTING, although primarily used to mean "exciting curiosity or attention", it is sometimes noticed to be used to describe unusual or strange things. Even though there are some similarities between meanings of each adjective, as will be discussed later, each could be considered as having distinct meanings because each meaning is used in a context and circumstances clearly different from those of the other meaning carrying the same term-

THE INSTRUMENT

A questionnaire was developed in order to achieve the goals previously defined. It was seven pages long, the first of which contained questions about educational level, gender, and, for the NNSs, the frequency of speaking English outside of the classroom; in addition, eighteen words were listed; and the NNSs were instructed to circle the ones familiar to them-

The remaining part of the questionnaire consisted of seventeen short scenarios or descriptions, each followed by a statement about the person or thing in the scenario. Each statement contained an underlined target adjective, and the subjects were instructed to rate how well that adjective described the person or 'thing in the scenario. The scale used ranged from one (best example) to six (not an example) (see appendix A for a copy of the equation -'

The first two scenarios, one good and the other poor, were used to allow the subjects to become accustomed to the task. The others were as follows⁹

a) Three for SOPHISTICATED, the first for "highly complex in form", the second for "worldly wise and knowledgeable", and the

third for the supposed-ly Arabic English prototype, "complicated and hard to get along with". (The aim of using Arabic English scenarios will be discussed in the "methodology" section-'

b) Three for AGGRESSIVE, one for "boldly hostile" (action), the second for the same meaning, however, describing a person, and the third for "bold and active! -

c) Three for DECENT, one for "moral and respectable," one for "adequate" or "reasonable or acceptable," and one for a situation where a woman is wearing culturally-enough clothes (this was supposed represent, in addition, a very good prototypical meaning for Arabic English-'

d) Four for INTERESTING, one for "exciting or holding attention" (a game), two for "unusual or strange" (thing and person), and one for "amusing and entertaining" which was thought of as the best example the Arabic English prototype-

e) Two for ACTIVE, one good, and the other poor-

The scenarios were originally devised by the inves-tigator. Two welleducated native speakers were then consulted. Some scenarios and descriptions were left unchanged, others were modified, and still others were substituted for better ones. Each scenario was written in simple and short sentences containing several adjectives, for maximum comprehension and optimal portrayal-

Subjects

The subjects, with a total of 75, constituted four groups⁹

1 the control group consisted of nineteen native speakers of English, ten males and nine females. Seventeen were .undergraduate students and two graduate-

- 2 the intermediate-level group, which is considered as having the lower level of English proficiency in this study, was represented by eighteen NNSs of English enrolled in level six of the Intensive English Program at Indiana University, seven males and eleven females. Their native languages are Chinese 3, Portuguese 2, Korean 2, Arabic 2, Japanese 2, German, French, Thai, Catalan, Fulani, Spanish, and Indonesian-
- 3 the higher level of proficiency was represented by twenty-one NNSs of English who were known, by the administrators, to be fluent in English. They were fourteen males, seven females, and eleven undergraduate and ten graduate. Their native languages are Chinese 4, Malay4, Arabic 2, Gujarati, Telugu, Korean, Swahili, Hindi, Amharic, Yoruba, Bambara, Hausa, Chichewa, and Malayalam-
- 4 The Arabic English group consisted of seventeen male university students, eight undergraduate and nine graduate. English speaking Arab females were not available, due to the scarcity of Arab female students at Indiana University. The Arab subjects were from Saudi Arabia 6, Yemen 2, Syria 2, Libya 2, Lebanon, Emirates, Iraq, Jordan, and Bahrain-

Methodology

The questionnaire was administered to the NS of English by a NS of English who knew the subjects personally. The intermediate-level group was given the questionnaire by their teacher who is also a NS of English. The fluent group, on the other hand, was given the questionnaire by four NNS of English who were asked to select those known for their fluency in English. They were also asked to attempt to receive the questionnaires from the subjects as soon as possible and preferably immediately after completion of the task. The subjects were also orally asked not to use dictionaries or consult anyone-

The Arabic English (AE) group was given the questionnaire by the author first hand and the task was performed at the same time either on campus or at their homes. Having the Arabic group and the AE scenarios would serve the following purposes⁹

- 1) The issue of whether or not a NN group from the same linguistic background may have a category prototype different from that of the native speakers' would be clearer-
- 2) Having AE scenarios, in addition to those for "happy", "active", and "interesting", which were considered to be poor or far from centrality, would hide the aims of the study, so that the subjects would not recognize a pattern-

The scenarios for each adjective were placed in different locations throughout the questionnaire, and the pages of the questionnaire were staggered to counter any fatigue factor-

To validate the scenarios representing the prototypical meanings of each adjective, the criterion adopted here was that if 75% or more of the NSs selected numbers from the 1-3 range, i.e., "best example", "very good", or "somewhat good", that scenario would be considered valid. (The results of the validation of the scenarios will be discussed in the "results" section-¹

Finally, the means and 1-3% were calculated for each group and each scenario. The results were based on those numbers only-

Hypotheses⁹

This study attempts to answer many questions and aims to investigate several aspects related to the abstract adjectives investigated, such "as the NSs' proto-typical conception, the progress of acquisition, the factors influencing NNSs' meaning formation, and the directionality of the acquisition of a category with

more than one central meaning. In general, the hypotheses below represent the bases of this study⁹

1) NSs may have one or more central meaning for a category. In the development of acquisition, the NNSs will acquire one meaning, followed by other central or peripheral ones. The unmarked meaning, if it exists, will be acquired first -

3 - The higher the language proficiency, the closer the NNS' prototypical conception to the NS' will become -

In SLA, the marking relations for the categories investigated were hypothesized as follows⁹

1) 'SOPHISTICATED' would have the following implicational universal⁹

!highly complex in form" > "worldly wise and knowledgeable-!

It should be mentioned that the definitions proposed may not be very precise and thorough, due to the level of abstractness; however, meanings of each adjective, especially the first three, could be considered as distinct from each other. It seems that the second meaning for SOPHISTICATED was derived from the first and similar to it in that a sophisticated person is up-to-date, advanced, shows personal and social complexity -

2) AGGRESSIVE would have the implicational universal:
"boldly hostile" > "bold and active-!

These two meanings share the "boldness" component; however, they seem to differ in that the first contains a "hostility" component, while the second shows a more salient "forwardness" and "activity". It seems that the second meaning was derived and developed from the first. "Aggression" appears to be much closer to the first meaning than to the second-

- 3) DECENT would be represented as having: "moral, respectable, and kind" > "adequate and acceptable-!"

This adjective seems to have meanings somewhat less clear than those of the first two adjectives and appears to be used in many different situations, therefore, becoming to some extent more similar to adjectives such as nice, great, and interesting, in that such adjectives could mean different things in many different contexts if precise interpretations and definitions were attempted. Another context or meaning for decent, "wearing culturally proper amount of clothes", was hypothesized to be acquired immediately after the first meaning and before the second, although it could be considered as an extending part of the first meaning; accordingly, the sequence of acquisition would be hypothesized as follows: "moral and respectable" > "wearing proper amount of clothes" < "adequate and acceptable-!"

The second meaning seems to extend from the first in that it expresses morally proper behavior and being upright. The third meaning seems to be related to the first in that it indicates that something is acceptable as if it should not be considered different from or less than the cultural-ly agreed-upon and correct model. It should be mentioned that the second definition was hypothesized as representing the best prototypical meaning for decent in AE -

- 4) INTERESTING would have the following implicational

universal: "exciting curiosity and holding attention" > "unusual or strange!"

The second meaning, if correct, would seem to be derived from the first in that strange and unusual things usually excite curiosity and are attention-holding. The hypothesized AE prototypical meaning was "amusing and entertaining." (For the specific scenario, see "Amy" in Appendix A). This adjective

seems to be used in many contexts in which clear and precise meanings are difficult to obtain. However, the first meaning, although not very easily identified, seems to be the underlying factor in its usage-

RESULTS AND DISCUSSION

Native Speakers and Instrument Validation⁹

The results show that the scenarios or descriptions representing the meanings proposed were validated, according to the 75% -1-3-range criteria, by the native speakers for those of the first three adjectives (see Table 1). As for the fourth one, interesting, only the meaning "exciting and holding attention", the "unmarked meaning", met that criterion, 84% (Note that the AE prototypical meanings for sophisticated and interesting were not used for those of the NSs' as well).

TABLE 1
NATIVE SPEAKERS' JUDGEMENTS OF SCENARIOS (SEE APPENDIX A FOR SCENARIOS)

Meaning		X	1-3%	Meaning		X	1-3%
SOPHISTICATED	“Complex in form” (The United...) 2.01		95%	DECENT	“Moral and respectable” (The Johnson...)	2.63	89%
	“World Wise” (Linda...) 2.31		100%		“Properly dressed” (Nancy...)	2.84	79%
	“Complicated (AE) (John...) 5.47		0%		“Adequate” (Bill and Joe...)	2.79	79%
AGGRESSIVE	“Boldly hostile” (If the army...) 2.26		95%	INTERESTING	“Attention holding” (George...)	2.68	84%
	“Boldly hostile” (Person) (Peter...) 2.26		89%		“Unusual” (Thomas...)	3.26	63%
	“Bold and active” (Kathy...) 2.11		89%		“Unusual” (Person (Mary...))	3.84	32%
					“Entertaining” (AE) (Amy...)	3.53	53%

As Table 1 shows, the percentages obtained for sophisticated are 95%, with a mean of 2.01, for "complex in form" and 100%, with a mean of 2.31, for "worldly wise and knowledgeable", validating our hypothesis and indicating that those two meanings constitute the two central components in the category

sophisticated .

AGGRESSIVE, as well, received 95% with a mean of 2.26, for "boldly hostile" and 89% with a mean of 2.26 as well, for the same meaning used to describe a person. As for "bold and active," it received 89%, with a mean of 2.11, representing along with the first meaning the two prototypical meanings for aggressive, without any evidence of influence over personal. vs. 'impersonal usage .

As for DECENT, it was rated slightly less favorably than the first two adjectives; however, the meanings represented in the scenarios met the criterion proposed with 89%, with a mean of 2.63, for "moral and respectable", 79%, with a mean of 2.84, for "properly pressed", and 79%, with a mean of 2.79, for "adequate and acceptable." This indicates that those meanings make up the prototypical components of the category decent, with the first one being more central. The slight difference between the rating of this adjective and those of the first two is probably due to the relative vagueness and overextension in the usage of this adjective; while it is easy to imagine a "computer" for sophisticated and "war" for aggressive, it would probably require more effort to imagine something that would trigger the mental picture of decent. This seems to be the case in spite of the possibility of devising scenarios better than the ones used in this study.

With regard to INTERESTING, only one meaning, "exciting curiosity and attention holding", met the criterion set, with 84% and a mean of 2.68. "unusual or strange" received 63%, with a mean of

3.26. when this meaning was used for a person, the percentage dropped to 32%, with a mean of 3.84. The AE scenario received 53% and a mean of 3.53. It seems that the meanings not meeting our criterion constitute peripheral positions in the mental representation of the category interesting, with the first meaning being the central component, and perhaps underlying the over extension and usage of the category in different contexts.

Prototypical Conception of NNSs:

The results show that the NNSs' developmental acquisition and conception seemed to follow, to a reasonable extent, the hypotheses proposed for this study. There appear to be some clear patterns consistent with the markedness and acquisition assumptions.

The results for sophisticated (see Table 2) indicate that the intermediate-level group (IL) rated "complex in form" reasonably high, 2.17 (10.0%), while "worldly wise", the marked meaning, received 2.92 (75%) which is considerably lower than the first meaning, even though it was considered as "somewhat good". This reveals that they perceive the first as a central component in the category and the second as a good but less central.

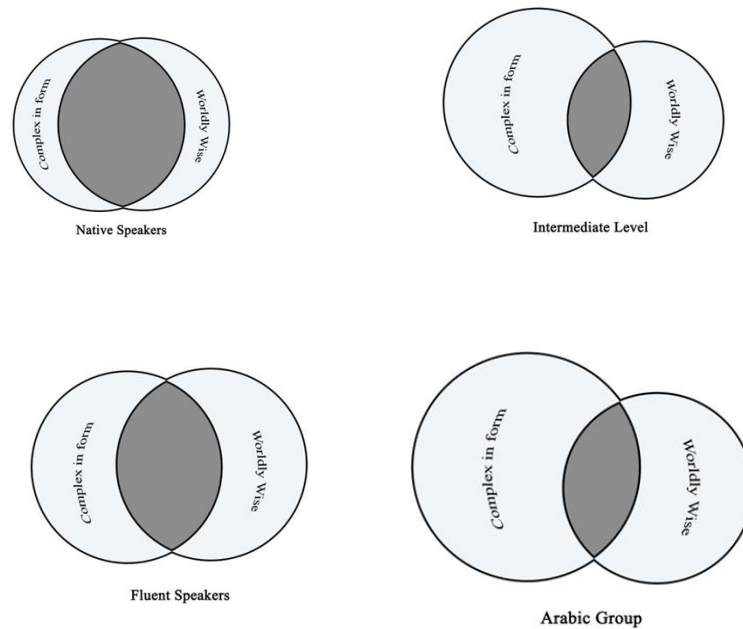
The fluent speakers (FS), on the other hand, rated-"complex in form" very high, 1.48 with 100% in the 1-3 range, while giving "worldly wise" a lower rating, 2.48 (86%) which is closer to that of the NSs' and could be considered as "good". While both groups showed preference for the first meaning, the FSs seemed to be more similar to the NSs in that their rating of the marked meaning was higher than that of the (IL), even though they did not appear to be identical to the NSs. The marked meaning, interestingly, received slightly lower rating, 2.31, from the NSs, than the unmarked one, 2.01.

Table 2
Means and percentages for sophisticated

Meaning	Group	X	1-3%
Complex in form	NS	2.01	95%
	IL	2-17	100%
	FS	1.48	100%
	AR	1.6	94%
Worldly wise and knowledgeable	NS	2.31	100%
	IL	2.92	75%
	FS	2.48	86%
	AR	3.35	65%

The Arabic group's (AR) judgment, 1.76 vs. 3.35, seems to support the previous findings, indicating that in the process of acquiring this adjective, the higher the proficiency the higher the marked meaning would be rated, while still keeping the first meaning as a central member of the prototype. In addition, there was no evidence of much effect of having a number of European languages in the (IL) on their rating. The means of those with European languages as opposed to the remainder of the group for "complex in form" were 2.0 vs. 2.29 and for "worldly wise" 3.0 vs. 2.86. There were six subjects with European native languages and twelve without. The schemata for the prototypes of sophisticated can be visualized for those groups as seen below (See figure 1).

Figure 1



The patterns discussed seemed to be clearer in the acquisition of AGGRESSIVE. While the IL's mean for "boldly hostile" was 2.36 (86%), their mean for "bold and active" was 3.86 (29%), indicating that the marked meaning, which is a central component to the NSs, was perceived as much less representative for the category than the unmarked one. A similar pattern was found in the comparison between those with European languages and those without, 2.33 and 4.67 vs. 2.38 and 3.25; however, it seems that those with European native languages leaned more strongly toward the first meaning than the others, perhaps due to first language influence as evidenced in the Arabic dictionary translation of "aggressive" in a French Arabic

dictionary (Abdunnoor' and Edris, 1983, p.29) and the understanding of a French speaking person.

The FSs mean for "boldly hostile", on the other hand, was 2.19 (86%) (see Table 3) while that for "Bold and active" was 2.76, indicating that while the first was a central meaning, the second was thought of as considerably good and was perceived more favorably than by the IL groups. This shows the progress in acquisition and gradually becoming more native-like.

Table 3.
Means and Percentages for AGGRESSIVE

Meaning	Group	X	1—3%
Boldly Hostile	NS	2.26	95%
	IL	2.36	86%
	FS	2.19	86%
	AR	2.29	76%
Boldly Hostile (Person)	NS	2.26	89%
	IL	2.50	79%
	FS	3.19	62%
	AR	2.06	88%
Bold and Active	NS	2.11	89%
	IL	3.86	29%
	FS	2.76	71%
	AR	4.41	24%

An interesting finding is seen in the evaluation of the meaning

"boldly hostile" in a scenario about a person (Peter). While the IL's' mean was 2.50, the FSs' was 3.19. This could be attributed to one of two reasons :

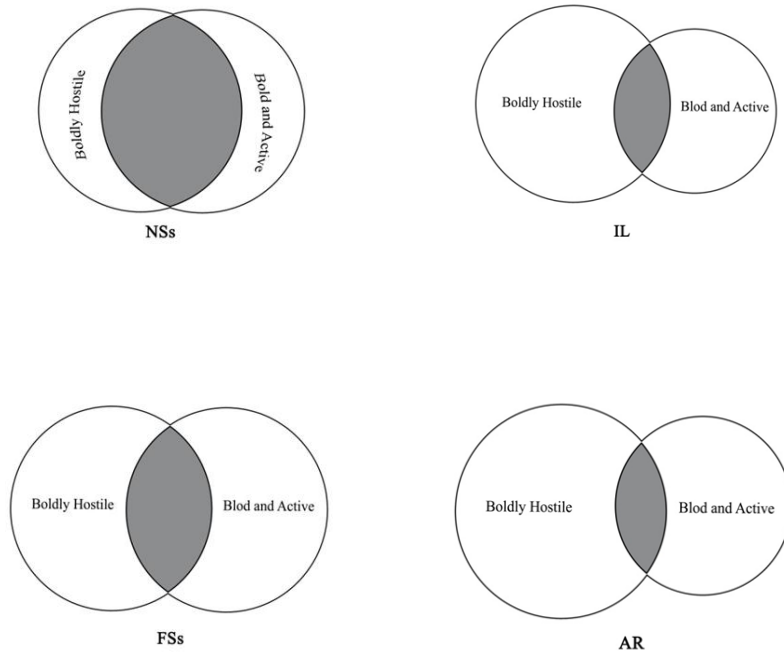
- a) an aggressive person to the FS would be more attached to the second meaning which is already acquired (Even the IL group gave slightly lower rating to the personal usage than to the other.)
- b) The fact that the scenario was about a boy in school may have affected the rating. Some people find it difficult to imagine serious hostility in children. One comment written on the questionnaire by a FS stating that the body should be called a "bully ."

In general, whereas the two meanings are considered prototypical to the NSs, the IL considers only the first as a central component. The FS, seem to occupy an in-between level, perceiving the first prototypical and the second as a "good" member close to the central one.

The Arabic group's conception seems to strongly support the patterns observed. While their means for the two scenarios for "boldly hostile" were 2.29 and 2.06, their mean for "bold and active" was 4.41. Their lower proficiency level in the acquisition of the meanings of these adjectives, which are best acquired through social interaction, is probably due to observed little social interaction with NSs of English .

The schemata for the prototypes for AGGRESSIVE are drawn for each group below: (See Figure 2)

Figure 2



As for DECENT, the results (see Table 4) appear to be, for the most part, consistent with the patterns and findings discussed. The IL rated the meaning "moral and respectable" as in the middle, "not good" and "not poor," with a mean of 3.44 (67%), giving similar rating to "adequate" , 3.33 (56%), and 3.78 (44%) to "properly dressed". These findings seem to be inconsistent with our hypotheses in that no meaning received clear agreement and no major differences were found between means. This is probably due to one or more of the following reasons: 1) This adjective was not clearly acquired since only 50% of the subjects indicated that they did not recognize it. Therefore, it could be considered the most difficult item. It was, in

addition, the only one unfamiliar to two Arab subjects. This may also indicate its level of abstraction and vagueness.

2) When we compare the mean of those with European languages, 3.83 for "moral and respectable," 3.67 for "properly dressed", 3.33 for "adequate," and 2.67, 4.0, and 3.33 respectively, we find that those without European native languages followed the pattern hypothesized. This may indicate possible first language influence in the acquisition by the first group.

Table 4
Means and Percentages for DECENT

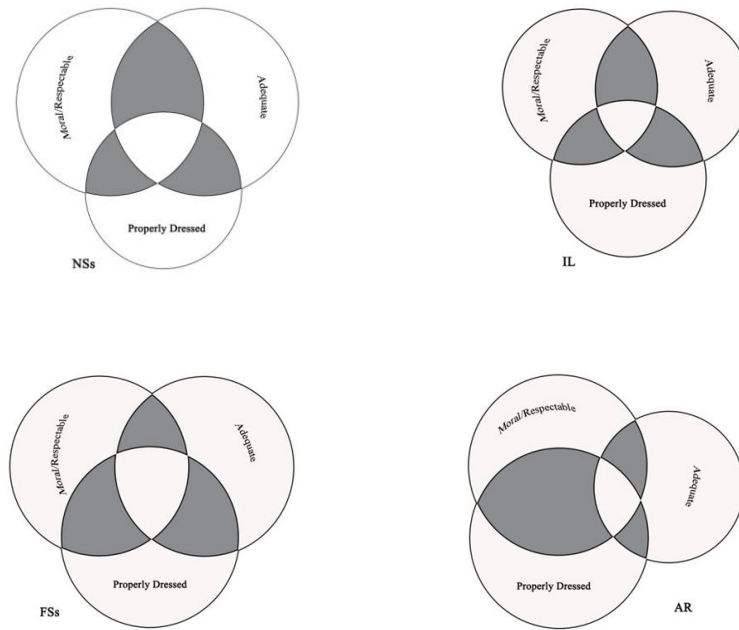
Meaning	Group	X	1-3%
Moral and Respectable	NS	2.63	89%
	IL	3.44	67%
	FS	2.67	86%
	AR	2.75	81%
Properly Dressed	NS	2.84	79%
	IL	3.78	44%
	FS	2.71	76%
	AR	2.63	69%
Adequate And Acceptable	NS	2.79	79%
	IL	3.33	56%
	FS	2.67	86%
	AR	3.94	44%

The FSs' prototypical conception of this category seemed to be similar to that of the NSs. They gave all meanings similar ratings and still perceived them as considerably good exemplars. Their means were 2.67 (86%) for "moral and respectable", 2.71 (76%) for "properly dressed", and 2.67 (86%) for "adequate and acceptable". Even though the hypothesized unmarked meaning, "moral and respectable", was not rated by the FSs much higher than the other two, it was not rated lower and was rated considerably higher by those with non-European native languages from the IL group. In addition, the categorical prototype of the FSs is very similar to that of the NSs.

The prototypical conception of the Arabic group as reflected in the results seems to agree with both the markedness pattern and the hypothesis about the AE prototype, "properly dressed". The AE prototype was rated the highest, 2.63 (69%), slightly higher than "moral and respectable" which received 2.75 (89%), and much higher than "adequate" which received 3.94 (44%). The AE dictionary translation literally means "properly dressed" or "polite," The directionality in the implicational universal hypothesized is apparent in the acquisition of "moral and respectable" before "adequate". Therefore, it could be stated that in a natural acquisition, with minimum first language interference, this and the previous implicational universals should hold.

The schemata for the categorical components for each group can be seen below: (see Figure 3)

Figure 3



Finally, INTERESTING seems to have only one proto-typical meaning, "exciting and holding to attention", for the IL (as it does to the NSs), who rated its scenario as a considerably good one, 2.78 (72%), as the results show (see Table 5). The meaning of "unusual or strange" received 3.72 (39%), and 4.0 (44%) in the personal usage. The marked meaning would be peripheral. Interestingly, the AE meaning "amusing and entertaining", although lower than the central meaning, was rated considerably higher than "unusual or strange", perhaps because "interesting" things are sometimes amusing and entertaining.

Means and Percentages for INTERESTING

Table 5

Means and Percentages for INTERESTING

Meaning	Group	X	1-3%
Exciting Curiosity and Holding Attention	NS	2.68	84%
	IL	2.78	72%
	FS	2.48	90%
	AR	2.12	88%
Unusual or Strange	NS	3.26	63%
	IL	3.72	39%
	FS	3.19	62%
	AR	4.53	24%
Unusual or - Strange (Person)	NS	3.84	32%
	IL	4.0	44%
	FS	3.38	52%
	AR	4.18	35%
Amusing and Entertaining	NS	3.53	53%
	IL	3.06	72%
	FS	2.76	90%
	AR	2.35	88%

As for the FSs' prototypical conception of the two meanings hypothesized, it appears to resemble that of the NSs. They gave the unmarked meaning 2.48 (90%) and the marked ones 3.19 (62%) and 3.38 (5-2%) (personal usage). However, there appears to be an interesting difference between them and the NSs in that they perceived the AE meaning "entertaining" as a considerably good component in the category, 2.76 (90%), compared with 3.53 (53%) given by the NSs. On the whole, it seems that the implicational universal hypothesized is valid for both groups. The AE group (AR) seems to follow the same pattern observed in the judgments of the FSs in that they perceived "exciting and holding attention", 2.12 (88%), as a central component in the adjective's prototype and rated "unusual or strange" much lower, 4.53 (24%) and 4.18 (35%) (personal usage). Both also rated "entertaining" positively; however, while this meaning is considered somewhat good in the FSs' conception, it is seen as a central component to the AE group.

Generally, this adjective seems to be used in many contexts and situations, without having clear definition in some usages, perhaps due to its vagueness and the over-extension of its usage. It would be possible to assume that the NSs usage of it is generally underlined by the meaning "exciting curiosity and holding attention."

The schema for the mental representations for each group can be visualized below: (see Figure 4)

Figure 4



CONCLUSION

In perspective, the results seem to generally support, to some extent, the hypotheses on which this study was based. The major findings and patterns observed in the native speakers' prototypical conception and the developmental acquisition of the lexical items under scrutiny are as follows:

- 1) The native speakers may have one or more prototypical or central components in a category.
- 2) The marked meaning is acquired after the unmarked and is less central, if no external factors, e.g., first language influence, interfere with natural acquisition, the results

seemed to generally support the hypotheses on which this study was based. In perspective, the major findings and patterns observed in the native speakers' prototypical conception and the developmental acquisition of the lexical items under scrutiny are as follows :

- 3) The marked meaning is increasingly becoming more central in the process of acquisition, if it is a central part of the category prototype .
- 4) (4The NNS' category prototype may sometimes be somewhat different from that of a NS, even in advanced stages, e.g., "entertaining" for interesting.
- 5) (5The higher the proficiency level, the more native-like the NNS becomes, even in the prototypical representation.

It is apparent that one of the factors affecting the process and the directionality of the acquisition of a category with more than one exemplar seems to be the level of saliency (Nelson, 1985). Mostly, the degree of abstraction, the level of frequency in usage, and the amount of cognitive effort needed for acquisition would appear to control, with varying degrees of importance, the degree of saliency. It is hoped that this study will be beneficial to linguistic researchers concerned with the acquisitional process, as well as to language material developers and language program planners who seek better language material and programs which improve and fasten the acquisition. The more research is conducted on second language acquisition, the more effective language material, teaching methods, and language programs should be.

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Appendix (A)

I. Please provide the following information :

1. Male _____ Female _____
2. Undergraduate _____ Graduate _____
3. Married _____ Single _____

II. If you are not a native speaker of English, please answer the following questions :

1. How long have you been in the U.S.A _____ ?.
2. What is your native language _____ ?
3. Which number below describes how often you speak English outside classroom?
1 2 3 4 5
never rarely sometimes often always

Please read the following words and circle those which you recognize, (which are familiar to you).

- | | |
|----------------|-------------------|
| 1. amusing | 10. decent |
| 2. unusual | 11. sophisticated |
| 3. unjustified | 12. bright |
| 4. forward | 13. respectable |
| 5. moral | 14. active |
| 6. interesting | 15. bold |
| 7. hostile | 16. fashionable |
| 8. excellent | 17. enjoyable |
| 9. exciting | 18. aggressive |

Instructions: Please read each of the following situations, descriptions, or short, stories and the statement following it. Each statement has an underlined word or adjective describing the person or the thing that the situation or the description is about. Then, indicate how well the underlined adjective describes that person or thing by circling only one of the numbers below the statement. Please do not

return to already answered questions -

David is a college student and has a part time job to help him pay for school tuition. ‘Sometimes, he does not have enough money to buy expensive clothes, or sport equipment. Today, David found out that he won two hundred thousand dollars in the lottery. He is glad and excited -

Statement: Today, David is happy -

1	2	3	4	5	6
Best example	Very good example	Somewhat good example	Somewhat poor example	Very poor example	<u>Not an example</u>

Cindy wanted to buy ‘an expensive watch which she had seen in a store two weeks earlier. When she went to the store, the salesman told her that they did not have it and she could not find that particular kind anywhere else in the city. Cindy was disappointed and did not know what to do-

Statement: Cindy was happy.

1	2	3	4	5	6
Best example	Very good example	Somewhat good example	Somewhat poor example	Very poor example	<u>Not an example</u>

John is 20 years old. He works at a gas station. He does not have many friends because he is hard to understand and difficult to get along with. He has some psychological problems. He is a complicated person -

Statement: John is a sophisticated person.

1	2	3	4	5	6
Best example	Very good example	Somewhat good example	Somewhat poor example	Very poor example	<u>Not</u> an example

Amy is ten years old. She likes to ride her bicycle after school. She does that for an hour everyday. Sometimes, ‘her friend rides, with, her.’ Amy finds riding a bicycle amusing and fun - -

Statement: Riding a bicycle is interesting to Amy -

1	2	3	4	5	6
Best example	Very good example	Somewhat good example	Somewhat poor example	Very poor example	<u>Not</u> an example

If the army of a ”country attacks another country for no reason other than to take the other country’s land, this would be considered a hostile, wrong, and an unjustified action -

Statement: Attacking another country without any acceptable reasons is an **aggressive** action.

1	2	3	4	5	6
Best example	Very good example	Somewhat good example	Somewhat poor example	Very poor example	<u>Not</u> an example

Sara is a college student, who studies hard and participates in many school events and programs. For example, she writes for the students’ newspaper and plays for the volley ‘ball and tennis teams. She also attends special lectures and social events. She is always

doing something -

Statement: Sara is an active student.

1	2	3	4	5	6
Best example	Very good example	Somewhat good example	Somewhat poor example	Very poor example	<u>Not</u> an example

Mary always wears unusual clothes, brightly colored and too, long for her. She seems to know about every subject. People were confused and wondered about her strange answers to their questions. In one of her classes, her professor asked her a simple question and she gave him the most unusual, unlikely answer which surprised everyone..

Statement: Mary is an interesting woman.

1	2	3	4	5	6
Best example	Very good example	Somewhat good example	Somewhat poor example	Very poor example	<u>Not</u> an example

Kathy is 24 years old. She is a bold and a forward woman. When she wants anything from anyone1 she goes directly to ‘him or her and asks for it. When she has a problem with someone, she goes to that person and talks honestly and frankly to him or her about it. She does not let anyone stop her from reaching her goals.

Statement: Kathy is an aggressive woman.

1	2	3	4	5	6
Best example	Very good example	Somewhat good example	Somewhat poor example	Very poor example	<u>Not</u> an example

Linda is a 26 year old lawyer. She travels frequently and reads about many things. She also likes art and classical music. She knows many people and cares about how she looks and talks .

Statement: Linda is a **Sophisticated** woman .

1	2	3	4	5	6
Best example	Very good example	Somewhat good example	Somewhat poor example	Very poor example	<u>Not</u> an example

Thomas is a high school teacher. He asks his students many questions. Most of his students give excellent answers and, sometimes, the others give satisfactory ones. In his last class, Thomas asked a question. One of the students answered, but gave an unusual and unexpected answer. The teacher thought that it was out of the ordinary, completely different from what he had in mind.

Statement: The student gave an **interesting** answer.

1	2	3	4	5	6
Best example	Very good example	Somewhat good example	Somewh at poor example	Very poor example	<u>Not</u> an example

Nancy lives with her family in a nice house. One day, she was alone in the house taking a shower, when the mailnari knocked on the door to deliver a registered letter. Then, Nancy put on her clothes, including a pair of pants, a blouse, and a jacket. After she put on her clothes, she opened the door and took the letter .

Statement: When Nancy opened the door, she was decent.

1	2	3	4	5	6
Best example	Very good example	Somewhat good example	Somewhat poor example	Very poor example	<u>Not an example</u>

The United States produces computers, weapons., and jet fighters which are highly advanced, complex and often difficult to operate. They are considered to be the most advanced in. the world.

Statement: These weapons and computers are sophisticated.

1	2	3	4	5	6
Best example	Very good example	Somewhat good example	Somewhat poor example	Very poor example	<u>Not an example</u>

George likes basketball very much. Last night, he went to a basketball game. The game was both exciting and entertaining. The winning team did not lead until the last ten seconds. George enjoyed the good plays and the great players.

Statement: The basketball game was inter to George.

1	2	3	4	5	6
Best example	Very good example	Somewhat good example	Somewhat poor example	Very poor example	<u>Not</u> an example

The Johnson family is a very respected family. in their neighborhood. The children behave themselves, and the parents are very upright, do all they can to be kind and considerate the others. They are very moral people.

Statement: The Johnson family is a **decent** family.

1	2	3	4	5	6
Best example	Very good example	Somewhat good example	Somewhat poor example	Very poor example	<u>Not</u> an example

Robert is a member in a music a. The. members of the club meet and listen to differentiate kinds of music. They also exchange music albums and cassettes. Even though Robert does not attend the meetings often, he still pays his membership fees and still likes the club.

Statement: Robert is an active member of the music club.

1	2	3	4	5	6
Best example	Very good example	Somewhat good example	Somewhat poor example	Very poor example	<u>Not</u> an example

Peter is twelve year old boy who does not have many friends always fights and beats other boys and classmates. He hits other boys for no reason other than to see them cry.

Statement: Peter is an aggressive boy.

1	2	3	4	5	6
Best example	Very good example	Somewhat good example	Somewhat poor example	Very poor example	<u>Not</u> an example

Bill and Joe wanted to go out for dinner a lot of money. So, they went to a food there was very cheap but it was example.

Statement: The food was decent.

1	2	3	4	5	6
Best example	Very good example	Somewhat good example	Somewhat poor example	Very poor example	<u>Not</u> an example