A Short Analysis of L1 Korean and L1 Mandarin L2 English learners' acquisition of the count/mass distinction in English.

--Choi et. All(2017)

This study is quite a great initiative in the area of second language study from the perspective of count/mass distinction. From the literature review, we knew about the scarcity of research in this exact field before this study. We had one sort of similar type of research though that was carried out on Japanese L1 speakers. That study mainly investigated how learners perceive the meaning of count and mass nouns, rather than how they use the morphosyntax and they found L2-English learners at an intermediate proficiency level have great difficulty with mass nouns. Regardless of the differences, it helped the researchers to compare with their own research to some extent later.

This study had been carried out by Choi et, All in early 2017 which is not so old including some good statistics in it. This study focuses on two different L1 speakers who were learning English as their L2. One is Korean L1 and the other is L1 Mandarin Chinese. This study starts with the primary hypothesis that L1 Korean and L1 Mandarin L2 English learners are influenced by atomicity in the use of count/ mass morphosyntax in English

This study crafted two hypotheses to test.

1. Hypothesis 1 (L1-transfer): L2-English learners transfer the semantics of plural marking from their L1 to their
2. Hypothesis 2 (universality): L2-English learners from generalized classifier L1s are influenced by the semantic universal of atomicity in their acquisition of English plural marking, regardless of how plural marking works in their

Hypothesis one predicts different behavior in L1 Korean and L1 Chinese where hypothesis 2 predicts similar behavior. According to the first hypothesis, the Korean group should be more accurate than the Mandarin group at using plural -s with [–human] count nouns; and (ii) the Korean group should overuse -s with atomic mass nouns more than the Mandarin group. On the other hand, universality demands that both groups will (initially) use English plural marking with both count nouns and mass atomic nouns, but not with mass non-atomic nouns. Input will lead hem to restrict plural marking to count nouns only.

The count/mass distinction is a particularly interesting area for investigating the role of the first language (L1) transfer and the role of semantic universals in L2-acquisition, in light of cross-linguistic differences in how nominal semantics maps to count/mass morphosyntax. Before getting into the result/finding, I am adding a few points about count/ mass condition in these languages.

The count/mass distinction is completely grammatical in English but not in Korean and Chinese. On the other hand, there is a three-way distinction among these languages in the mapping between semantics and morphosyntax in the domain of plural marking.

Atomicity, a key concept in distinguishing count nouns from mass nouns that have been mainly emerged from the term" boundedness". "A noun is 'atomic' if and only if there exists the smallest element (the atom) with the property denoted by the noun." For example- table is atomic and water is non-atomic. Another difference that can be shared here in terms of boundedness is that entities that denote animate things/ object is atomic where the entity that denotes substance is non-atomic. Atomicity is overly related to semantics,

Another study shows, the mapping between non(atomicity) and the count/mass syntax appears to be language specific.(Iwasaki et al., 2010; Jackendoff, 1991) . Like in English, this language distinguishes between count and mass nouns in the morphosyntax, but does not have a one-to-one mapping between semantics and morphosyntax:

while all count nouns denote atomic entities, not all mass nouns denote non-atomic entities.

English has obligatory plural marking and lack classifier. But Korean is considered as a generalized classifier language,so as Mandarin Chinese. Chierchia(1998) argued that no language has both a generalized classifier system and plural marking. However, his proposal has been challenged by a number of more recent publications, which have shown that plural marking and classifiers can co-exist within a single language, such as Indonesian (Cheng, 2000), as well as Armenian, Akatek, Japanese, Korean, Persian, and Tajik (Gebhardt, 2009).

For example- Korean has both plural marking (-tul) and a generalized classifier system, -tul is optional in indefinite contexts. If we go in-depth, we can see Korean has two types of plural marking, intrinsic and extrinsic plural marking.

Mandarin, has the plural marking -men (different in its behavior from English and Korean), is optionally used with [+human] nouns and obligatory with pronouns. This is restricted to use with [-human]nouns, both abstract and concrete. Being a classifier language, it has some distinction in behaving too. Mass classifiers create "a unit of measure" where count classifiers "simply name the unit" in Mandarin Chinese.

Table 1 (provided in the study) is a clear visualization to understand these three languages and their count/mass distinction.

This study is quite a good and organized one in the realm of Second Language Learning collaborating with new statistics. This study conducted two experiments. In both experiments, participants are tested on their suppliance of plural marking with count and mass NPs. Two tests were created, one compared L1 Korean and

L1Mandarin L2 English learners and the other investigated count/mass morphosyntax in native Korean and Mandarin Chinese. They designed was very good and they provided a good amount of information than the others in old statistics. The experiment had L1 Korean and L1 Chinese group along with the control group of L1 English.33 participants from L1 Korean and 33 from L1 Chinese and 32 native speakers of English participated in this test. A pilot study was carried out before the actual one. Participants were tested by a means of Grammar task(GT) and Picture Matching Task(PMT). They were tested individually in a single session. The GT task was timed. Since “time pressure limits learners’ ability to access metalinguistic knowledge, and increases reliance on implicit rather than explicit knowledge.”(Ellis 2005). The testing took 1.5 hours for the learners and less than one hour for the native. assage adapted from American kernel lessons: Advanced students’ book, by O’Neill

et al. (1991). The cloze test was scored by means of an appropriate-word criterion.

The Gt contained 48 items(24 target and 24 fillers). The 24 target items corresponded to six categories of four tokens each. The six categories were formed by crossing the factor ‘countability’ (3 levels: count, mass atomic, and mass non-atomic) with the factor ‘concreteness’ (2 levels: concrete and abstract).They wanted to determine whether countability would affect concrete and abstract nouns to the same extent.

An independent samples t-test on the cloze test proficiency

scores of the two groups found that the L1-Mandarin L2-English learners had significantly higher proficiency than the L1-Korean L2-English learners ($t(64) = 3.25$, $p < .05$).

The two learner groups exhibited a very similar pattern in the test. They both use the plural marker -s correctly with the atomic count nouns as well overused -s with atomic mass nouns but did not exhibit overuse of -s with non-atomic mass nouns. The same patterns were exhibited in using concrete and abstract nouns.

Along with the t-test , ith concrete and abstract nouns.

A mixed ANOVA on the suppliance of the plural marker -s was conducted with countability (3 levels: count vs. mass-atomic vs. mass non-atomic) and concreteness (2 levels:abstract vs. concrete) as the within-subject variables, and learner group (2 levels:L1-Korean L2-English learners vs. L1-Mandarin L2-English learners groups) as the between-subjects variable.

There was a significant effect of countability; post-hoc Bonferroni comparisons indicated that all three levels differed significantly from one another, with the most -s suppliance with count NPs, and the least -s suppliant with mass non-atomic NPs. There was also a significant effect of concreteness, with sig[1]nificantly more -s suppliance for concrete than for abstract NPs. There was also an interaction between countability and concreteness: the interaction plot shows that there was slightly more suppliance of -s with concrete than abstract nouns in count and mass-atomic categories, while the opposite was true for the mass non-atomic categories. There was no effect of group, and no interaction between group and any other variable.

The second experiment was conducted on their own L1.It was to examine whether the plural marking system of Korean does in fact encode atomicity, while that of Mandarin Chinese does not. The Gt task was translated in their L1. New participants were taken for this study.The Korean study results are consistent with the description of Korean in Kim (2005). In the GT, Korean NSs used the plural marker -tul optionally with count and mass atom in nouns, but hardly used it with non-atomic nouns. Similarly, in the GJT, Korean NSs

found count and mass atomic nouns to be more acceptable in the presence of -tul and found mass non-atomic nouns to be more acceptable without -tul. 10 These findings pro[1]vide empirical evidence for Kim's (2005) claim that Korean has a count/mass distinction which is based on atomicity. Even though -tul is always optional with indefinite, when a plural interpretation of an atomic NP was targeted, Korean NSs preferred to use -tul, and judged nouns without -tul to be less acceptable than those with -tul.

To sum up, the results from both Korean and Mandarin experiments show that the behavior of plural marking in these languages is just as we had assumed based on the literature: -tul is optionally used with atomic nouns, while -men is not used at all with[–human] nouns.

All the results strongly supported Hypothesis 2 than hypothesis 1. Since the L1-Korean and L1-Mandarin groups exhibited the same patterns of performance. Atomicity affects both groups. the results of this study support the view of atomicity as a semantic universal which influences all languages. The effects of atomicity on L2-English plural marking are not restricted to learners whose L1 (Korean) encodes atomicity in its plural system. So, the study concludes that learner's performance is due to the semantic universal of atomicity in L2 acquisition.

In pen eyes, this is a very clear , informative study. This study offers us advanced statistics with clear explanation. But if we think profoundly, they are some limitations of the study which should be taken care of. First of all, the choice if hypothesis. They overlooked a very important possible option. They just picked to and acted as any one of them should be the most plausible reason behind this count/mass distinction study. We can propose another alternative hypothesis for this study which is "Exposure to L2". We learn through taking input from the target language. This theory is also established along with the other theories of L2 acquisition. Along with the semantic universality, this can also be a good reason for this distinction. Since we can't say all the speakers from different languages will show the same patterns in this distinction due to the semantic universality but we can show good evidence for this according to the length of exposure of those speakers to their target language.

Due to the practice in L2 more and more make these happen and add to their cognition territory. This might be a possible reason. As we found in this study, learners behave the same, and it should be as they are exposed to the same input. As they are taking

the same input, they are extracting the same pattern, making the same generalization. So, they overlooked the most possible hypothesis which can be considered as a weakness of their research.

Another weakness I felt to be mentioned is their statistics model. I agree they have very good experimental design with clear figures and provide enough information. Again, I was wondering why they didn't choose linear regression instead of ANOVA or simple t-test. As we know, If you run multiple t-tests there's a probability of having 50 %errors. Same things happen with running ANOVA and post hoc tests. Bonferroni correction is used to lessen those errors but that affects the p-value. So why not a better test method like linear regression?

In the second experiment of Korean study, there was a part which was talking about interaction, which can be clearly described with linear regression. They used percentage on figures (a very common practice) which is good but they could run the linear regression model to run the binary data.

In figure 1, they showed standard deviation bars but they seem like standard error bars. Though it's clear enough to say this with high importance but from a general point of view, we know that , standard deviation bars are huge in and standard error bars are comparatively smaller. So, there should be some clear explanation for this.,

This study shows only whether the result is significant or not, nothing else than that. But this might give us more information like the effect size and others. See table 3 (164). This is more like old statistics. There is also more room left to develop this study and find a more appropriate result.

Undoubtedly this study is a far better one than most of the studies conducted before this. Since it offers new statistic method with a good explanation, clear figures, and information. This study has a perfectly balanced condition since they have the same no of tokens for the conditions and haven't excluded any of them which is also impressive but still, there are some rooms to work on. This can be a good place for prospective researchers to start on who are interested in advanced quantitative research.