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Addressing the Subjunctive in Spanish

While brainstorming ideas for my project, I knew I wanted to work on something that was interesting to me and that I could possibly apply in a real world situation. As a student who has studied Spanish for more than five years, and a Spanish tutor, I decided that working on some aspect of this language would be very fulfilling for me.

As a student, one of the concepts I struggled with was the subjunctive. I was not familiar with its use in English, so trying to learn it in another language made it a more daunting task. Online translators were of little help because in many cases they defaulted to a literal, indicative translation that was completely incorrect. I was determined to come up with some kind of program that would help students check their work when learning about the subjunctive.

The goal of this project is to create a tool using OCaml that would allow students learning Spanish at an intermediate level to check their understanding of the use of the subjunctive in Spanish. It is important to note that this program is not a translator, and that it does not check for proper syntax. In particular, the program takes an input of a Spanish sentence in the indicative form. The input sentence is expected to be grammatically correct in terms of word order, case, agreement, etc. The program then analyzes the sentence to see if the subjunctive is necessary and returns a structure that labels clauses and verbs that should be in the subjunctive as such. In order

to discuss the specifics of the program, I will first provide a brief description of the subjunctive and its use in the Spanish language.

The subjunctive is a critical aspect of the Spanish language, and its use is more prominent than it is in English (Collentine 2010). This is primarily because subjunctive verbs in Spanish have an ending that is significantly different from their indicative counterparts. Additionally, colloquial substitution of the indicative into what should typically be subjunctive phrases is not as common in Spanish as it is in English (Collentine 2010). As a result, errors in this area are more easily noticed, and provide some difficulty to students new to the language.

There are a variety of grammatical situations that trigger the use of the subjunctive in Spanish. Addressing all these situations would be beyond the scope of a project of this length. For the purpose of this project, I have chosen to address the ones that are most commonly covered by high school students learning Spanish. As a result, the program is not comprehensive, but I will discuss each type of clause and how it is addressed in the program. For each type of clause, I have included one or two example sentences in the comments that the program parses correctly. Expanding the corpus of sentences to be correctly parsed is then simply a matter of expanding the limited vocabulary I have outlined in the program, as the clauses here each loosely follow specific patterns, which will be explained below.

Before delving into the specific details of the subjunctive and how I chose to address them, I would first like to discuss the structure of this program. My initial idea was to use FOMA to output the subjunctive form of indicative verbs, and build from there. I quickly realized that this would not be a suitable option due to the reliance on semantic meaning of individual clauses to determine the mood of a sentence.

After coming to this understanding, I started with the code on nondeterminism in parsing, which we covered in class. I felt that this would be the best fit for this project as it would allow me to easily define and link together various types of independent and dependent clauses. Of course, I had to increase the size of the vocabulary and the grammar to handle the number of new rules I would be covering for this project.

For this project, a sentence can be a conjunction of a noun phrase (NP) and a verb phrase (VP) or of an NP and a subjunctive verb phrase (subjVP). After this, I defined a set of NPs, VPs, subjunctive NPs and subjunctive VPs. From here, I created a set of verbs I would use for my test cases, which spanned a range of tenses and moods. These were accompanied by a few basic nouns and pronouns to use as NPs. From here, I created clause structures and combination rules as I went through each of the types of clauses that were covered in this project.

Below is a list of grammatical situations in which the subjunctive is typically employed. The ones addressed in this project are in bold:

1) Independent clauses

   -Requests and suggestions

   -"Perhaps" phrases

   -Comands

2) **Noun Clauses**

3) **Adverbial Clauses**

   -**Adverbial conjunctions indicating hypothetical action or state.**

   -Adverbial conjunctions of time.

   -Other adverbial clauses

4) **Adjectival Clauses**

5) **"As if"** (*Como si*) **Statements**

6) If clauses.

Independent clauses

In Spanish, commands or *mandatos* are based on the subjunctive forms of the verbs. Aside from two exceptions, this is true for both affirmative and negative commands. The exceptions occur in the affirmative commands for the second person singular (*tu*) and the the second person plural (*vosotros*) forms.

To fit my purposes, I had to come up with a way for a user to enter a phrase and let the program know it is meant to be a command. The required input is the word "mandato," followed by the pronoun and optional negative, and then the infinitive of the verb. The phrase is then analyzed to determine whether input contains one of the above exceptions in the affirmative. If so, the verb is labeled as being in the indicative. For all other cases, it is labeled as subjunctive.

I decided not to include clauses that were requests or suggestions, or that dealt with "perhaps" phrases. This was more of a matter of sticking to the scope of the project than anything else. I wanted my program to cover situations in which the use of the subjunctive may or may not be acceptable.

For these types of clauses, while the subjunctive is preferred, it is more of a colloquial matter. Suggestions, such as in the sentence "You should run more", can be in either the

subjunctive or the indicative. Here, the subjunctive version is seen as being more polite, but both are grammatically correct.

With "perhaps" phrases, again both the indicative and the subjunctive versions are acceptable. The sentence "perhaps we will go" when used in the indicative conveys a little more certainty than its subjunctive counterpart. I felt that this had more to do with the situational semantics of the sentence and therefore excluded it from this project.

Noun clauses

Use of the subjunctive in the noun clause is often a Spanish student's first experience with the subjunctive. This case is quite simple. Verbs that express emotion, influence, or doubt trigger the subjunctive, as is the case in many languages. For the purpose of this project, I have selected a few verbs that fit these criteria to use as examples. For example, the verbs "to expect" (*esperar*), "to doubt" (*dudar*) and "to desire" (*desear*) are examples of these. If the VP starts with one of these words, followed by a noun clause (which typically starts with "that" or *que*) then the clause is recognized as being in the subjunctive mood and the verbs in it are labeled as appropriate. If these verbs are preceded by a no, or the verb is not one that fits the criteria to trigger the subjunctive, the clause is recognized as indicative.

Adverbial clauses

Adverbial clauses in Spanish can be divided into three types with regards to use of the subjunctive (Kanwit and Geeslin 2014). One of these is adverbial conjunctions which indicate a

hypothetical situation or action. Clauses of this form included expressions such as "unless" (*a menos que*) and "before" (*antes de que*). If the input sentence includes these expressions, the clause is always recognized as being in the subjunctive.

A second category of adverbial clauses includes adverbial conjunctions that deal with time (Kanwit and Geeslin 2014). These include expressions such as "until" (*hasta que*) and "as soon as" (*luego que*). These expressions are followed by the subjunctive only if they introduce an anticipated situation. The most common occurrence of this is when the phrase is preceded by a verb in the future tense (Kanwit and Geeslin 2014). As a result, my program processes any sentence containing a future tense verb before these expressions as containing the subjunctive, and if this is not the case, the indicative is recognized as being valid here.

Adjectival Clauses

Adjectival clauses are one of the more complex aspects of the use of the subjunctive in Spanish. Most resources I consulted say that adjectival clauses employ the subjunctive in cases where the noun or pronoun is negated or nonexistent. My first approach was to follow this and check for negation in the NP. However, this yielded some incorrect trees and required more research. I found that a better way to address this would be to look at the article. In most cases, the definite article indicates use of the indicative, while an indefinite article is usually followed by the subjunctive.

For these phrases, I realized I would have to redefine the scope of my project after doing a little more research. As mentioned above, definite articles (*el, la*) in these clauses are always followed by the indicative. For negated indefinites, such as "nobody" (*ningun*), the opposite is

always true. For the indefinite articles (*un, una*), however, the mood is more dependent on the semantics. For example, in Spanish the sentence "I'm looking for a cat" would employ the subjunctive. However, the sentence "I'm looking for a cat that I saw here yesterday" would be in the indicative, as there is a specific cat being discussed. Handling these kinds of semantic differences would probably be beyond the scope of a project of this scale, so I chose to parse all adjectival clauses with indefinite articles as being in the subjunctive.

If Clauses

If clauses in are another complex case of subjunctive use in Spanish. These cases involve sentences of the form "If you earned more money, we would go to California." This sentence would be in the subjunctive; while a sentence like "If you earn more money, we will go to California" would be in the indicative. This is something I would have liked to get working in my program. However, I was unable to do so because of some conflict with the way I structured my code and the fact that the verbs in both clauses must change to the subjunctive in the appropriate situations.

Future Improvements

Going forward, if clauses would definitely be the next area of the subjunctive I would like to cover, as it is the one main usage of the subjunctive that I was not able to address. If time had not been such a factor, I would also have liked to broaden the scope of the project to include the excluded independent clauses concerning requests and suggestions, and "perhaps" statements

that I mentioned above. Additionally, I would include support for parsing more commands. The commands included in this project are direct commands. Spanish also has indirect commands which employ the subjunctive. These are more like suggestions or wishes, which include sentences like "may you have a great year." While in my experience these types of occurrences are not common in the curriculum for students new to the subjunctive in Spanish, it would definitely round out the project and make it more complete.

Finally, I think the program would also be vastly improved if it had a greater vocabulary. There are many instances of irregularly conjugated verbs in Spanish, and while I did not come across problems concerning these, I am certain that they would present some difficulty in an expanded version of this project.

Reflection

When I started this project, I thought I had a decent understanding of the subjunctive and where it applied in Spanish. After just a couple hours of research, I realized that this area of grammar was a lot more complex than I initially thought and that I would definitely have to scale down my goals to make them realistic for the time frame I was given. As I discussed above, I decided that the best approach would be to find out what patterns trigger the use of the subjunctive. From there, I would tackle as many as possible, with examples for each type of clause.

Working on this project has definitely solidified my understanding of the subjunctive. There is a vast difference between teaching the subjunctive to a student who knows basic Spanish and teaching the subjunctive to a program that knows no Spanish. One of the key things

I learned while working on this was how to differentiate indicative and subjunctive phrases. In the beginning, my code was a large mess that included a multitude of rules that covered very specific sentence or phrase structures. In the process of refining the program, I was able to broaden my rules to allow for more structures and make the code more simple and readable.

I have actually showed this program to one of the students I tutor. Since it was designed to be used by a student of Spanish at his level, I felt that this would be the best reflection of the impact of my work. Currently, the limited corpus allows for processing of a very small sample of sentences he would come across. However, he did say that seeing the rules I defined in the code gave him a more concrete visual understanding of how the subjunctive is triggered by certain structures.

Overall, I am very happy with this project. While I wish I had more time to expand on the sections covered, I was able to successfully apply some of the knowledge I gained in this course to create a program that has potential for a real world application in my work as a tutor. I would like to thank Zac Smith and Professor John Hale for their assistance in helping me create and refine the ideas for this project.

Works Cited

Joseph Collentine. "The Acquisition and Teaching of the Spanish Subjunctive: An Update on Current Findings." Hispania 93.1 (2010): 39-51. Project MUSE. Web. 24 Nov. 2015. <https://muse.jhu.edu/>.

Kanwit, M., & Geeslin, K. L. (2014). THE INTERPRETATION OF SPANISH SUBJUNCTIVE AND INDICATIVE FORMS IN ADVERBIAL CLAUSES. Studies in Second Language Acquisition, 36(3), 487-533. doi:http://dx.doi.org/10.1017/S0272263114000126

Rojas, Juan de la C. The Spanish Subjunctive In Embedded Clauses a Transformational Approach. [Ithaca, N.Y.], 1969.

Whalen, Gillian Hamer. A Study of the Two Imperfect Subjunctive Variants In Spanish. 1979.