Ling567 Lab2 write up

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## 1. May I share this and future write ups with students working on the AGGREGATION project?

Yes

## 2. Description the steps you had to take to get from the automatically constructed choice file to one that would both (a) customize and (b) compile.

We change the sentential negation construction from zero to simple and check the inflectional negation in the choice file.

## 3.1. How many items parsed?

194 (The very first version)

## 3.2. What is the average number of parses per parsed item?

8.14 (The very first version)

## 3.3. How many parses did the most ambiguous item receive?

144 (The very first version)

## 3.4. What sources of ambiguity can you identify?

(i) The suffix -ak could be added to a verb to indicate the infinite form. According to the descriptive grammar, the infinite form of a verb could also be considered a “verbal noun” only when the suffix -n is added to a verb. (ii) The suffix -i on a verb could indicate either the obligative mood or the past tense.

## 3.5. For 10 items (if you have at least that many parsing), do any of the parses look reasonable in the semantics? (Emily will demo in class on Thursday.)

1. 60@@@@-1@@wuz=əm=ʂ gəfs-t-i@@@@1@2@1SG.NOM ==1SG =PROG run -PST -PST // I was running.@@
   1. The semantics looks reasonable. There is a predication for wuz=əm=ʂ that has \_pron\_n\_rel since it is a pronoun as well as an exist\_q\_rel predication that is a result of the constituent being an NP. The verb gəfs-t-i also has the reasonable predication of \_run\_v\_rel which takes the pronoun as its ARG1. The ARG0 of value of the verb is identified with the INDEX of the sentence.
2. 290@@@@-1@@maʐ taw win-tu@@@@1@3@1SG.OBL 2SG.OBL see -PLPF // I saw you.@@
   1. The semantics doesn’t seem to match up with the IGT. There is a \_and\_coord\_rel predication that does not exist in the IGT. The ARG0 in the verb predication \_see\_v\_rel is identified with the INDEX of the sentence.
3. 1850@@@@-1@@zəm di-tu@@@@1@2@snow hit -PLPF // It snowed.@@
   1. The semantics looks reasonable. The predications describing snow are exist\_q\_rel and \_snow\_n\_rel where ARG0 of \_snow\_n\_rel is identified with the ARG0 of the exist\_q\_rel that comes from the the constituent being an NP. The verb has the \_hit\_v\_rel predication where it’s ARG2 is identified with the ARG0 of both exist\_q\_rel and \_snow\_n\_rel. The ARG0 of \_hit\_v\_rel is identified with the INDEX of the sentence.
4. 2140@@@@-1@@sajiʃt=əv=ʂ gəfs-t-i@@@@1@2@2PL.NOM ==2PL =PROG run -PST -PST // You (pl.) were running.@@
   1. The semantics looks reasonable. There is a predication for sajiʃt=əv=ʂ that has \_pron\_n\_rel since it is a pronoun as well as an exist\_q\_rel predication that is a result of the constituent being an NP. The verb gəfs-t-i also has the reasonable predication of \_run\_v\_rel which takes the pronoun as its ARG1. The ARG0 of value of the verb is identified with the INDEX of the sentence.
5. 2410@@@@-1@@john-i maʐ win-t@@@@1@3@NO\_GLOSS -OBL 1SG.OBL see -PST // John saw me.@@
   1. The semantics does not match up with the IGT. In the MRS, we are missing the predication for maʐ. The \_and\_coord\_rel predication does not belong because there is no coordination in the IGT. Additionally, the INDEX of the sentence is identified with the C-ARG of the \_and\_coord\_rel which isn’t correct because there is coordination in the IGT.
6. 2490@@@@-1@@j-a-w-i çat win-tu@@@@1@3@DEM -MED PRO -OBL REFL see -PLPF // S/he saw herself/himself.@@
   1. The semantics does not match up with the IGT. The \_and\_coord\_rel does not belong because there is no coordination occurring in the sentence according to the IGT. Additionally the exist\_q\_rel predication with ARG0 identified with the C-ARG of the coordination predication. The \_see\_v\_rel has an ARG2 value identified with the C-ARG of the coordination predication and the irrelevant exist\_q\_rel predication.
7. 3950@@@@-1@@wuz=ʂ dam xaʂ-əm@@@@1@3@1SG.NOM =PROG breath pull -1SG.NPST // I breathe.@@
   1. The semantics does not match up with the IGT. The \_and\_coord\_rel does not belong because there is no coordination occurring in the sentence according to the IGT. Additionally the exist\_q\_rel predication with ARG0 identified with the C-ARG of the coordination predication. The \_see\_v\_rel has an ARG2 value identified with the C-ARG of the coordination predication and the irrelevant exist\_q\_rel predication
8. 3170@@@@-1@@wuz=əm retʂ-tu@@@@1@2@1SG.NOM ==1SG go -PLPF // I left.@@
   1. The semantics looks reasonable. There is a predication for wuz=əm that has \_pron\_n\_rel since it is a pronoun as well as an exist\_q\_rel predication that is a result of the constituent being an NP. The verb retʂ-tu also has the reasonable predication of \_go\_v\_rel which takes the pronoun as its ARG1. The ARG0 of value of the verb is identified with the INDEX of the sentence.
9. 3510@@@@-1@@j-a-iʃt=əv rəd-t-tu@@@@1@2@DEM -MED -PL.NOM ==3PL run -PST -PLPF // They had run.@@
   1. The semantics looks reasonable. There is a predication for j-a-iʃt=əv that has \_dem\_n\_rel since it is a demonstrative as well as an exist\_q\_rel predication that is a result of the constituent being an NP. The verb gəfs-t-i also has the reasonable predication of \_run\_v\_rel which takes the pronoun as its ARG1. The ARG0 of value of the verb is identified with the INDEX of the sentence.
10. 3930@@@@-1@@retʂ-tu=əm@@@@1@1@go -PLPF ==1SG // I left.@@
    1. The only predication we have is \_go\_v\_rel. The pronoun is missing from the simple MRS, even though it has the same meaning as 8)

## 4. Documentation of the phenomena you have added to your testsuite, illustrated with examples from the testsuite.

## 5. Documentation of the choices you made in the customization system, illustrated with examples from your test suite.

The first phenomena is the suffix added to indicate the infinitive form of verbs. According to the descriptive grammar there are two ways to indicate an infinitive verb. The suffix -ak could be added to a verb to indicate the infinite form. The infinite form of a verb could also be considered a “verbal noun” only when the suffix -n is added to a verb. In the item file there are only occurrences of -ak as an -INF. However, parsing a sentence with -ak would give us ambiguity of whether -ak was behaving as a noun or verb inflection. We edited out the noun lexical type rule that assigned -ak as an affix of a noun in the grammar. This brought the number of parses down for sentences with verbs having the -ak affix. An example of this would be the sentence “wuz=ʂ j-a-w nɨmendʒ-ən goç-ak jeçk tsar-əm.”

The second phenomena is the suffix added to indicate either the obligative mood or the past tense of a verb. According to the descriptive grammar, the suffix -i could indicate the past tense of a verb. Parsing a sentence with a verb with the -i suffix would give parses for the verb as past tense or the verb with an obligative mood. While there was nothing in the descriptive grammar about mood, in the item file we could see that -i only seemed to indicate past tense on a verb and never the obligative mood. Therefore, we decided to remove the verb lexical rule type that assigned -i as an obligative mood from the grammar. This brought the number of parses down with verbs having the -i affix. An example of this would be the sentence “wuz=əm plan-t-i.”

## 5.X Results

1. How many items parsed?
   1. 20
2. What is the average number of parses per parsed item?
   1. 1.5
3. How many parses did the most ambiguous item receive?
   1. 2
4. What sources of ambiguity can you identify?
5. For 10 items (if you have at least that many parsing), do any of the parses look reasonable in the semantics? (Emily will demo in class on Tuesday.)
   1. 6@author@@@1@tam@wuz=əm puv-i@@@@1@2@1SG.NOM=1SG drink-PST`I drank'
      1. The semantics looks reasonable. There is a predication for wuz=əm that has \_pron\_n\_rel since it is a pronoun as well as an exist\_q\_rel predication that is a result of the constituent being an NP. The verb puv-i also has the reasonable predication of \_drink\_v\_rel which takes the pronoun as its ARG1. The ARG0 of value of the verb is identified with the INDEX of the sentence.
   2. 7@author@@@1@tam@wuz=əm rəd-i@@@@1@2@1SG.NOM=1SG run-PST`I ran'
      1. The semantics looks reasonable. There is a predication for wuz=əm that has \_pron\_n\_rel since it is a pronoun as well as an exist\_q\_rel predication that is a result of the constituent being an NP. The verb puv-i also has the reasonable predication of \_run\_v\_rel which takes the pronoun as its ARG1. The ARG0 of value of the verb is identified with the INDEX of the sentence.
   3. 8@author@@@1@tam@wuz=əm rɨçɨp-i@@@@1@2@1SG.NOM=1SG sleep-PST`I slept'
      1. The semantics looks reasonable. There is a predication for wuz=əm that has \_pron\_n\_rel since it is a pronoun as well as an exist\_q\_rel predication that is a result of the constituent being an NP. The verb puv-i also has the reasonable predication of \_sleep\_v\_rel which takes the pronoun as its ARG1. The ARG0 of value of the verb is identified with the INDEX of the sentence.
   4. 9@author@@@1@tam@wuz=əm rondoj-i@@@@1@2@1SG.NOM=1SG jump-PST`I jumped'
      1. The semantics looks reasonable. There is a predication for wuz=əm that has \_pron\_n\_rel since it is a pronoun as well as an exist\_q\_rel predication that is a result of the constituent being an NP. The verb puv-i also has the reasonable predication of \_jump\_v\_rel which takes the pronoun as its ARG1. The ARG0 of value of the verb is identified with the INDEX of the sentence.
   5. 10@author@@@1@tam@wuz=əm pats-i@@@@1@2@1SG.NOM=1SG cook-PST`I cooked'
      1. The semantics looks reasonable. There is a predication for wuz=əm that has \_pron\_n\_rel since it is a pronoun as well as an exist\_q\_rel predication that is a result of the constituent being an NP. The verb puv-i also has the reasonable predication of \_cook\_v\_rel which takes the pronoun as its ARG1. The ARG0 of value of the verb is identified with the INDEX of the sentence.
   6. 1@author@@@1@tam@wuz=əm puv-ak pers-i@@@@1@3@1SG.NOM=1SG drink-INF ask-PST'I ask to drink'

* The semantics does not match up with the IGT. he \_and\_coord\_rel does not belong because there is no coordination occurring in the sentence according to the IGT. The ARG2 of the \_ask\_v\_rel and the \_drink\_v\_rel predications are not identified with any values. Additionally, the INDEX of the sentence is incorrectly identified with the C-ARG of the coordination predication.
  1. 2@author@@@1@tam@wuz=əm rəd-ak pers-i@@@@1@3@1SG.NOM=1SG run-INF ask-PST'I ask to run'
* The semantics does not match up with the IGT. he \_and\_coord\_rel does not belong because there is no coordination occurring in the sentence according to the IGT. The ARG2 of the \_ask\_v\_rel and the \_run\_v\_rel predications are not identified with any values. Additionally, the INDEX of the sentence is incorrectly identified with the C-ARG of the coordination predication.
  1. 3@author@@@1@tam@wuz=əm rɨçɨp-ak pers-i@@@@1@3@1SG.NOM=1SG sleep-INF ask-PST'I ask to sleep'
* The semantics does not match up with the IGT. he \_and\_coord\_rel does not belong because there is no coordination occurring in the sentence according to the IGT. The ARG2 of the \_ask\_v\_rel and the \_sleep\_v\_rel predications are not identified with any values. Additionally, the INDEX of the sentence is incorrectly identified with the C-ARG of the coordination predication.
  1. 4@author@@@1@tam@wuz=əm rondoj-ak pers-i@@@@1@3@1SG.NOM=1SG jump-INF ask-PST'I ask to jump'
* The semantics does not match up with the IGT. he \_and\_coord\_rel does not belong because there is no coordination occurring in the sentence according to the IGT. The ARG2 of the \_ask\_v\_rel and the \_jump\_v\_rel predications are not identified with any values. Additionally, the INDEX of the sentence is incorrectly identified with the C-ARG of the coordination predication.
  1. 5@author@@@1@tam@wuz=əm pats-ak pers-i@@@@1@3@1SG.NOM=1SG cook-INF ask-PST'I ask to cook'
* The semantics does not match up with the IGT. he \_and\_coord\_rel does not belong because there is no coordination occurring in the sentence according to the IGT. The ARG2 of the \_ask\_v\_rel and the \_cook\_v\_rel predications are not identified with any values. Additionally, the INDEX of the sentence is incorrectly identified with the C-ARG of the coordination predication.

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## 6. Descriptions of any properties of your language illustrated in your test suite but not covered by your starter grammar and/or the customization system.

To make the sentences ungrammatical, we added the enclitic =əm to verb stems. However, because we got 100% coverage of both our grammatical and ungrammatical sentences, the fact that attaching an enclitic meant for a pronoun can be parsed shows that our starter grammar does not rule out this property.