

Recall that, as described in the Carnie reading, there are basically three types of noun phrases (also called "NPs" or "nominals"): referring expressions (names or common nouns), pronouns, and anaphors (reflexives). Recall also that noun phrases have to corefer (refer to) with something in the real world. Finally, recall that for the purpose of syntactic analysis we can write a sentence with small letters (called "subscripts") to indicate which words in the sentence refer to the same thing. For example, the sentence *Divya wants me to give the book to her* can have two interpretations:

1.  $Divya_i$  wants  $me_j$  to give the book $_k$  and the pencil $_l$  to  $her_i$ .
2.  $Divya_i$  wants  $me_j$  to give the book $_k$  and the pencil $_l$  to  $her_m$ .

In (1), the interpretation is that "her" means "Divya"; you can tell because I put a  $_i$  next to both "Divya" and "her", meaning they refer to the same thing. In (2), the interpretation is that "her" refers to some other person (maybe a third person we had mentioned earlier in the conversation); you can tell because I put an  $_i$  next to "Divya" but an  $_m$  next to "her".

Now, with these background facts, let's systematically look at the rules about how referring expressions, pronouns, and anaphors work in English.

First, let's think about what happens when a noun phrase does not corefer with any other word in the same sentence:

- R-expression: *The bad weather $_i$  bothers Mary $_j$ .*
- Pronoun: *The bad weather $_i$  bothers her $_j$ .*

- Anaphor: \**The bad weather<sub>i</sub> bothers herself<sub>j</sub>*.

In all three of these examples, "the bad weather" is not referring to the same thing as "Mary"/"her"/"herself"; that's why I write "the bad weather" with an <sub>i</sub> and the others with a <sub>j</sub>, to indicate that they refer to different things. Importantly, we see that the sentences with referring expressions and pronouns are ok, but the sentence with an anaphor is not. This shows us that referring expressions and pronouns do not need to have an antecedent (a word that refers to the same thing) in the same sentence. Anaphors do need to have an antecedent in the same sentence.

Now let's think about what happens when a noun phrase does corefer with a word in the same sentence:

- R-expression: \**Mary<sub>i</sub> kicked Mary<sub>i</sub>*.
- Pronoun: \**Mary<sub>i</sub> kicked her<sub>i</sub>*.
- Anaphor: *Mary<sub>i</sub> kicked herself<sub>i</sub>*.

Here, the first "Mary" refers to the same person as the second "Mary"/"her"/"herself"; that's why I've written them both with <sub>i</sub>. The sentence with the referring expression is not grammatical. (It would be grammatical if the two different "Mary"s were two different people with the same name. But I cannot say "Mary kicked Mary" if I am trying to express that these are the same person.) The sentence with the pronoun is also not grammatical. (Again, it would be grammatical if "her" were referring to a different person. But I cannot say "Mary kicked her" if I want to express that Mary kicked

herself.) Finally, the sentence with an anaphor is grammatical. This shows us more about the rules for how noun phrases work. Recall that above we saw that pronouns and referring expressions do not need to have an antecedent in the same sentence, whereas anaphors do. Here we see that pronouns and referring expressions *cannot* have an antecedent in the same sentence, whereas anaphors can. (It makes sense that anaphors can have an antecedent in the same sentence, because up above we saw that anaphors *must* have an antecedent in the same sentence.)

Finally, let's look at what happens when a noun phrase corefers with a word in the same sentence but not the same clause:

- R-expression: \**Mary<sub>i</sub> thinks that [ I<sub>j</sub> like Mary<sub>i</sub> ]*.
- Pronoun: *Mary<sub>i</sub> thinks that [ I<sub>j</sub> like her<sub>i</sub> ]*.
- Anaphor: \**Mary<sub>i</sub> thinks that [ I<sub>j</sub> like herself<sub>i</sub> ]*.

In this sentence, "I like Mary" is a clause (like a mini-sentence) within the main sentence. "Mary" refers to a different person than "I"; that's why I wrote Mary with a <sub>i</sub> and I with a <sub>j</sub>. Crucially, the sentence with a pronoun is grammatical; even though "her" and "Mary" refer to the same person (I indicated this by writing both of them with an <sub>i</sub>), the sentence is acceptable. This shows that the generalization we made above ("pronouns cannot have an antecedent in the same sentence") is not correct; pronouns can have an antecedent in the same sentence, as long as it's not in the same *clause*. On the other hand, the sentence with a referring expression is still ungrammatical; this shows that referring expressions really

cannot have an antecedent in the same sentence. Finally, the sentence with the anaphor is not grammatical, even though "herself" seems to have a possible antecedent in the same sentence ("Mary"). That shows that our previous generalization ("an anaphor must have an antecedent in the same sentence") is not specific enough; actually, an anaphor must have an antecedent in the same clause.

So we are left with the following set of rules:

- A referring expression cannot have an antecedent in the same sentence.
- A pronoun cannot have an antecedent in the same clause.
- An anaphor must have an antecedent in the same clause.

We can summarize the rules with examples as shown below:

- Referring expressions
  - Antecedent in same clause: not allowed
    - \**She<sub>i</sub> kicked Mary<sub>i</sub>.*
  - Antecedent in another clause in the same sentence: not allowed
    - \**She<sub>i</sub> said that [ you<sub>j</sub> kicked Mary<sub>i</sub> ].*
  - No antecedent in the sentence: allowed
    - *She<sub>i</sub> kicked Mary<sub>j</sub>.*
- Pronouns
  - Antecedent in same clause: not allowed
    - \**She<sub>i</sub> kicked her<sub>i</sub>.*

- Antecedent in another clause in the same sentence: allowed
  - *She<sub>i</sub> said that [ you<sub>j</sub> kicked her<sub>i</sub> ].*
- No antecedent in the sentence: allowed
  - *She<sub>i</sub> kicked her<sub>j</sub>.*
- Anaphor
  - Antecedent in same clause: allowed (and required)
    - *She<sub>i</sub> kicked herself<sub>i</sub>.*
  - Antecedent in another clause in the same sentence: not allowed
    - *She<sub>i</sub> said that [ you<sub>j</sub> kicked herself<sub>i</sub> ].*
  - No antecedent in the sentence: not allowed
    - *She<sub>i</sub> kicked herself<sub>j</sub>.*

### Now, here is your question for reflection:

Those are supposedly the rules for how referring expressions, pronouns, and anaphors work in English. Does Chinese follow the same rules? Try analyzing Chinese referring expressions, pronouns, and anaphors in the same way I did above (an easy way would be to try directly translating my sentences and seeing if they are grammatical in Chinese) to see if Chinese works differently than English in any respect. If you find something that's different about Chinese (e.g., something that's not grammatical in English but is

grammatical in Chinese), can you find any real-world example of it (e.g. in a book or website)?