

## ϕ Agreement in Cherokee

**Problem:** In Cherokee, transitive verbs with local persons as arguments give rise to portmanteau morphemes while the same morphology is seen on intransitive verbs and transitive verbs with at least one third person argument. This last set of morphemes comes in two different series, set A and set B. These have previously been analyzed as verb classes. The verb class analysis captures the data. However, it is not ideal because we are then forced to posit syncretism whenever the form of the agreement morphemes are the same between the two classes, such as when both arguments of a transitive verb are first or second. An analysis where the different sets of morphemes arise from two probes, in separate places in the structure permits the elimination of verb classes all together. The distribution of the morphology becomes entirely predictable based upon the argument structure of the particular verb. A structural approach also predicts a switch based on animacy that otherwise is an exception to the classes.

**Morphology:** Agreement in Cherokee follows different patterns depending on the transitivity and argument structure of the verb, and the person features of the arguments. In transitive verbs with arguments that are both local persons, the person feature is realized as a portmanteau morpheme that proceeds the root. There are different morphemes for first subject with second object and second subject with first object. Both person features are represented in the portmanteau morpheme, but only one number feature is realized. There is a number hierarchy beginning with plural, followed by dual, with singular coming in last. If one of the arguments is plural, the portmanteau morpheme will also express plural. If none are plural, but at least one is dual, dual will surface, and so on. The situation looks different if a transitive verb has at least one third person argument. There is no agreement with the third person, so the morpheme that appears just before the stem agrees with the person and number of the argument that is not third person. If the third person argument is plural, a plural marker appears before the other agreement morpheme. If both arguments are third, then a default morpheme is used. This morpheme also agrees with the number of the subject while the number of the object is realized with the same plural marker that proceeds the other agreement morpheme. Similar to number, there is another morpheme that refers to the argument otherwise not being agreed with. This morpheme marks animacy or agency. It appears when an argument is third person and animate, as well as in a passive construction when the subject is not present. This picture is complicated further by the fact that the morphemes which express agreement with the other argument, or default, come in two different versions: set A and set B. These sets of morphemes, A and B, that show agreement with the person and number of a single argument are the ones used with intransitive verbs. Though still quite complex, by framing the morphology in this manner, the structural analysis becomes clearer, and there is less syncretism in the system overall. The structural approach also allows for the elimination of the verb classes: the use of set A vs. set B becomes predictable.

**Structural Account:** Within the verbal projection there are two separate probes, one higher and one lower. One series of agreement morphemes, set A, results from the higher probe reaching the subject, while the lower probe yields set B. This is motivated by the distribution of verbs that take set A or B agreement. Both transitive and intransitive verbs are present with both sets of morphemes. However, the vast majority of transitive verbs take set A agreement. The transitive verbs that take set B mostly have experiencer subjects. The split in intransitive verbs between the two sets seems to mirror the canonical unergative unaccusative split, with unergative verbs belonging to set A and unaccusatives to B. A similarity between transitive verbs and unergative intransitive verbs is that they all merge the subject high, outside of the VP. Therefore, the set A morphemes should result from a higher probe that can reach these external arguments. Meanwhile, unaccusative verbs, and the small handful of transitive verbs

with experiencer subjects, have subjects merged into the structure lower, within the VP. A lower probe, below the point that the external argument is merged, is then responsible for the occurrence of set B morphology. With this structural account, classes are no longer necessary because the form of the agreement is tied to the argument structure of a given verb, through the location of the  $\phi$  probe.

**Exceptional Agreement:** The proposed agreement structure also predicts an otherwise exceptional agreement pattern. Cherokee has an optional animacy switch. If the subject is lower in animacy than the object, set B morphology is used when set A would normally occur. This is illustrated with sentences from Scancarelli 1987. In (1), women are kicking horses and set A agreement is seen. In (2), horses are kicking women and set B agreement is seen.

- (1)    ani:-    ge:hja   so:gwili de:-   ani:-    ahjəte:ʔa  
        3A.NS- woman horse    DST- 3A.NS- kick:PRC  
        ‘The women are kicking the horses.’
- (2)    so:gwili ga:-   u:ni:-   ahjəte:ʔa ani:-    ge:hja  
        horse    ANS- 3B.NS- kick:PRC 3A.NS- woman  
        ‘The horses are kicking the women.’

In his 2015 grammar, Montgomery-Anderson has previously recognized the connection to animacy, though the switch was still left as an exception to normal class agreement. He gives the hierarchy for Cherokee as beginning with local persons, then third person human, followed by third person animate, and finally all other entities at the lowest level. Speakers who have this optional alternation in agreement are actually preferentially agreeing with the most animate argument, instead of the external argument as they would in a normal sentence. Since in (2), *women* is low, within the VP, it is within the domain of the lower probe. This results in set B morphology appearing. Therefore speakers of Cherokee can always agree with the external argument, but some also have the option of agreeing primarily with the most animate argument. If they choose to agree with the most animate argument, and that argument is a object, then set B morphology will surface, even if the verb normally takes set A.

**Discussion:** By taking a structural approach,  $\phi$  agreement in Cherokee is greatly simplified, with less syncretism, no classes, and the ability to predict unusual patterns of agreement that would otherwise be exceptions. The implementation of this requires the agreement mechanism to have certain properties. There must be two  $\phi$  probes in two different locations in the structure, yet there still must be a way for portmanteau morphemes to surface. Also, the individual features cannot be bundled together in the probe since person and number behave differently. Every available argument must be probed, regardless of whether it will agree fully, since there are morphemes which show certain features of an argument that is not agreed with fully. Also, the system must be sensitive to the difference between probing unsuccessfully, which would result in a default morpheme, and the argument simply not being present, which results in a different morpheme.

#### References:

- Montgomery-Anderson, Brad. 2015. Cherokee Reference Grammar. University of Oklahoma Press: Norman.
- Scancarelli, Janine. 1987. Grammatical Relations and Verb Agreement in Cherokee. University of California at Los Angeles.