

**Study questions for Anttila 1997**  
**Turn in to my mailbox (in Campbell 3125) by 5 PM Friday, Jan. 13**

Anttila, Arto. 1997. Deriving variation from grammar. In Frans Hinskens, Roeland van Hout and Leo Wetzels (eds.), *Variation, Change and Phonological Theory*, Amsterdam, John Benjamins. pp. 35-68. [posted version is 1995 ROA version]

**Notes and tips**

- p. 5** The paragraph that begins “First, consider /maa/” is a bit hard to understand, because we don’t know what the incorrect combination /maa/ + weak form of genitive would look like. Anttila’s dissertation gives it as \*[má.jen] (first syllable is light). The incorrect combination of /kala/+strong would be \*[ká.loi.den].
- p. 5** /ä/ means IPA [æ]; /ö/ means [ø]
- p. 11** Anttila is introducing free ranking of constraints. In the notation we used in class, his tableaux (20)-(21) could be one tableau with a jagged line between columns B and C.
- p. 12** The idea that the number of rankings producing some output predicts that output’s frequency was original to Anttila; we didn’t see it in class.
- p. 14** Don’t worry too much about the definition in (27). Just understand the constraints in (28) and (29).

**Questions**

Usually the study questions will ask you to think about the reading more, but this time, since you have such a short time to do it in, I mainly want to use the study questions to have you get used to OTSoft.

1. Briefly describe the difference between Anttila’s approach and the Stochastic OT approach of assigning numbers to constraints.

**(more on next page)**

2. First, do these steps:

- If necessary, install OTSoft (Windows only: [www.linguistics.ucla.edu/people/hayes/otsoft](http://www.linguistics.ucla.edu/people/hayes/otsoft)). PCs in the dept. mostly have it installed already.
- Download from the course webpage the file 01Anttila.txt . Open OTSoft.
- Click ‘Work with a different file’ and choose the 01Anttila.txt file.
- Under ‘Choose Ranking Algorithm’, choose ‘Constraint Demotion’, then click the big ‘Rank 01Anttila.txt’ button.
- Take a look at the results.

What constraint ranking does OTSoft give you?

The current version of OTSoft (2.3.1) seems to have a bug that won't let it use this file. If you have a computer with an older version, use that. Otherwise, skip this question. Sorry.

3. First, do these steps:

- Go to [www.fon.hum.uva.nl/paul/gla/](http://www.fon.hum.uva.nl/paul/gla/). Scroll down to #3. Have a look at the file Anttila\_data.txt , which is based on data from your reading and Anttila's dissertation.
- Download from the course webpage an adapted version of this file, 01Anttila\_data\_adapted.txt
- Click ‘Work with a different file’ and choose the 01Anttila\_data\_adapted.txt file.
- Under ‘Choose Ranking Algorithm’, choose ‘Gradual Learning Algorithm’, then click the big ‘Rank 01Anttila\_data\_adapted.txt’ button.
- Take a look at the results. If the match is poor, try more learning iterations.

**Print and attach** the first page of the results (look in the folder where you saved 01Anttila\_data\_adapted.txt. There should be a new folder called FilesFor01Anttila\_data\_adapted.txt. In that folder should be a file 01Anttila\_data\_adaptedDraftOutput.txt—print the first page of that file).

Briefly discuss how well or poorly the Stochastic OT Grammar captures the quantitative patterns. Does Anttila get a better match anywhere? Does Stochastic OT get a better match anywhere? Do the constraints that Anttila treats as freely ranked have similar ranking values in the Stochastic OT grammar?