LIN1222H F: Advanced Phonology II
Exceptionality in (Phonological) Grammars: Theory and Learning

Aleksei Nazarov, Sidney Smith 4089
Email: aleksei.nazarov@utoronto.ca
Class time and location: Wed 12-2, Sidney Smith 2116
Office hours: Tue 2-4 or by appointment
Make sure you have access to the Quercus site for this course.

1. Description

In this seminar, we'll discuss a big and fundamental question: when we identify patterns in language, how do we deal with words/morphemes/constructions that don't fit the pattern?

The beauty of this question is that theory and (computational) learning go hand in hand: incorporating both patterns and exceptions into one system poses questions for theory, but the complexity of the resulting grammar models raises questions about whether and how they could be internalized by humans. We will look at both aspects of the problem. In addition, we will make an excursion to some psycholinguistic literature, as we need to know how humans actually behave when they encounter exceptions.

There is also a great amount of crossover between syntax and phonology: both syntactic and phonological systems feature exceptions. To foster a greater understanding of exceptionality, we will also be reading some papers focused on syntactic phenomena.

I would like to concentrate the seminar on the following 5 themes:
- evidence for a pattern despite the existence of exceptions
- grammatical and lexical representation of exceptions
- partition of the lexicon (into exceptions and non-exceptions)
- lexicon-generality of the grammar
- generalisation to novel words.

2. Learning outcomes

Upon successful completion of this seminar, you should be able to:
- have a thorough mental image of typical phonological systems with exceptionality
- freely apply and think about the main approaches to exceptionality in grammar
- understand the main approaches to exceptionality in learning, and the reason why we need them
- make an individual, original contribution to existing work on exceptionality in (phonological) grammars

3. Assessment

Item	Due date	Percent of grade
Weekly comments on Quercus	**Weekly** Monday 12 pm[1] between Sep 17-Oct 29	15%
Presentations on readings	**Twice** between Oct 3-Nov 28	25%
Final project proposal	Oct 24	5%
Proposal peer review	Oct 31	5%
Final project presentation	Nov 28 / Dec 5	15%
Term paper	Dec 15	35%

3.1 Comments on Quercus

In weeks 2 through 8 (Oct 3 through Nov 28), those taking the seminar for credit will be expected to submit comments on the paper underlined in the reading list for that week onto that week's discussion board on Quercus. These comments will be due on the Monday preceding the relevant session at 12 pm. (For the October 10 presentation, comments will be due on Friday, October 5.) The person presenting this paper in class will be asked to incorporate and discuss these questions in their presentation.

3.2 Presentations on readings

From Oct 3 up until Nov 28, at least one of the assigned readings will be presented by a student. In the course of the semester, each of the students taking the seminar for credit will be expected to present a total of 2 readings. The assigned readings for November will be determined based on your research interests and curiosity.

3.3 Final research project

Your final research project will be a piece of theoretical or computational work or a fully worked out proposal for a behavioural experiment based connected to the theme of exceptions in grammar and to the readings we discussed in class. There will be **three** formal check-in moments for your project:
- a proposal + a peer review of one of your classmates' proposal in the two weeks before reading week,
- an oral presentation in the last week or two weeks of class, and
- a paper due on December 15.

A. *Project proposal and peer review*   I will ask each student registered for credit to write a 1-page proposal by October 24 of what they'd like to work on for their final project. Each student registered for credit will then be asked to write a short (max. 1 page) peer review (summary and evaluation) of one of the other students' proposals by October 31.

---

[1] Except in the week of Oct 8 because of Thanksgiving. Instead of Monday, Oct 8, comments will be due on Friday, Oct 5.

B. *Project presentation* In the last week (or two weeks, depending on the number of students) of class, each student who is taking the seminar for credit will give a presentation of their final project in the standard format of 20 minutes of presentation + 10 minutes of questions.

C. *Term paper* Finally, those taking the seminar for credit will be expected to write a 10-15 page term paper reporting on your project, which will be due on December 15.

4. Schedule (tentative)

The following gives a preliminary schedule of themes and readings up until Reading week. As I'm open to suggestions based on your interests and focus, our schedule will inevitably change to reflect this. After Reading week, we will continue with material that you are interested in as well as presentations of your final projects, so I have left these weeks underspecified.

Wk	Date	Theme	Reading	Presenter
1	Sep. 12	Introduction	Wolf 2011, Chomsky and Halle 1968:4.2.2 & 8.7	AN
2	Sep. 19	Validity of exceptionful patterns	Sanders 2006, Yang and Montrul 2017	AN
3	Sep. 26	Representation in the grammar: Indexation vs. cophonologies	Pater 2000, Inkelas and Zoll 2007	AN
4	Oct. 3	Representation in the lexicon: Are diacritics necessary?	Kim and Pulleyblank 2009, Mullin 2011	Students/ AN
5	Oct. 10	Generalization to novel words	Hayes et al. 2009, Moore-Cantwell 2016:ch 4	Students/ AN
6	Oct. 17	Lexicon- and language-general statements in the grammar?	Becker and Gouskova 2016, Goldberg 2013	Students/ AN
7	Oct. 24	Partitioning the lexicon **Paper proposal due**	Pater 2010, Nazarov 2018	Students/ AN
8	Oct. 31	Storage vs. computation **Proposal peer-review due**	Zuraw 2000: ch. 2, Kager 2008	Students/ AN
	Nov. 7	Reading week, no class		
9	Nov. 14	TBD		Students/ AN
10	Nov. 21	TBD		Students/ AN
11	Nov. 28	TBD/Final project presentations		Students/ AN
12	Dec. 5	Final project presentations		Students
	Dec. 15	**Term papers due**		

References/Bibliography

Allen, Blake and Michael Becker. 2015. Learning alternations from surface forms with sublexical phonology. Ms. Available at http://ling.auf.net/lingbuzz/002503.

Becker, Michael. 2009. *Phonological Trends in the Lexicon: The Role of Constraints*. PhD dissertation, University of Massachusetts, Amherst.

Becker, Michael and Maria Gouskova. 2016. 'Source-oriented generalizations as grammar inference in Russian vowel deletion.' *Linguistic Inquiry* 47(3): 391–425.

Chomsky, Noam, and Morris Halle. 1968. *The Sound Pattern of English*. New York, Evanston, and London: Harper and Row.

Coetzee, Andries W. 2009. 'Learning lexical indexation.' *Phonology* 26: 109–145.

Domahs, Ulrike, Ingo Plag, and Rebecca Carroll. 2014. 'Word Stress Assignment in German, English and Dutch: Quantity-Sensitivity and Extrametricality Revisited.' *The Journal of Comparative Germanic Linguistics* 17(1): 59–96.

Dresher, B. Elan. 2016. 'Covert representations, contrast, and the acquisition of lexical accent.' In Jeffrey Heinz, Rob Goedemans and Harry van der Hulst, eds., *Dimensions of phonological stress*. Cambridge: Cambridge University Press, 231–262.

Goldberg, Adele E. 2013. 'Constructionist Approaches.' In Thomas Hoffmann and Graeme Trousdale (eds.), *The Oxford Handbook of Construction Grammar*. Oxford: Oxford University Press.

Gouskova, Maria and Michael Becker. 2013. Nonce words show that Russian yer alternations are governed by the grammar. *NLLT* 31(3), 735–765.

Hayes, Bruce, Kie Zuraw, Péter Siptár, and Zsuzsa Londe. 2009. 'Natural and unnatural constraints in Hungarian vowel harmony.' *Language* 85(4):822-863.

Inkelas, Sharon. 1998. "The Theoretical Status of Morphologically Conditioned Phonology: A Case Study from Dominance." *Yearbook of Morphology* 1997: 121–55.

Inkelas, Sharon, C. Orhan Orgun and Cheryl Zoll. 1997. 'The implications of lexical exceptions for the nature of grammar.' In Iggy Roca (ed.), *Derivations and Constraints in Phonology*. Oxford: Clarendon Press, 393-418.

Inkelas, Sharon & Zoll, Cheryl. 2007. 'Is grammar dependence real? a comparison between cophonological and indexed constraint approaches to morphologically conditioned phonology.' *Linguistics* 45(1):133-171.

Kager, René. 2008. 'Lexical irregularity and the typology of contrast.' In K. Hanson & S. Inkelas (eds.), *The Nature of the Word: Studies in Honor of Paul Kiparsky*. Cambridge, MA: MIT Press, pp. 397–432.

Kim, Eun-Sook, and Pulleyblank, Douglas. 2009. 'Glottalization and lenition in Nuu-chah-nulth.' *Linguistic Inquiry* 40(4): 567–617.

Kraska-Szlenk, Iwona. 1995. 'The Phonology of Stress in Polish.' PhD dissertation, University of Illinois, Urbana-Champaign.

Legate, Julie, and Charles Yang. 2012. 'Assessing Child and Adult Grammar.' In Massimo Piattelli-Palmarini and Robert C. Berwick (eds.), *Rich languages from poor inputs*, Oxford: Oxford University Press, pp. 169-183.

Lightner, Theodore M. 1968. 'On the use of minor rules in Russian phonology.' *Phonology* 4(1): 69-72.

Mascaró, Joan. 2007. 'External allomorphy and lexical representation.' *Linguistic Inquiry* 38, 715–735.

Moore-Cantwell, Claire. 2016. The Representation of Probabilistic Phonological Patterns: Neurological, Behavioral, and Computational Evidence from the English Stress System. PhD dissertation, University of Massachusetts Amherst. [Available at https://scholarworks.umass.edu/dissertations_2/590/]

Mullin, Kevin. 2011. 'The Necessity of Diacritics for Descriptive Adequacy.' Talk given at *RUMMIT 2011*. [Available on Quercus]

Nazarov, Aleksei. 2018. 'Learning within- and between-word variation in probabilistic OT grammars.' In Gillian Gallagher, Maria Gouskova, and Sora Yin (eds.), *Supplemental Proceedings of the 2017 Annual Meeting on Phonology*, Washington, DC: Linguistic Society of America.

Nouveau, Dominique. 1994. *Language Acquisition, Metrical Theory, and Optimality. A Study of Dutch Word Stress*. Utrecht: OTS Publications.

Pater, Joe. 2000. "Non-Uniformity in English Secondary Stress: The Role of Ranked and Lexically Specific Constraints." *Phonology* 17(2): 237–74.

Pater, Joe. 2010. 'Morpheme-Specific Phonology: Constraint Indexation and Inconsistency Resolution.' In Steve Parker (ed.), *Phonological Argumentation: Essays on Evidence and Motivation*. London: Equinox Press, pp. 123–54.

Sanders, Nathan. 2006. *Strong lexicon optimization*. Talk given at Umass Phonology Group. Available at http://sanders.phonologist.org/Papers/sanders-umass.pdf.

Wolf, Matt. 2011. 'Exceptionality.' In Marc van Oostendorp, Colin J. Ewen, Elizabeth Hume, and Keren Rice (eds.), *The Blackwell Companion to Phonology, vol. 4: Phonological Interfaces*. Oxford: Blackwell, pp. 2538-2559.

Yang, Charles. 2016. *The Price of Linguistic Productivity : How Children Learn to Break the Rules of Language*. Cambridge, MA: MIT Press.

Yang, Charles and Silvina Montrul. 2017. 'Learning datives: The Tolerance Principle in monolingual and bilingual acquisition.' *Second Language Research* 33(1): 119-144.

Zuraw, Kie Ross. 2000. *Patterned exceptions in phonology*. PhD dissertation, UCLA.