

1 Notes

- The only criteria for obtaining full credit is turning this assignment in on time.
- Therefore, feel free to provide thoughtful criticism.

2 Questions

1. Suppose there are two different domains, e.g. phonology and syntax, or phonology and vision. If the same learning mechanism applies equally well to both domains, what do the properties of the learner tell us about the kinds of patterns we see in each domain? This question is intended to be thought-provoking, inviting a Socratic-style discussion.
2. This question is also supposed to be thought provoking. Suppose a martian—who has never been to earth or observed humans in any way—understood exactly how recursive constraint demotion worked. Would the martian have any knowledge as to what human phonologies look like? More generally, do you think that if a martian knew the human language learning mechanism, it should know something about human language?
3. Why does Heinz represent stress patterns with finite state machines?
4. Draw a finite state machine for the following patterns:
 - (a) Primary stress on the initial syllable, all other odd syllables bear secondary stress (e.g. Bagandji).
 - (b) Primary stress falls on the rightmost heavy syllable in the word, and if there are none, it falls on the initial syllable (e.g. Chuvash).
 - (c) Primary stress falls on the initial syllable if it is heavy, otherwise it falls on the peninitial if it is heavy, otherwise it falls on the penult. Secondary stress falls on all heavy syllables, if there are any (e.g. Sierra Miwok). BONUS: Sierra Miwok has words which consist of a single light syllable. Include this minimal word condition in your acceptor.

Like the text, you may assume symbols σ , L, H, ... as needed.

5. Why can merging states result in generalization?
6. In your words, explain why the Forward Learner cannot learn the stress pattern exemplified by the FSA in Figure 7 (p. 22)?
7. Section 7.3 (pp. 23-26). Why does Heinz argue that the 9 cases where the FBL fails to identify the pattern in the limit may not be problematic? Is this convincing? Why or why not?

8. How do you think the FBL compares to other learning proposals? (I don't discuss them in great detail, so your answer here can be relatively short). What are some of the complications in comparing the different models, and can you think of any better ways to compare them?