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# Week 4 – Addendum

March 12, 2008

## 1 English Past Tense and Richness of the Base

- (1) You have encountered morpheme structure constraints/rules in the past to explain why certain underlying forms seem to be missing. (E.g., clusters disagreeing in voicing within a morpheme, as in English \*/fisd/, \*/fizt/.)
- (2) This leads to some weird duplication in the grammar, cf. English past tense:

present	past	
sai	said	‘sigh’
p <sub>l</sub> ei	p <sub>l</sub> eid	‘play’
su	sud	‘sue’
k <sup>h</sup> us	k <sup>h</sup> ist	‘kiss’
klip	klipt	‘clip’
slæp	slæpt	‘slap’
ˌaɪm	ˌaɪmd	‘rhyme’
hʌg	hʌgd	‘hug’
liv	livd	‘live’

- ★ Write the rule and the morpheme structure constraint needed for English voicing agreement.

- (3) In OT, it is assumed that there are no constraints on underlying forms. That is, nowhere in the grammar is there anything that regulates underlying forms. It’s up to the grammar to make sure that every conceivable underlying form (even if it’s not an actual underlying form) gets turned into a legal output form.
- (4) What does the OT grammar for English voicing agreement look like? Fill in the tableau:

	/k <sup>h</sup> ɪs+d/	
a	k <sup>h</sup> ɪst	
b	k <sup>h</sup> ɪsd	
	/fɪsd/	
c	fɪst	
d	fɪsd	

- (5) This idea that the set of potential underlying forms is unconstrained (and the same in every language!) is known as ‘Richness of the Base’ where *Richness = Unconstrainedness and Base = Set of underlying forms*.

## 2 FAQ

1. Does that mean the lexical entry for English *fist* is /fɪsd/? Why would the language-learning child think that?

A: No. We can assume that, in the absence of alternations, the child posits inputs that are just like the outputs she/he hears. The point is that it’s up to the grammar to explain why, if there were an underlying form like /fɪsd/, it couldn’t get pronounced faithfully as \*[fɪsd].

2. When do I have to show a tableau for one of these crazy inputs?

A: If you’re analyzing an alternation, it’s usually not necessary. But if you’re trying to explain something about legal and illegal single morphemes, you need to show that a bad underlying form doesn’t surface faithfully (i.e., gets changed by the grammar).

3. How do I know what a “bad” input turns into?

A: In many cases, you don’t know. For example, English speakers agree that \*[ɪsd] is bad, but what should /ɪsd/ turn into, [ɪst] or [ɪzd]? Sometimes you will have evidence from how loanwords are adapted, and sometimes the constraint ranking you have already forces you to one choice (let’s add [fɪzd] to the tableau above). In other cases, you just need to show that the faithful output candidate doesn’t win.