

Phonology in mental grammar: Rule-based phonology vs. OT

<i>Rule-based phonology</i>	<i>Optimality Theory phonology</i>
Lexicon	Lexicon
<ul style="list-style-type: none"> • Contains URs • URs are restricted? (<i>example</i>: “default” allophones only) <ul style="list-style-type: none"> - Alternative: Use redundancy rules? 	<ul style="list-style-type: none"> • Contains URs • There are no language-particular restrictions on input forms <ul style="list-style-type: none"> - The constraint ranking is what enforces <i>all</i> predictable information

Representations — *This is independent of the choice between rules and OT*

{ features, #, syllables, ... }

- URs are stored in terms of...
- Phonological processes refer to or manipulate or change...

Phonological processes (“grammar”)	Phonological processes (“grammar”)
<ul style="list-style-type: none"> • The grammar of language L consists of a set of phonological rules specific to L • There may also be restrictions on when rules can apply <ul style="list-style-type: none"> - <i>example</i>: restrictions on possible clusters tell us whether we can or cannot reapply the Onset Rule or Coda Rule 	<ul style="list-style-type: none"> • The grammar of language L consists of: <ol style="list-style-type: none"> (a) GEN, the <u>Generator</u> function <ul style="list-style-type: none"> - Takes the input (\approxUR or <i>hypothetical form</i>) - Generates the set of outputs (b) CON, the set of <u>constraints</u> <ul style="list-style-type: none"> - Each constraint takes an output - Assigns a set of violation marks (c) A ranking for the constraints (d) EVAL, the <u>Evaluator</u> function <ul style="list-style-type: none"> - Takes a complete tableau - Chooses the optimal output (winner) • Note that (a), (b) [<i>mostly</i>], (d) are proposed to be universal in classic OT • Only (c) is language-specific

Remember: *rules* and *constraints* are very different things

- **Rules:** Identify a “problem” *and* say how to fix it
- **Constraints:** Identify a “problem” — what determines how it will be fixed?