The Issues

- How are word-internal morphemes ordered?
- How does the grammar 
  distinguish
  between prefixes and suffixes?

The Aim

To present a theory
- in which Direction of Attachment is a Property of Affixes,
- ... Not of Constraints (cf McCarthy & Prince 1993)
- but still set within Optimality Theory
The Theory

➤ **Background:**

A *string* is a set of positions that map onto features:

Features: k æ t

/k æ t/ ‘cat’ =

Positions: 1 2 3

(II) **Proposal:**

➤ Not all input positions have to map onto features:

Features: ∆ n

/∆ n □/ ‘un -’ =

Positions: 1 2 3

➤ But all output positions must map onto something.

➤ Correspondence Constraints determine how the output mapping takes place.
Implementation

**Input:** un-, do: \( /\wedge \ n \ \square \/, \ /d \ u/ \)

**Output:** \([\wedge \ n \ d \ u] \)

➢ This is the *most harmonic* output:

- All input positions have output correspondents
- No featural material is lost

**Failed Candidates:**

- \( /\wedge \ n \ \square \/, \ /d \ u/ \)
  - \( [d \ u \ \wedge \ n] \)
  - \( \square \) does not correspond to anything!
  - MAX violation

- \( /\wedge \ n \ \square \/, \ /d \ u/ \)
  - \( [d \ u \ \wedge \ n] \)
  - Order is not preserved: \( \square \) follows /n/ in the input, but precedes it in the output.
  - LINEARITY violation

- \( /\wedge \ n \ \square \/, \ /d \ u/ \)
  - \( [d \ \wedge \ n \ u] \)
  - Adjacency is not preserved: /d/ and /u/ are adjacent in the input, but not in the output.
  - CONTIGUITY violation
Consequences

(I) The Prefix-Suffix Asymmetry

If a language has prefixes it also has suffixes, but not vice-versa.


Positional Faithfulness: Correspondence Constraints can refer to Root-Initial position, but not Root-final position (Beckman 1998, and others).

Prediction: UNIFORMITY-1: “A root-initial segment cannot have more than one input correspondent.”

The ranking ||UNIFORMITY-1 » LINEARITY|| means that underlying prefixes will surface as suffixes:

Root: /piki/, Affix: /ta\□/ (only relevant correspondence relations are shown)
... but underlying suffixes will surface as suffixes:

Root: /piki/, Affix: /\textipa{ta}/

There is no ranking that bans suffixes and allows prefixes.

(II) The Affix Ordering Generalisation

Class II Affixes cannot appear closer to the Root than Class I affixes

*Af_{I}+Af_{II}+Root \quad (no \ direction \ implied) \quad (Siegel \ 1974)

e.g. *in_{I}-non_{II}-legible, *tender-ness_{II}-ous_{I}
Constraints on class II affixes outrank constraints on class I affixes (Benua 1997).

Therefore, $||\text{UNIFORMITY-CLASS II} \gg \text{UNIFORMITY-CLASS I}||$

UNIFORMITY-I(I): “If $x$ is an output position and $x$ belongs to a class I(I) affix, $x$ must not correspond to more than one input element.”

* $ness$ (II) + $ous$ (I)

<table>
<thead>
<tr>
<th>$/\Box_1 n \in s_2 /$, $/\Box_3 \in s_4 /$, Root</th>
<th>$\text{UNIFORMITY-II}$</th>
<th>$\text{UNIFORMITY-I}$</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) $\text{Root}<em>1 n \in s</em>{2,3} \in s_4$</td>
<td>$x \ x!$</td>
<td>$x$</td>
</tr>
<tr>
<td>➖ (b) $\text{Root}<em>3 \in s</em>{4,1} n \in s_2$</td>
<td>$x$</td>
<td>$x \ x$</td>
</tr>
</tbody>
</table>

This shows that the order $[\text{Root+class I + class II}]$ harmonically bounds the order $[\text{Root+class II+class I}]$.

Therefore, class II affixes will never appear between class II affixes and the root.

-------- The End --------