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

➤ **<u>Background:</u>**

A ***string*** is a **set of <u>positions</u>** that **map onto <u>features</u>**:

Features: k æ t

/k æ t/ ‘cat’ = | | |

Positions: 1 2 3

(II) <u>Proposal</u>:

➢ **Not all input positions have to map onto features**:

Features: ʌ n

/ʌ 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:* /ʌ n □/, /d u/

Output: [ʌ n d u]

➢ This is the *most harmonic* output:

❑All input positions have output correspondents

❑No featural material is lost

Failed Candidates:

/ʌ n □/, /d u/ [d u ʌ n]	/ʌ n □/, /d u/ [d u ʌ n]	/ʌ n □/, /d u/ [d ʌ n u]
- □ does not correspond to anything!	- Order is not preserved: □ follows /n/ in the input, but precedes it in the output.	-Adjacency is not preserved: /d/ and /u/ are adjacent in the input, but not in the output.
MAX violation	*LINEARITY violation*	*CONTIGUITY violation*

Consequences

(I) The Prefix-Suffix Asymmetry

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

(Greenberg 1957, 1966; Hawkins & Gilligan 1988; Bybee, Pagliuca, and Perkins 1990; Hall 1992)

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*)

/t a □$_1$ /, /p$_2$ i k i$_3$/	UNIFORMITY-1	LINEARITY
☞ **t a p$_{1,2}$ i k i**	x!	
p i k i$_{3,1}$ t a		x

… but **underlying suffixes** will surface as **suffixes**:

Root: /piki/, Affix: /□ta/

/□$_1$ t a /, /p$_2$ i k i$_3$/	UNIFORMITY-1	LINEARITY
t a p$_{1,2}$ i k i	x!	x!
☞ **p i k i$_{3,1}$ t a**		

☞ 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 (no direction implied) (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, || UNIFORMITY-CLASS II » 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)

/□$_1$ n ə s$_2$ /, /□$_3$ ə s$_4$/, Root	UNIFORMITY-II	UNIFORMITY-I
(a) Roo<u>t</u>$_1$ n ə <u>s</u>$_{2,3}$ ə s$_4$	x x!	x
☞ **(b) Roo<u>t</u>$_3$ ə <u>s</u>$_{4,1}$ n ə s$_2$**	x	x x

❖ This shows that the order [Root+class I + class II] *harmonically bounds* the order [Root+class II+class I].

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

====== The End ======