

Background

All of morphology (except total reduplication) is a regular language and regular function

Previous/current uses of FSTs in morphology:

- **Generation**

run+V+3P+Sg → runs

run+N+Pl → runs

- **Analysis:**

runs → { run+N+Pl, run+V+3P+Sg }

- **composition**

stretch+V+3P+Sg → stretches

stretchs → stretches

composition: stretch+V+3P+Sg → stretches

Other language areas

- syntax: context-sensitive

(7) Swiss German (Shieber 1985)

Jan säit das mer em Hans es huus hälfed aastriiche
Jan says that we Hans-DAT the house-ACC helped paint
'Jan says that we helped Hans paint the house.'

(8) Yoruba (Kobebe 2006)

- a. Rira ti Jimọ ọ ra adię
buying TI Jimọ HTS buy chicken
'the fact/way that Jimọ bought a chicken'
- b. Rira adię se ti Jimọ ọ ra adię se
buying chicken cook TI Jimọ HTS buy chicken cook
'the fact/way that Jimọ bought the chicken to cook'

- **Morphology: context-sensitive**

(9) Bambara (Culy 1985)

- a. wulu 'dog'
b. wulu o wulu 'whichever dog'

(10) a. wulu+nyini+la 'dog searcher'

- b. wulunyinila+nyini+la 'one who searches for dog searchers'

(11) wulunyinila o wulunyinila 'whichever dog searcher'

- **Phonology: (sub-)regular**

Contribution: subregular morphology

Table 1 Summary of morphological maps and their computational classification

Map	Language	Classification
Suffixation	English	1-ISL
Suffixation	Sammi	left subsequential
Suffixation	Yidip	left subsequential
Suffixation	Yidip	7-ISL (with foot structure)
Prefixation	English	1-ISL
Circumfixation	Chickasaw	1-ISL
Circumfixation	Chickasaw	2-ISL (with deletion)
Circumfixation	German	3-ISL
Infixation	Tagalog (<i>um</i>)	4-ISL
Infixation	Ulwa	6-ISL
Infixation	Tagalog (<i>in</i>)	right subsequential
Reduplicative prefixation (local)	Tagalog	4-ISL
Reduplicative suffixation (local)	Marshallese	4-ISL
Reduplicative infixation	Pima	4-ISL
Reduplicative prefixation (non-local)	Madurese	right subsequential
Reduplicative suffixation (non-local)	Chukchee	left subsequential
Total reduplication	Indonesian	non-regular
Featural affixation	Mafa (palatalization)	2-ISL
Featural affixation	Mafa (imperfective)	right subsequential
Truncation	English	4-LOSL