

# 2011 Solutions

## (N) Stopping and Flapping in Warlpiri (1/4)

The 'father' words show us that the second consonant sound is *rd* in all dialects in the basic word and when followed by *ku*. Dialects A and B “change” this sound to *rt* when followed by *-rlangu*, while Dialect C maintains the *rd* sound.

There are several more examples of this same pattern in the dataset:

- in the 'aunt' words: *rt* in A & B preceding *rla*, but *rd* in C.
- with the final consonant in 'tooth' words: *rt* in A & B preceding *rla* or *rli*.
- in the 'smoke' words: *rt* in A & B preceding *rlu*

What is common to *rlangu*, *rla*, *rli* and *rlu* is the initial consonant, *rl*.

The same pattern is also found with the 'hold' words: *rt* in A & B preceding *rni* or *rnu*, the common factor being *rn*.

Now we can see that if a word has *rd* as its last consonant, then in A & B it is pronounced as *rt* if a suffix starting with *rl* or *rn* is added. Given that these sounds have something in common, i.e., they are retroflex sounds, we might expect this behavior before all retroflex sounds. This is a hypothesis we would want to test.

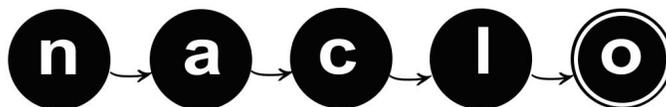
Another observation is that all dialects have words pronounced with both *rd* and *rt* sounds. Our problem is to explain the distribution of these sounds in each dialect.

When we look at the distribution of these sounds in basic words, we find that dialects B & C behave the same way and both contrast with dialect A. We notice that dialect A never has *rd* word-initially, only *rt*. B & C have both *rd* and *rt* word initially.

What is common to all three dialects is that inside basic words, *rd* is allowed if the following consonant is not retroflex (and it is *not* the word-initial consonant in A), but that only *rt* is found if the following consonant is retroflex. Contrasting pairs of words such as 'heel' (*rtari* in all dialects) and 'raw' (*rtarri*, *rdarri*, *rdarri*) or 'accompany' versus 'summit' illustrate this difference. (Notice that *rtari* is consistently pronounced when in the compound *marnangkartari*).

We notice that in 'tooth', the first word-internal consonant is *rt* in all dialects, as it is followed by the retroflex *rd* sound. The variation in the pronunciation of this second word-internal consonant (whether *rd* or *rt*) depends on the initial consonant of the suffix in dialects A & B, but not in C, where it is consistently *rd*. *Kurturdu* ('heart') provides another example: first word-internal consonant is *rt* in all dialects, since it is followed by retroflex sound *rd*. Note that this sound is followed by the non retroflex *rr* sound.

What is missing from the list of words is any example of a contrast between *rd* and *rt* in exactly the same environment within any of the dialects; linguists say that the contrast between *rd* and *rt* never distinguishes a 'minimal pair' in the way that say 'b' and 'p' do in English *bit* versus *pit*.



# 2011 Solutions

## (N) Stopping and Flapping in Warlpiri (2/4)

How has this variation come about within Warlpiri dialects?

It would seem that Dialect A is the most conservative dialect, i.e., closest to the original “mother” or “ancestral” Warlpiri, in which the *rt* sound was pronounced as *rd* between vowels only if the next consonant was not also a retroflex sound. This same rule applies in Dialect B, except that it is less restrictive, as it is pronounced as *rd* except if followed by another retroflex consonant (not restricted to *between vowels*). Notice that it's easier to explain the distribution in B by assuming that *rd* is the basic sound and that it is pronounced as *rt* when followed by another retroflex sound.

Dialect C is the most radical of the dialects: like B, *rd* is the basic sound. Inside basic words, this dialect has an *rt* sound where the following consonant is retroflex, but it allows *rd* elsewhere. The pronunciation of the *rd* sound when it is the last consonant in a word is not affected by the initial consonant of any suffix. We can see that the “rule” for turning *rd* into *rt* in dialect B when suffixes are added to a word does not operate in Dialect C, where *rd* and *rt* are lexically determined, or are stipulated as part of the dictionary entry for basic words. In the other dialects, A & B, these sounds represent two ways of pronouncing a single consonant; whether it is pronounced as *rt* or *rd* depends on the “environment” of the consonant within the word. In A, the *rd* variant is the most restricted (if not word-initial and not followed by retroflex consonant), whereas in B, it is the *rt* variant which is the most restricted (not if followed by retroflex consonant).

### N1.

In Dialect A

|   |   |   |   |   |   |   |   |  |  |  |  |  |  |  |  |  |  |
|---|---|---|---|---|---|---|---|--|--|--|--|--|--|--|--|--|--|
| y | a | r | t | a | r | n | i |  |  |  |  |  |  |  |  |  |  |
|---|---|---|---|---|---|---|---|--|--|--|--|--|--|--|--|--|--|

In Dialect B

|   |   |   |   |   |   |   |   |  |  |  |  |  |  |  |  |  |  |
|---|---|---|---|---|---|---|---|--|--|--|--|--|--|--|--|--|--|
| y | a | r | t | a | r | n | i |  |  |  |  |  |  |  |  |  |  |
|---|---|---|---|---|---|---|---|--|--|--|--|--|--|--|--|--|--|

In Dialect C

|   |   |   |   |   |   |   |   |  |  |  |  |  |  |  |  |  |  |
|---|---|---|---|---|---|---|---|--|--|--|--|--|--|--|--|--|--|
| y | a | r | d | a | r | n | i |  |  |  |  |  |  |  |  |  |  |
|---|---|---|---|---|---|---|---|--|--|--|--|--|--|--|--|--|--|

### N2.

In Dialect B

|   |   |   |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |
|---|---|---|---|---|--|--|--|--|--|--|--|--|--|--|--|--|--|
| r | t | i | r | i |  |  |  |  |  |  |  |  |  |  |  |  |  |
|---|---|---|---|---|--|--|--|--|--|--|--|--|--|--|--|--|--|

In Dialect C

|   |   |   |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |
|---|---|---|---|---|--|--|--|--|--|--|--|--|--|--|--|--|--|
| r | t | i | r | i |  |  |  |  |  |  |  |  |  |  |  |  |  |
|---|---|---|---|---|--|--|--|--|--|--|--|--|--|--|--|--|--|



# 2011 Solutions

## (N) Stopping and Flapping in Warlpiri (3/4)

**N3.**

In Dialect A

|   |   |   |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |
|---|---|---|---|---|--|--|--|--|--|--|--|--|--|--|--|--|--|
| r | t | u | p | a |  |  |  |  |  |  |  |  |  |  |  |  |  |
|---|---|---|---|---|--|--|--|--|--|--|--|--|--|--|--|--|--|

In Dialect B

|   |   |   |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |
|---|---|---|---|---|--|--|--|--|--|--|--|--|--|--|--|--|--|
| r | d | u | p | a |  |  |  |  |  |  |  |  |  |  |  |  |  |
|---|---|---|---|---|--|--|--|--|--|--|--|--|--|--|--|--|--|

**N4.**

In Dialect A

|   |   |   |   |   |   |   |   |   |   |   |   |   |  |  |  |
|---|---|---|---|---|---|---|---|---|---|---|---|---|--|--|--|
| k | a | p | i | r | t | i | r | l | a | n | g | u |  |  |  |
|---|---|---|---|---|---|---|---|---|---|---|---|---|--|--|--|

In Dialect B

|   |   |   |   |   |   |   |   |   |   |   |   |   |  |  |  |
|---|---|---|---|---|---|---|---|---|---|---|---|---|--|--|--|
| k | a | p | i | r | t | i | r | l | a | n | g | u |  |  |  |
|---|---|---|---|---|---|---|---|---|---|---|---|---|--|--|--|

In Dialect C

|   |   |   |   |   |   |   |   |   |   |   |   |   |  |  |  |
|---|---|---|---|---|---|---|---|---|---|---|---|---|--|--|--|
| k | a | p | i | r | d | i | r | l | a | n | g | u |  |  |  |
|---|---|---|---|---|---|---|---|---|---|---|---|---|--|--|--|

**N5.** The sound **rd** never occurs in Dialect **A** at the **start/beginning** of a word.

**N6.**  TRUE

**N7.**

- rd* is permitted in A if... **not initial AND/OR not followed by retroflex sound/r, rd, rl, rn, rt** (may group sounds as retroflex or list relevant sounds in answer).
- rd* is permitted in B if... **not followed by retroflex sound/r, rd, rl, rn, rt** (may group sounds as retroflex or list relevant sounds in answer).
- rd* is permitted in C if... **not followed by retroflex sound/r, rd, rl, rn, rt within basic/lexical/dictionary/ simple word** (may group sounds as retroflex or list relevant sounds in answer).



# 2011 Solutions

## (N) Stopping and Flapping in Warlpiri (4/4)

### **Grading:**

N1: 3 points (1 point each)

N2: 1 point (0.5 points each)

N3: 1 point (0.5 points each)

N4: 1.5 points (0.5 points each)

N5: 1.5 points (must fill in **all** of the blanks correctly to receive credit)

N6: 0.5 points

N7: 1.5 points (0.5 points each)

Total: 10 points

