

# VOT in initial stops

## Languages with two-way contrasts

(from Illustrations of the IPA)

### 1. Catalan

Voiceless unaspirated vs. Fully voiced (voicing lead)

**p i g a**

▶ “speck”

**t a λ a**

▶ “size”

**k a s a**

▶ “house”

**b i g a**

▶ “beam”

**d a λ a**

▶ “scythe”

**g a s a**

▶ “lint”

### 2. Cantonese

Voiceless aspirated vs. Voiceless unaspirated

**p<sup>h</sup> a**

▶ “to lie prone”

**t<sup>h</sup> a**

▶ “he/she”

**k<sup>h</sup> a**

▶ “truck”

**p a**

▶ “father”

**t a**

▶ “dozen”

**k a**

▶ “to add”

### 3. German and English

In initial position these languages are fairly similar to Cantonese (according to Catford with somewhat weaker aspiration for the voiceless aspirated stops, though this is not apparent here). However, as the non-aspirated stops may be slightly voiced (i.e have a short voicing lead) and are generally fairly fully voiced intervocalically, they are assigned the symbol for voiced stops.

#### a. German

**p a s ə**

▶ “skip”

**t a s ə**

▶ “cup”

**k a s ə**

▶ “cash desk”

**b a s**

▶ “bass”

**d a s**

▶ “that”

**g a s ə**

▶ “lane”

#### b. American English

**p a i**

▶ “pie”

**t a i**

▶ “tie”

**k a i t**

▶ “kite”

**b a i**

▶ “buy”

**d a i**

▶ “die”

**g a i**

▶ “guy”

## 4. Bulgarian

Similar to Catalan (but somewhat more aspiration of the voiceless stops)

**p i j a**

▶ “I drink”

**t o m**

▶ “volume”

**k o l**

▶ “pole”

**b i j a**

▶ “I beat”

**d o m**

▶ “home”

**g o l**

▶ “naked”

## 5. French

Clear voicing lead for the voiced stops. The voiceless stops are traditionally considered to be unaspirated or weakly aspirated (i.e overall pattern like Catalan), but for this speaker there is actually quite extensive aspiration.

**p u**

▶ “louse”

**t u**

▶ “all”

**k u**

▶ “neck”

**b u**

▶ “mud”

**d u**

▶ “sweet”

**g u**

▶ “taste”

## 6. Persian

Another example of a language with strongly aspirated voiceless stops

**p æ r**

▶ “feather”

**t i r**

▶ “arrow”

**k u r**

▶ “blind”

**b æ r**

▶ “fruit”

**d i r**

▶ “late”

**g u r**

▶ “grave”