LingLab Methods Fair

23 JAN 2020

What does the LingLab have to offer?

Rank	Resource	Requests
1	Quant (and qual) surveys (MCQ, Likert Scales, Forced-choice, sentence completion, etc)	17
2	Eye-tracking while reading	13
3	Audio recordings (for interviews, phonetic analysis, other linguistic analysis, e.g.)	12
4	Audio/Visual recordings	11
5	Perception tasks (sound identification, discrimination, categorisation)	11
6	Self-paced reading (moving window or centred)	11
7	Visual world eye-tracking	11
8	Either survey type, conducted remotely (via internet)	10
9	Lexical priming / Lexical decision tasks	10
10	Self-paced listening	8
11	Electroencephalography (EEG)	8
12	Reaction time / Speeded judgment tasks	7

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Kai Alter

EEG

(available through Psychology)

- Electro-encephalography
- Measures magnetic field generated by brain activity
- Non-invasive
- High temporal resolution (low spatial resolution)

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Eye-tracking (images and reading)

EyeLink1000 (HWB, Psychology/IoN)
- 2000 Hz sample rate
- Desktop, tower, long-distance mounts
- Compatible software:
  - EyeTrack
  - Experiment Builder
  - OpenSesame
  - PsychoPy
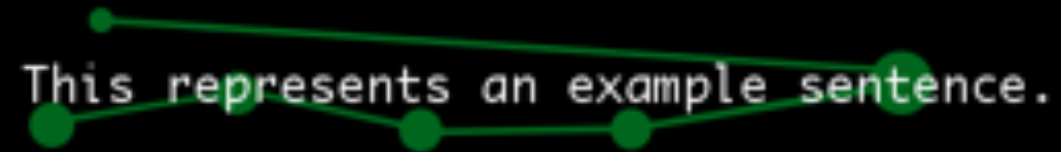
Tobii X120 (KGVI 2.12)
- 120 Hz sample rate
- Desktop mount
- Compatible software:
  - Tobii Studio
  - OpenSesame
  - PsychoPy
  - E-Prime

Reading behaviour

- Currently only available through Psychology
- Requires:
  - Some coding
  - Sophisticated statistics
- Produces:
  - Rich, multidimensional data
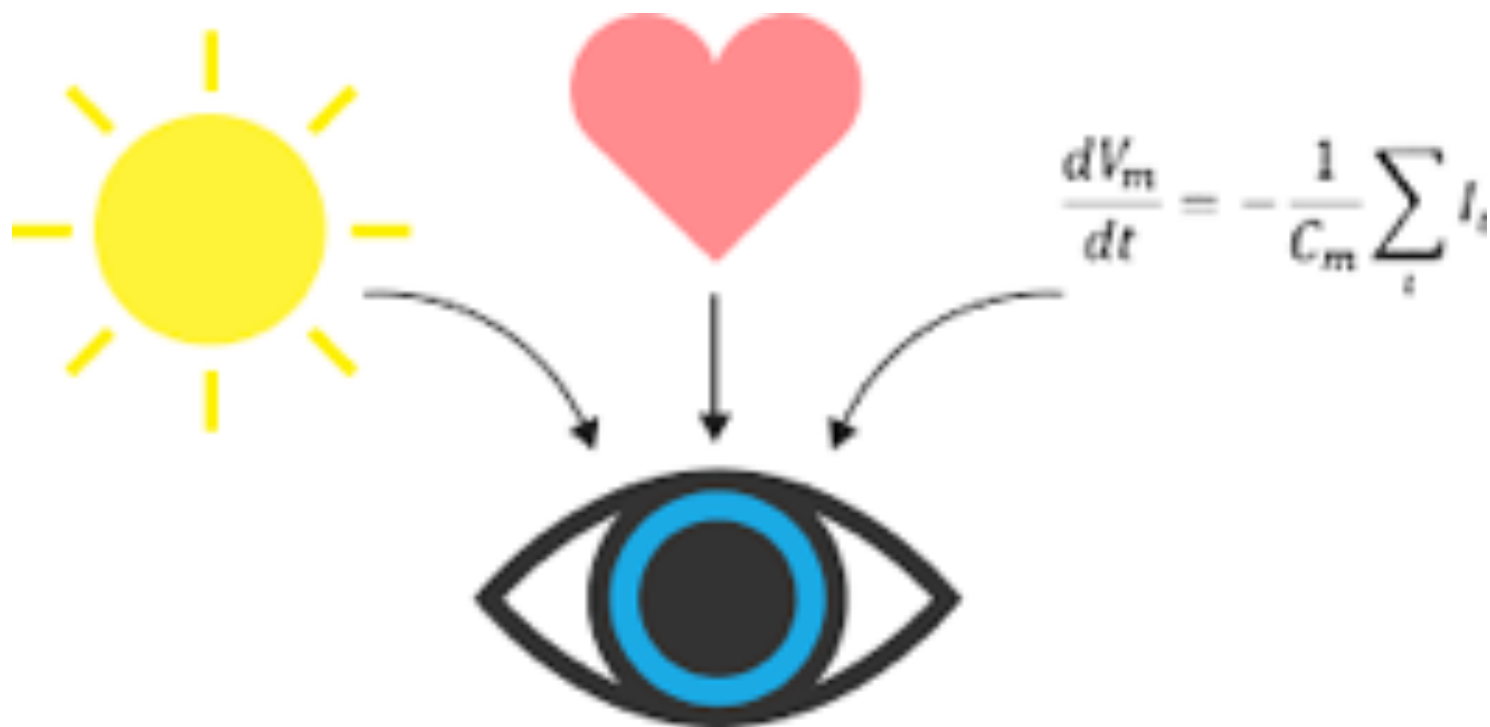 - Unconscious and conscious behaviours

Eyes as windows into linguistic processing

- Gaze
- Fixations & saccades
  - Forward or backward movement in reading
  - Skipping words

Eyes as windows into linguistic processing

- Attention
  - To what does the text, image, and/or accompanying sound direct the reader/listener's attention?
  - Phonetic/phonological processing
  - Discourse processing
  - Sentence processing

$$\frac{dV_m}{dt} = -\frac{1}{C_m}\sum_i I_i$$

- Pupillometry
- Pupil size increases:
  - Increased light
  - Emotional arousal
  - Cognitive effort

Eyes as windows into linguistic processing

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Audio(/visual) recordings

KGVI 2.13:

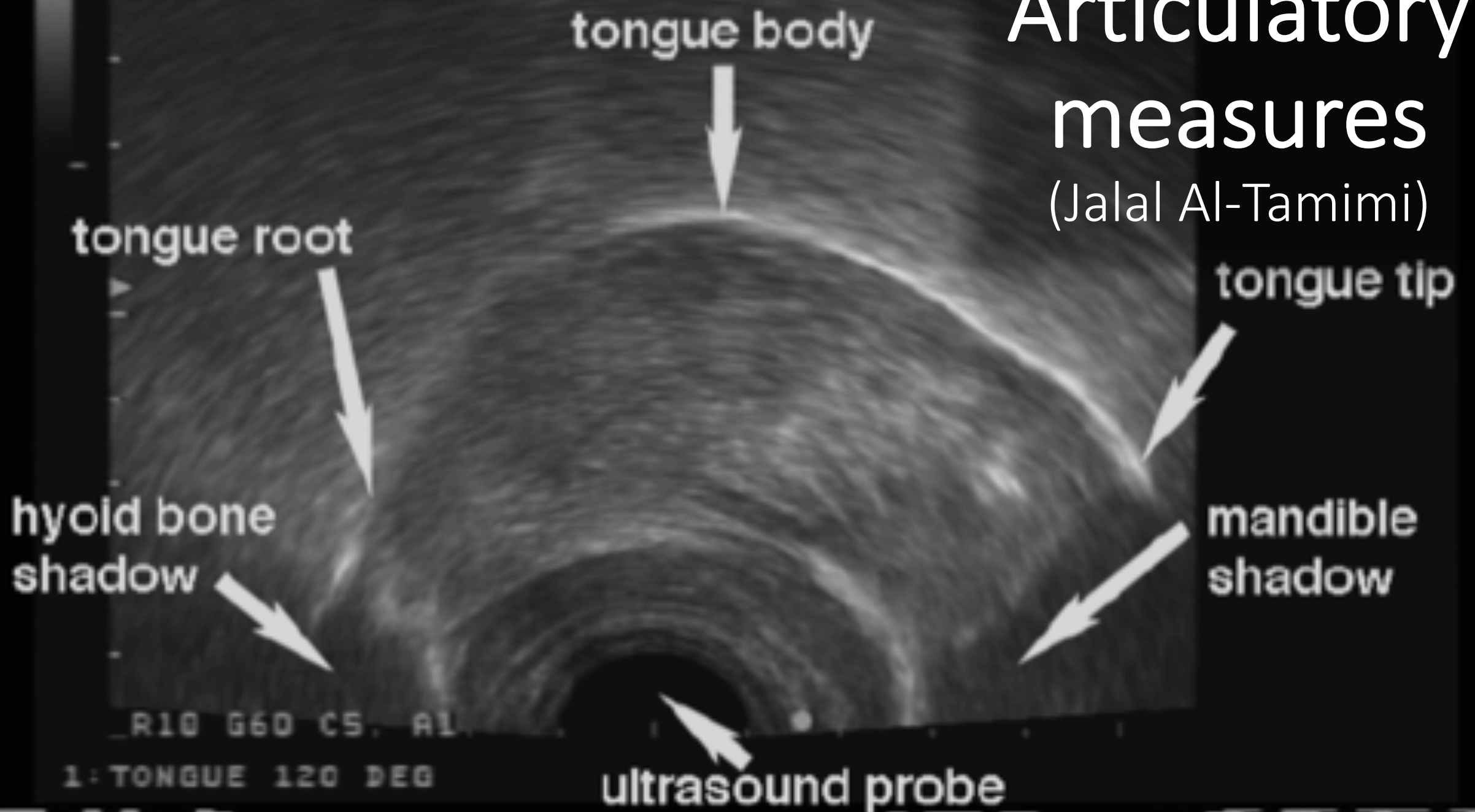- Sound attenuated booth

- Ultrasound and articulatory kit

KGVI 2.12:

- Three dedicated computers

- LX-specific IT support

KGVI B.01:

- Accessible, comfortable space

- Child-friendly, aphasia-friendly

tongue body

Articulatory measures
(Jalal Al-Tamimi)

tongue root

tongue tip

hyoid bone shadow

mandible shadow

_R10 G60 C5 A1

1:TONGUE 120 DEG

ultrasound probe

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Computer-based surveys / tasks (+ internet)

- Rating scales
- Reaction times
- Perception
- Transcription
- Self-/auto-paced tasks
- Priming tasks
- Decision tasks
- Free responses

- IBEX Farm / pcIBEX (demo: bit.ly/ibex-demo)
- Linger (in-person only)
- PsyToolkit.org*
- Gorilla.sc*
- Prolific.ac*
- OpenSesame* (osdoc.cogsci.nl)
- PsychoPy.org*

Lunch and Open Space Discussion

Open Space 'rules'

1. The people who attend are the right people
2. Whatever happens is the way it was meant to happen
3. Whenever it starts is the right time
4. When it's over, it's over

Open Space 'law'

- *The Law of Two Feet*: "If, during the course of the gathering, any person finds themselves in a situation where they are neither learning nor contributing, they can go some more productive place."