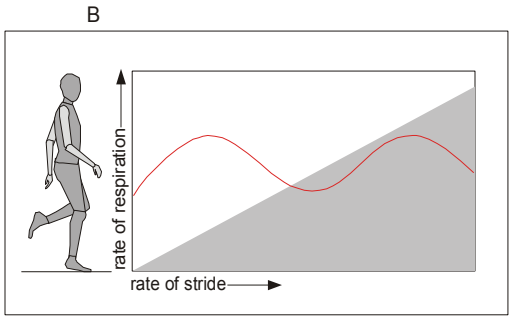
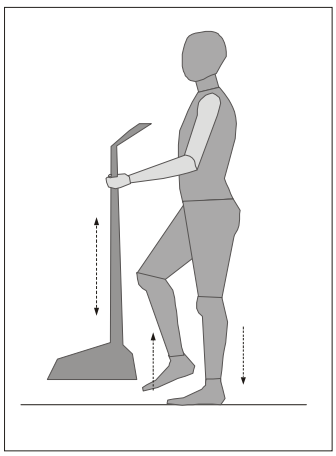
Contrasting relaxed standing - male/female

Experiment B - Somatic and Respiratory rates interaction



It would seem that if you run faster you also breathe faster. But in fact the rates of stride in walking or running and the rate of respiration do not increase in parallel. This is because they are related not only in energy consumption rate, but also in the mechanical way two independent repeating actions go in and out of **phase** with each other. This demonstration can be done by walking, running, in place or outdoors as well as by bicycling, on real or stationary (exercise) bicycles. It may that experienced comfort reached in running results in part from ideal phase setting between rates of stride and respiration.

Experiment A – Apparent load weight and walking movement



A

Lifted object appears lighter if walking in place.

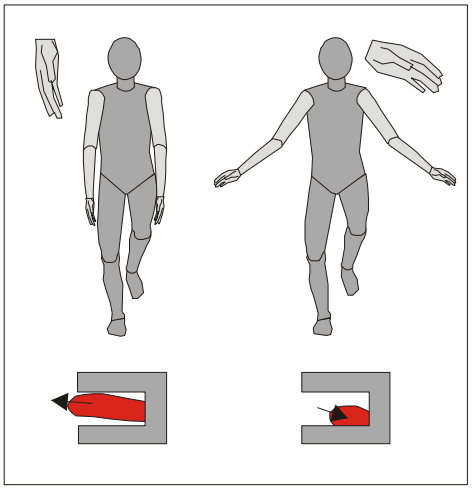
1. Lift up and hold with one arm some heavy object, like an oversized book or vacuum cleaner, etc.

2. Note its apparent weight.

3. Now walk in place and observe that the weight is noticeably less.

Experiment Y: Hand rotation influences tongue and body behavior

Y



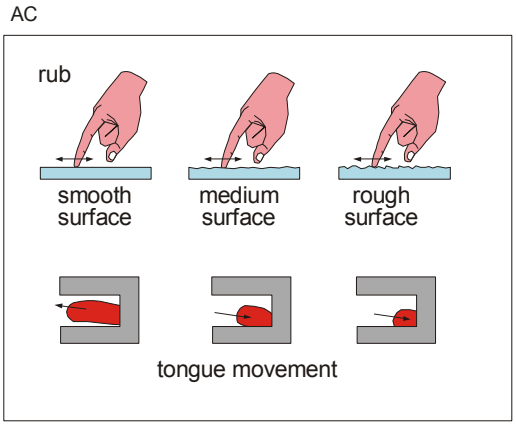
The positioning of the hands is integrally connected with the way the legs and even the tongue move.

1. Hold the hands normally, by the sides, palms **facing** the **body**. Run and/or in place. Note that the legs remain relatively **vertical**, under the body.

2. Now **turn** the wrists so that the palms face the **ground**. Repeat the action, and observe that the arms are **raised** laterally from the body, and the legs also **separate** more. (Lateral wrist extension).

3. If the tongue is observed while going through these two alternate patterns, it can be seen it moves **forward** (protracts) in the first case, and moves **backward** (retracts) in the second one.

Experiment AC: finger texture perception connected to tongue shape



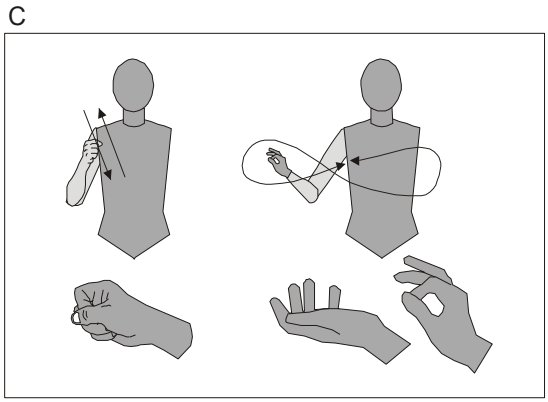
Finger sensed texture quality changes the tongue position.

1. With relaxed hand and arms rub a smooth surface and note that the tongue moves forward (protracts). (smooth table top, etc.)

2. Rub a rougher texture and feel the tongue move back somewhat. (furniture fabric, etc.)

3. Rubbing a very rough texture moves the tongue further back. (computer keyboard keys, etc.)

Experiment C - Hand shape and arm movement paths



The paths possible for arm gesticulation are determined by the way the hand is held, and vice versa.

1a. Make a tight **fist**, and move the arm in various directions in paths of various shapes, as for instance, circular or linear lines.

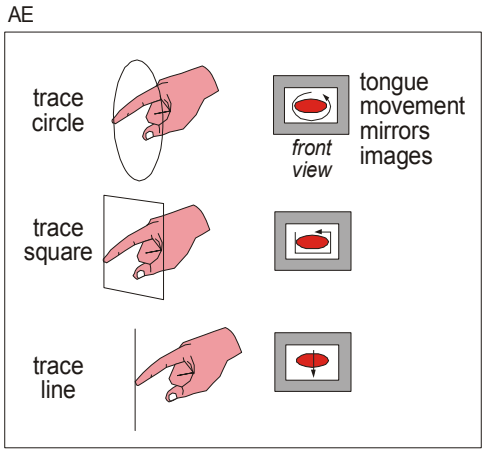
1b. Note that with closed fist, the arm moves most naturally in an up and down line. This is the movement of the fist activities like hammering or in **angry** gesticulation. If you now make an angry face,

the effect becomes even stronger, but if you smile the arm can move in paths more circular, outside of the fist shaking route. The **smile** partly neutralizes the facial component of the muscular active frame. This behavior occurs whether one or both hands and arms are active. The association of up and down fist striking pattern is obviously designed for striking objects, and when coupled with anger, with physical aggression.

2a. Now hold the one or both hands in the position of conducting **music** and move them to find the most natural path they would take.

2b. Note that now the arms have a strong tendency to move in a horizontal **sideways** path that curves gently and that the hands and fingers also change their shape during the movement cycle. Moving out towards the sides that hands turn to face the ground (pronate), while returning towards the midline of the body (medially) the palms turn to face each other, (partially supinate) when they almost meet. At the outermost point the fingers separate and turn extend as well. This movement shows up in graceful hand movements in everyday life and in dance, ballet.

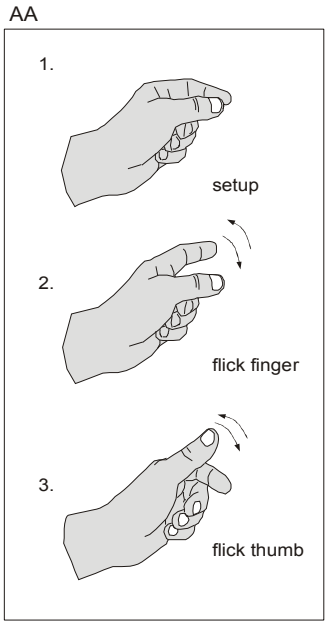
Experiment AE: hand and tongue coactivity/mirroring



In tracing geometric shapes by hand clear geometric mirroring occurs in the tongue motion.

1. Trace a circle, square or line with a finger and observe the feeling of small movement in the tongue.
2. It will be evident that the tongue, in its own small motions, repeats the hand movements. This is analogous to the replay of finger movements in Experiment 0000. It is not necessary here to pay attention to the tongue because its behavior is closely connected with that of the hands and fingers. Cf. gesticulation in speech.

Experiment AA: motion memory and optic projection

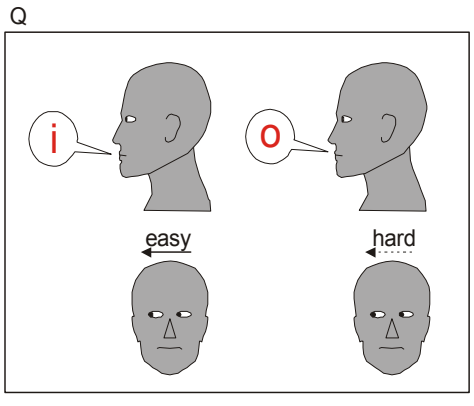


When relaxed, the movements of a finger appear to be automatically recorded and replayed at a place determined by eye focus.
In this experiment the upper **breathing** organs, larynx, neck, cheek, tongue, etc. must be in a relaxed (quasi-tonic) state.

1. Sit comfortably relaxed with hands in lap or on table. The body, arm and hands should be placed so that they are perfectly relaxed. Keep the hands in this position resting securely.

2. Watch the **index** finger and flick, extend it about 4-5 times. Immediately relax the finger and hand. Note that the finger will now **repeat** the movement one or more time, getting fainter with each repeat. The replay may be fainter or stronger, depending on the energy you have applied. The number of fading repeats also varies for the same reason. The thumb behaves the same way.

Experiment Q: rotating the eyes sideways is related to vowel formation

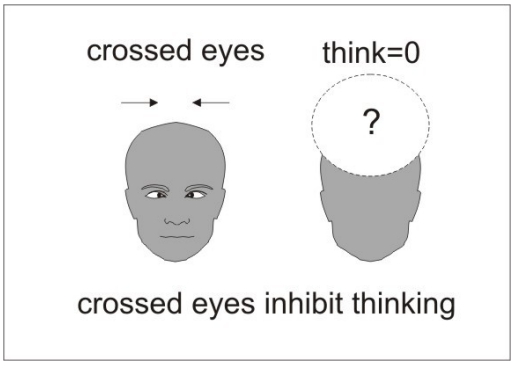


The formation of vowels by the tongue is connected to eye movement.

1. Continuously produce the sound **/i/** (English "tea"). Note that the sideways movement of the eyes is slightly curtailed, but it is still **possible.**

2. Continuously produce the sound **/o/** (English "no"). Note that the sideways movement of the eyes is significantly **curtailed**.

<u>Crossed eyes vs. thought function</u>



With the eyes crossed thinking is not possible.