



**VISUAL INPUT** to bisected brain was limited to one hemisphere by presenting information only in one visual field. The right and left fields of view are projected, via the optic chiasm, to the left and right hemispheres of the brain respectively. If a person fixes his gaze on a point, therefore, information to the left of the point goes only to the right hemisphere and information to the right of the point goes to the left hemisphere. Stimuli in the left visual field cannot be described by a split-brain patient because of the disconnection between the right hemisphere and the speech center, which is in the left hemisphere.

LARRY E. JOHNSON

TACHISTOSCOPE -- FROM THE GREEK WORDS MEANING "RAPID VIEWING", THIS CLASSICAL PSYCHOLOGICAL DEVICE PRESENTS VISUAL INFORMATION FOR DURATIONS AS SHORT AS FRACTIONS OF A SECOND. THE SUBJECT SITS BEFORE THE TACHISTOSCOPE AND PLACES HIS EYES BEFORE THE VIEWING SLOT. THE EXPERIMENTER CAN PRESENT VARIOUS STIMULI BY CHANGING CARDS WHICH FIT INTO THE REAR OF THE MACHINE.

IN EXPERIMENTS WHICH HAVE BEEN PERFORMED RECENTLY WITH THIS TACHISTOSCOPE, THE SUBJECT FIXATES HIS EYES ON A POINT AT THE REAR OF THE BOX. STIMULI ARE THEN FLASHED EITHER TO ONE SIDE OF THE FIXATION POINT, OR ON BOTH SIDES, AND THE SUBJECT IS REQUIRED TO IDENTIFY OR COMPARE WHAT HE OR SHE HAS SEEN.

REMEMBER THAT VISUAL STIMULI FLASHED TO THE LEFT OF THE FIXATION POINT FIRST ENTERS THE RIGHT HALF OF THE BRAIN, AND STIMULI FLASHED TO THE RIGHT OF THE FIXATION POINT WILL ENTER THE LEFT CEREBRAL HEMISPHERE.

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IN "SPLIT-BRAIN" SUBJECTS, THE MAJOR CONNECTIONS BETWEEN THE LEFT AND RIGHT CEREBRAL HEMISPHERES HAVE BEEN CUT. THEREFORE, IF INFORMATION IS PRESENTED TO ONLY ONE SIDE OF THE BRAIN IT MIGHT BE PROCESSED WITH LITTLE COOPERATION OR INTERFERENCE FROM THE OTHER SIDE OF THE BRAIN. IN THIS WAY IT WAS HOPED THAT WE COULD STUDY THE INTRINSIC ABILITIES OF EACH HEMISPHERE WITHOUT THEIR BEING AFFECTED BY THE OTHER SIDE.

IT HAS RECENTLY BEEN FOUND THAT IN SPITE OF THE LOSS OF THE MAJOR CONNECTIONS BETWEEN THE TWO HALVES OF THE BRAIN, THE TWO HEMISPHERES ARE STILL ABLE TO COMMUNICATE AND TRANSFER SOME VISUAL INFORMATION. EXACTLY WHAT CAN BE TRANSFERRED OR COMPARED BETWEEN THE TWO SIDES, AND HOW IT IS ACCOMPLISHED, IS NOW BEING CAREFULLY STUDIED.

HOPEFULLY THIS BASIC RESEARCH WILL LEAD TO AN UNDERSTANDING OF THE ROLE OF THE "MINOR" PATHWAYS BETWEEN THE TWO HALVES OF THE BRAIN IN NORMAL PEOPLE AND THEIR CAPABILITIES FOLLOWING BRAIN DAMAGE.