

# Biopsychology

- The scientific study of the biology of behavior.
- It is a research intensive field.
- New findings continually update our current state of knowledge.

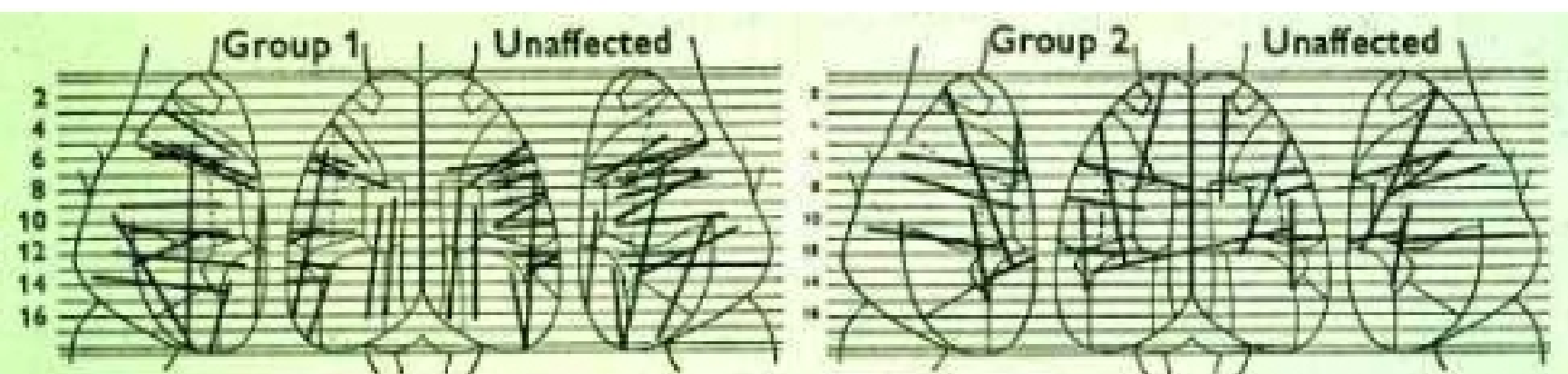
# Pop Quiz: true/false

1. Everyone is born with all the neurons they will have throughout life, what changes are the connections between them.
2. When neurons of the CNS die they are not replaced.
3. Glial cells provide the 'glue' that holds neurons in place but do not directly communicate with other cells.
4. Paralysis from stroke is permanent with minimal functional restoration.

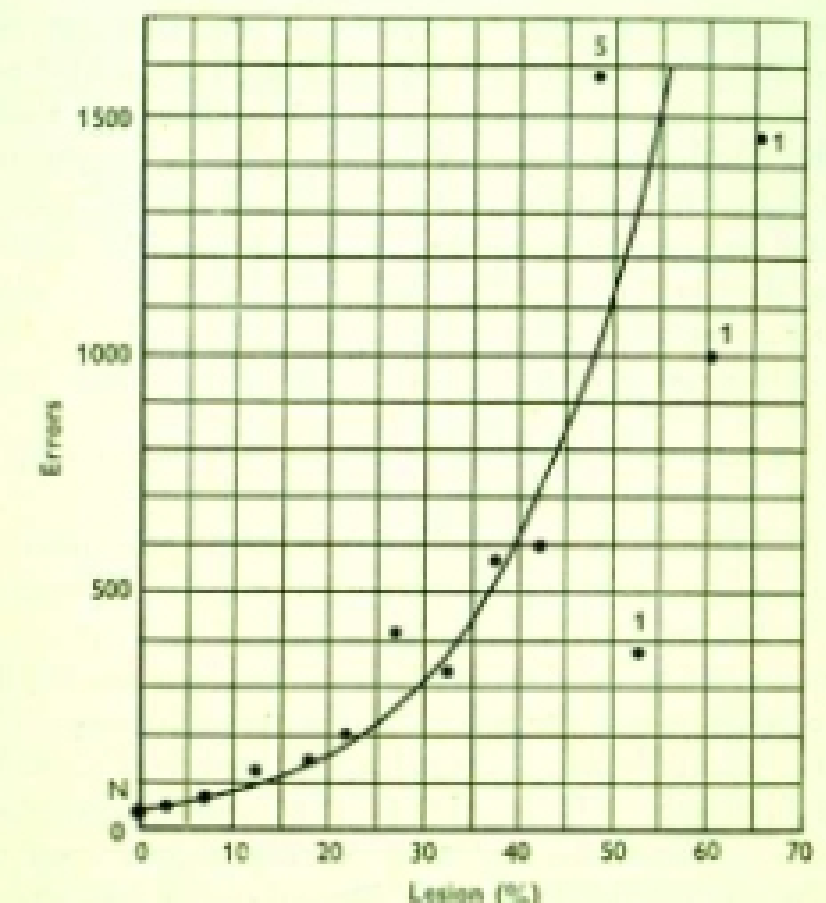
# Karl Lashley (1890-1958)



- Coined the term “neuropsychology”
- Studied the effects of cortical lesions on learning performance in rats with the goal of finding the “engram” or locus of a memory trace.
- Principle of “equipotentiality”
- Principle of “mass action”



Text-fig. 5. Composite of incisions through the cortex of the rat which did not disturb maze learning (Group 1) or retention (Group 2). One pair of lines, roughly symmetrical in the two hemispheres, represents the lesion in each animal studied (after Lashley, 1944).



Text-fig. 8. The relation of errors in maze learning to extent of cerebral damage in the rat. The extent of brain injury is expressed as the percentage of the surface area of the isocortex destroyed. Data from 60 normal and 127 brain-operated animals are averaged by class intervals of 5% destruction. The curve is the best fitting one of logarithmic form. For lesions above 45% the number of cases (indicated by numerals on the graph) is too small for reliability. (After Lashley & Wiley, 1933.)