

This poster will present the history of scientific evidence in psychology. The history of scientific evidence in psychology will be recounted through an in-depth analysis of the work of exemplar psychologists, dating from the earliest philosophers of the mind to the statistical research that characterizes quantitative research in psychology today. Descartes and Locke both relied on their own subjective logic as evidence for their claims. In contrast, Flourens conducted an early attempt at experimentation during the 18th century to provide evidence contradicting Gall's increasingly popular phrenology, a theory stating that specialized brain functions were localized to individual parts of the brain (Pickren & Rutherford, 2010). This experimental methodology was flawed, but it was an example of early psychological researchers' increasing adoption of the scientific method.

However, Kant criticized the idea that psychology could ever truly be a science, stating that it lacked the necessary quantification and precision of the "hard" sciences (Pickren & Rutherford, 2010). Kant's skepticism in regard to the validity of introspection and his critique of psychology had an unintended effect of increasing quantitative experimentation in the 19th century (Teo, 2005). For example, Wundt's laboratory utilized experimental introspection to describe common physiological aptitudes in humans in a structured and quantitative manner (Danziger, 1990). The testing movement also worked to propel the field toward its eventual adoption of the scientific method (Pickren & Rutherford). In regard to testing, researchers tackled the challenge of operationally defining complex variables, which is a critical aspect of quantitative psychological research; they also began to focus on comparing groups instead of analyzing select individuals. For example, Wooley (1903) utilized cognitive tests to provide quantitative evidence against the complementarity hypothesis, stating that women were genetically suited toward raising children, while men were better equipped to work.

Trends embedded in the evidence presented by key theorists from each of the major schools of psychology that emerged throughout the twentieth century (i.e. structuralism, functionalism, psychoanalytic, humanistic, gestalt, behavioral) will be evaluated based on adherence to or rejection of the scientific method and quantitative evidence. Case studies were prominent in the school of psychoanalysis (e.g. Freud, 1957), while behaviorists adhered more closely to the experimental method using systematic single-subject designs (e.g. Watson & Rayner, 1920). Gestalt experiments utilized the relatively large sample sizes more characteristic of modern-day experiments to provide empirical evidence for their theories (e.g. Zeigarnik, 1927). Humanists relied on observations, practical and self-evident truths, and, during the Golden Age, quantitative studies (e.g. Truax et al., 1966). Finally, this paper concludes with commentary on the later half of the 20th century regarding the adoption of the statistical model of psychology that characterizes quantitative research in academic psychology today.