

Wilhelm Wundt



Yzar S. Wehbe and Todd K. Shackelford
Department of Psychology, Oakland University,
Rochester, MI, USA

Preface

This entry relies heavily on the following three books: (1) *Wundt and the Philosophical Foundations of Psychology: A Reappraisal* (Araujo 2016), which provides a philosophical history of Wundt's ideas on psychology, (2) *Wilhelm Wundt in History: The Making of a Scientific Psychology* (Rieber and Robinson 2001), and (3) *The Story of Psychology* (Hunt 2007). These three references substantially overlap on the facts about Wundt featured in this entry. Other references are cited as needed.

Biography and Impact

Wilhelm Maximilian Wundt (1832–1920) was a German physiologist and psychologist generally known as one of the founders of scientific psychology. After earning a medical degree at the University of Heidelberg, and studying briefly with Johannes Müller, he was employed as a lecturer in physiology at the University of Heidelberg, where he became an assistant to the renowned physicist and physiologist Hermann

von Helmholtz. While there, he authored *Beiträge zur Theorie der Sinneswahrnehmung* [Contributions to the Theory of Sense Perception] – published in 1862. In this book, he challenged the dominant ideas of the physiologists and philosophers of the time by arguing that the study of the psyche can be a science if done experimentally. Wundt also presented the first course on the topic of psychological science, which had been considered a branch of philosophy and had been studied primarily via rational analysis. Wundt turned his course of psychology into a book titled, *Lectures on the Mind of Humans and Animals*. His career spanned about 65 years, and he graduated 186 doctoral students. He was thrice nominated for a Nobel Prize. Wundt was extraordinarily prolific – his published work spans an estimated 53,000 pages (Kim 2016).

Psychological Science's Beginnings

In 1879, at the University of Leipzig, Wundt founded the first official laboratory for psychological research, which became known as The Institute for Experimental Psychology. In 1881, he formed the first academic journal for psychological research, *Philosophische Studien* [Philosophical Studies], which published the institute's research. The institute attracted a large number of faculty and students who, in turn, became prominent figures in psychology across the globe, including Emil Kraepelin, G. Stanley

Hall, and James McKeen Cattell. His textbooks influenced the first two generations of American psychologists and their students, until the 1920s, when interest in Wundtian psychology began to wane. Wundt wrote on many subjects, despite his belief that most could not be adequately empirically tested. It was typical of Wundt to compare and contrast his ideas with those of other schools of thought, both new and old. For these reasons, Wundt could be considered an encyclopedist.

The Wundtian Method

From the modest beginnings of physiological psychology, he created a unique methodology for psychology – one that served as a model for psychologists for decades. Wundt placed a notable emphasis on studies involving reaction time measurements. Although measurement of reaction time was already taking place in physiology, his examination of consciously organized temporal processing was a unique addition.

Wundt's favored methodology was introspection, or the inward examination of conscious experience. Wundtian introspection is more narrowly defined compared to how the term is often used today. Wundtian introspection involved observing the reactions of participants subjected to stimuli such as lights, colors, and sounds. Although Wundt had claimed in *Contributions* that the psyche could be studied empirically and quantitatively, he subsequently believed this to be true only for the basic elements of consciousness – sensations, perceptions, and feelings, as well as the associations among them. Helmholtz and others had conducted similar experiments, though these were limited to studying manifest behaviors. Wundt's contribution was the use of introspection to gather quantitative information about non-behavioral conscious experiences.

Wundtian Psychology

Many of Wundt's theories and conceptualizations were subject to his own revisions, and many of the major revisions involved the topic of volition. For

example, three key propositions that he later abandoned or toned down were: (a) all mental acts are structured by logical rules, (b) unconscious processes are key, and (c) – linking the first two principles – the idea that the mind makes “unconscious inferences” by constructing more complex representations based on, for example, data from sensory perception. While Wundt appreciated that his theory of unconscious inferences had been adopted by Helmholtz, he did not agree with the manner of its application, since Helmholtz only used it to explain visual illusions, whereas Wundt had argued it to be essential for a psychological explanation of the perception of space. For more on the relationship between Wundt and Helmholtz, see the section titled “Wilhelm Wundt 1832–1920” in another entry in this encyclopedia “Hermann von Helmholtz” (Thomas [this volume](#), p. 14).

Wundt's abandonment of these three propositions shaped his most influential text, *Grundzüge der Physiologischen Psychologie* [Fundamentals of Physiological Psychology], in which he argues that we need an account of the experiencer of psychology based on conscious experience. Wundt believed that even though immediate elementary experiences were caused by particular stimuli, conscious experience had its own type of causation – ideas that build on one another according to specific laws. Wundt named these laws, which were his conceptualizations of association, judgment, creativity, and memory. Actions resulting from more complex mental processes are acts of will or volition. Wundt believed that these volitional processes are the products of an experiencer who actively chooses to think, speak, and act in certain ways. While this theory no longer plays a key role in contemporary psychology, it was part of Wundt's attempt to move away from the automatism of mechanistic psychology and toward what he regarded as a more complete model.

Wundt's Animal Psychology

Wundt considered animal psychology a fitting topic for ruminations, philosophies, and informal

experiments (including some that he lectured on featuring his poodle) but did not allow any work with animals in his laboratory because no data based on introspection could be obtained. In an idea reminiscent of Aristotle's *Scala Naturae*, Wundt believed that humans are at the pinnacle of a progressive evolution, and that animals may therefore be helpful insofar as they represent a precursor to the human mind. In his autobiography, he commented that his studies of animals in the book *Lectures on the Mind of Humans and Animals* were superficial and that they had been included due to his interest in Darwinism at the time.

In Wundt's *Völkerpsychologie* [People's Psychology], a 10-volume nonempirical investigation of social psychological phenomena, he hypothesized that volitional mental processes reflected advanced evolution, and that these abilities are what render humans intellectually superior to other animals. Specifically, he argued that the human capacity for selective attention is what facilitated intellectual progress and the development of human culture. Without these abilities, Wundt believed that humans would be buffeted about aimlessly by sporadic thoughts, memories, and perceptions.

When Wundt first became preoccupied with explaining human and animal movement, the difference between action and movement prompted extensive research and debate with highly influential researchers such as Alexander Bain and Hermann Lotze. All three were indebted to the earlier work of physiologist Johannes Müller. Unlike Bain and Lotze, Wundt did not think that voluntary activity results from learning. What Wundt brought to this debate is a phylogenetic perspective indebted to Darwin's theory of evolution. Wundt asserted that: "The intentional character of the reflexes then becomes easily intelligible, if we regard them as resulting from the voluntary action of previous generations" (Wundt 1894, p. 227).

It is not uncommon to see quotes from works by Wundt in which he communicated great appreciation for Darwin's contributions, but when read in context, one finds that they are often followed by a rejection of a basic premise of Darwinian evolution (that evolution is driven by blind forces that lack foresight) and instead endorse a view of evolution that accords with German idealistic philosophy (directed by teleological rather than mechanistic causal forces). For example, Wundt claimed that the theory of natural selection expresses a teleological rather than a causal principle, and that in calling variations on which natural selection operates "accidental," Darwin had repudiated his own attempt at providing a causal explanation.

Conclusion

Wundt's writings reveal deep and wide-ranging interests (culture, art, law, language, history, religion) which have long been overlooked, partly due to the fact that most of his works have never been translated into English. A recent digitization of his corpus may revive interest in his vast collection of papers and books (Meyer et al. 2017). Wundt was not merely a compiler of volumes, despite popular descriptions that portray him this way. Less known facts about Wundt include his lack of adherence to a positivistic approach, his arguments for the idea that psychology and philosophy are intertwined, and importantly, his view that *Völkerpsychologie* (essentially, social psychology) is important and complementary to his individual-level psychology (Jovanović 2021). He is sometimes thought to have been overly restrictive in what he considered to be part of psychological science, barring many areas that are now commonly accepted as essential parts of the discipline. Yet Wundt had a more inclusive view of psychology than is often believed, as evidenced by his willingness to write about a broad range of topics even when he thought they

could not be rigorously tested. Moreover, many of the methods now available in psychology and animal behavior simply did not exist during his time, which surely contributed to this view. While many of Wundt's specific views may no longer be influential, he contributed a great deal to the establishment of modern psychology as an experimental, empirical science.



Wilhelm Wundt in 1902

Cross-References

► [Hermann von Helmholtz](#)

References

- Araujo, S. D. F. (2016). *Wundt and the philosophical foundations of psychology: A reappraisal*. Cham: Springer International.
- Hunt, M. M. (2007). *The story of psychology*. New York: Anchor Books.
- Jovanović, G. (2021). How psychology repressed its founding father Wilhelm Wundt. *Human Arenas*. <https://doi.org/10.1007/s42087-021-00186-2>.
- Kim, A. (2016). Wilhelm Maximilian Wundt. In E. N. Zalta (Ed.), *The Stanford encyclopedia of philosophy*. <https://plato.stanford.edu/archives/fall2016/entries/wilhelm-wundt/>
- Meyer, T., Mädebach, A., & Schröger, E. (2017). The digitization of the Wundt estate at Leipzig University. *History of Psychology, 20*(3), 342–345. <https://doi.org/10.1037/hop0000068>.
- Rieber, R. W., & Robinson, D. K. (2001). *Wilhelm Wundt in history: The making of a scientific psychology*. New York: Kluwer Academic/Plenum.
- Thomas, R. K. (this volume). Hermann von Helmholtz. *Encyclopedia of animal cognition and behavior*.
- Wundt, W. (1894). *Lectures on human and animal psychology* (2nd ed.). (Trans. Creighton and Titchener). New York: Macmillan.