

The History of Psychology as a Science

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History is full of contingencies and the history of psychology is no exception. We can conclude what we consider as psychology only in a retrospective fashion. This perspective, of course, comes with many biases, for we live on the other side of history, the future. Some trends died out, some have continued through many metamorphoses. This is why I preferred to write about mostly German and American psychological trends and limited myself to psychology as an established science. Readers are warned that psychology is *psyche-logos* which means the study of the soul. It was not only Western thought that developed this inquiry, nor did it start in the 19th century. Interested readers are expected to do the hard work on their own and not just rely on the internet but diversify their sources.

INSTITUTIONALIZATION IN 19TH CENTURY -- GERMANY

Wilhelm Wundt (1832-1920) was the founder of psychology as an institution in Germany. He took the already established path through physiology, with the Cartesian way of understanding psychology, and married them. He had the first psychology laboratory. He published *Principles of Physiological Psychology* in 1873. He wanted to make an alliance between physiology and psychology. According to Wundt, consciousness was in the middle of the inner and outer experience and therefore required the application of both inquiries. Even though he is now regarded as the founder of introspection, he thought of his science as experimental psychology. He included introspection into his research, but he did not stay there and tried to link his findings to physiological substrates. It was not armchair speculation but “experimental self-observation” in which observers were subject to standardized controlled situations and then asked to describe what they experienced.¹ Wundt limited his ways of conduct to immediate conscious experience. He pondered on questions like “How many ideas can consciousness contain at a given moment” or “how do human beings create sentences”.

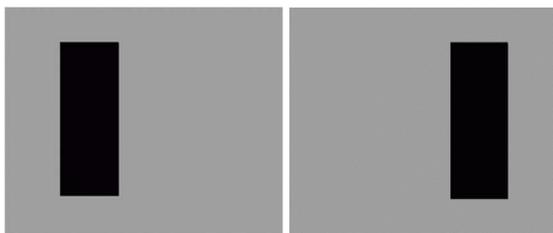
Wundt showed resistance to the application of psychological findings. He also did not conclude that all of the psychology could be compressed into natural science, instead, he divided psychology into many parts, including the philosophical roots to his understanding. But his students were more eager than him in the endeavor to make psychology a natural science.

Titchener was one of them and he played a big role in establishing American psychology. He was born in England and accordingly, his psychological understanding was similar to British psychology. He focused on sensations and how human beings formed complex processes from these individual elements. Therefore, he tried to come up with a list of all the basic sense elements and managed to identify 35.000 visual sensations. His ideas were reviewed during the cognitive era of psychology but other than that, he was not very influential at his time.

The next trend in Germany was Gestalt psychology, which claimed that apart from sense elements, there were also elements of form which played a part in our perception. Leading figures in this movement were Max Wertheimer (1880- 1943), Wolfgang Köhler (1887-1967), and Kurt Koffka (1887-1941). They were shocked by the theories of psychology in which everything was dissected to its atomic parts:

At the time we were shocked by the thesis that all psychological facts consist of unrelated inert atoms ... What had disturbed us was the utter senselessness of this picture, and the implication that human life, apparently so colorful and so intensely dynamic, is actually a frightful bore. This was not true of our new picture and we felt that further discoveries were bound to destroy what was left of the old picture. (Köhler to APA, 1959/1978, pg. 253-254)

Gestalt psychology rejected the modern understanding of the mind. They incorporated illusions (things that were not objects, but human beings experienced nevertheless, in one way or another) into their research. They named the forms they found as Gestalts. Gestalts were objective, they were not imposed on the experience but were discovered within the experience.² They were physically real, in nature, in the brain, and in experience. They all overlapped with each other: they were isomorphic to one another.



Phi pheonomenon

Gestalt psychology received criticism such as implying that it was the supporters of Gestalt that imposed this way of thinking onto the mind. For those critiques, it was not discovered but rather invented.

Maybe with the rise of Nazi Germany, psychology continued its growth in the USA. However, it changed tremendously. It was no longer about just consciousness. It was more about the application of the findings and developing methods, strategies. Depicted by Stanley Hall in 1912:

We need a psychology that is usable, that is dietetic, efficient for thinking, living, and working, and although Wundtian thoughts are now so successfully cultivated in academic gardens, they can never be acclimated here, as they are antipathetic to the American spirit and temper.³

AMERICAN PSYCHOLOGY

With the influence of evangelical Christianity that wanted to change the believer's emotional status with religion, one of the first goals of psychology in America was to modify behavior. If one makes a crude generalization, it could be said that American psychologists neglected theory or even acted rather dismissively.

Pragmatism appeared in a place literally called the Metaphysical Club, which hosted students including Charles S. Peirce and William James. They were influenced by Darwin and they applied the survival of the fittest notion to pragmatism and especially to beliefs. We couldn't be certain that our beliefs towards anything were to be correct, at first instance we would adapt them though with doubt. With the natural selection and thus with time, some would grow stronger while others weakened and eventually we would choose one over the other. The truth could not be fixed. It couldn't be thought of apart from the environment.

William James(1842-1910) was very much affected by pragmatism and he was the first to apply it to psychology. He declared that "psychology is the science of mental life". (Principles of Psychology, vol.1 p.1) He believed that consciousness could not be divided into atoms nor it could be represented in the image of a train or chain. It was a flow, a stream. Hence, he coined the term "stream of consciousness". It was what we do with consciousness rather than what it contained. The stream is something that flows, while the lake is more stationary for example. Thus we identify things with their functions. Consciousness's job is to serve the organism and it is not passive but chooses, acts towards some end. "The mind, in short, works on the data it receives very much as a sculptor works on his block of stone"(p.288). We need consciousness for our survival, according to James. He worked heavily on concepts such as emotion, linking consciousness back to stimuli. He then went on to develop pragmatism saying that ideas only had value as much as they mattered in our lives. But those ideas did not exclude "non-cognitive experiences" such as emotions. They had an impact on our lives too. It was not the sensory content at the end that made something of value. The pragmatism of James included all: both rational and empiricist arguments to the means of its own. He wrote: "A radical pragmatist is a happy-go-lucky anarchist sort of creature"(p.168). In the end, it was a method, not a theory. His study opened a gateway to functionalism in psychology which was "psychology of mental adjustment inspired by evolutionary theory".⁴ Functionalism according to Titchener was a subfield of psychology mostly associated with physiology. Even though this was an important trend, what rocked psychological research ever since its founding was behaviorism.

John Watson(1878-1958) was an animal psychologist that aimed at objective human psychology. He started a lecture series on animal psychology called "Psychology as the Behaviorist Views It" and in it described what psychology is for him and for the behaviorist:

"Psychology as the behaviorist views it is a purely objective branch of natural science. Its theoretical goal is the prediction and control of behavior... The behaviorist, in his efforts to get a unitary scheme of animal response, recognizes no dividing line between man and brute." (1913a, p.158)

Watson believed that organisms adjust themselves to their environment, which would result in the appropriate behavior. Then we could predict stimuli or behavior if one of them was given. He wanted to learn how to control behavior.

But what Watson came to call behaviorism was born before its name. With the development in animal psychology and condition experiments such as that of Pavlov, were already on board. The motor theory of consciousness, for example, was an earlier model that placed consciousness with physiological processes, between stimuli and response, showing that all there was could be summarized by our reactions to the outer world. But Watson was a novel voice that exaggerated all

those sayings and combined them in writing that could be regarded as a manifesto. And for a long time, psychology came under the sway of behaviorism.

Jean Piaget (1896-1980) rose as an alternative to behaviorism and investigated how the development of knowledge in children occurred.⁵ He believed that the very qualitative characteristics of intelligence changed with age as well. He was seen as one of the representatives of new structuralism that took place in continental philosophy along with Lévi Strauss and Michel Foucault, though their work differed from one another enormously.

COGNITIVE REVOLUTION

Then came the computational view of the mind. The mind was associated with a computer, and just like a computer, it was conceptualized as consisting of units that can be traced and processes that can be broken down to those units. At first, scientists could only differentiate between input and output. They could also conceptualize what was hardware and software, meaning, what was the processes and the mechanic part that allowed the processes to continue. But with the development of brain scanning, most research was carried to technological areas. MRI, fMRI, and EEG are some of the methods that are still used to this day that allow us to visibly see what is going on inside the brain, and reduce the amount of guessing necessary for conducting research.

SIDETRACKS – GERMANY

A criticism brought to the atomic investigation of the world and the sensations themselves came from Franz Brentano (1838- 1917). Along with Wilhelm Dilthey, he argued that we could only analyze reality by imposing pre-theoretical assumptions.⁶ He believed that we could only describe the experience and the environment we found ourselves in, but nothing more. This is different from Cartesian thinking, which believes that we cannot be certain that our ideas correspond to the objects. But according to Brentano, we would take hold of objects themselves by our mental acts. There was no representation, there were acts. And those acts could not be dissected into their atomic units. This came to be known as phenomenology and was developed by philosophers including Edmund Husserl, Martin Heidegger, Merleau-Ponty, Jean-Paul Sartre, and Simone de Beauvoir.

Interestingly, Sigmund Freud (1856-1939) took philosophy classes from Brentano during his medical education. Freud started as a physiologist but is known as the founder of the unconscious. His method came to be known as psychoanalysis (later developed by the French intellectuals) and he used introspection heavily. He focused on abnormal minds and tried to identify the primal impulses that lurked in the unconscious. Peter Gay (1989) summarized him by concluding that “Freud is inescapable” and that “we all speak Freud whether we know it or not”.⁷ It is not surprising to say that he faced many criticisms from some psychologists that denied the existence of the unconscious. Behaviorists rejected the mind Freud focused his work on. Even Freud himself placed psychoanalysis underneath psychiatry, instead of psychology. He formulated theories regarding dream formations (concluded that dreams were mainly wished fulfillment), sexuality, personality, neurosis, and hysteria. His writings focus on case studies and give great insights. He coined the terms such as the ego and the id. After him, psychoanalysis continued with Carl Gustav Jung and Jacques Lacan though they are very different from the classical understanding of psychoanalysis.

REFERENCES

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