

1 Introduction and Overview

1. 1 In Remembrance of Wilhelm Wundt

After Wundt's death, the remembrances and obituaries that were published showed how greatly the founder of experimental psychology, author of *Cultural Psychology* (Völkerpsychologie) and philosopher (with his works on ethics, logic and epistemology) had been respected. But did his essential guiding ideas gain any permanent influence on the further development of psychology? These ideas included the process analysis of psychical activity, the developmental theory of the mind based on cultural psychology, supplementation of experimental and qualitative methodology, and the demand for a critical examination of implicit philosophical presuppositions in empirical psychology. How could Wundt as the founder of experimental psychology and the first permanent laboratory with a research program become a kind of outsider in psychology during his lifetime? Is his work sufficiently accessible?

When the *Gesellschaft für experimentelle Psychologie* (German Society for Experimental Psychology) was founded in 1904, the assembly gave a greeting address to the then 72-year-old senior professor Wundt at the suggestion of Oswald Külpe, Wundt's former assistant in Leipzig. Georg Elias Müller from Göttingen was elected president of the Society at the assembly and maintained this position until 1927 (Gundlach und Stöwer, 2004). Even more significant than Wundt's personal absence, were the relatively few appearances of his name and the obvious neglect of his research program in the published congress papers, making it clear that by 1904 the era of Wundt was over from the viewpoint of the academic psychologists. Wundt now appeared as an important figure in the *history* of psychology worthy of a special greeting address.

The motives behind this conspicuous distance are unknown. Was it that he did not want to become a member of that Society or that he was not directly asked? In those years, Wundt was already engaged in writing his 10-volume work on cultural psychology published under the title *Völkerpsychologie*, and he had broadened his theoretical and methodological horizon to an almost universal range. To him, G. E. Müller's psychophysics and memory research must have seemed quite narrowly conceived.

Wundt was an honorary member in 12 scientific societies in Germany and abroad as well as a member of the *Pour le Mérite* order for arts and sciences and a foreign or corresponding member of 13 academies. He was also an honorary citizen of Leipzig and Mannheim. Between 1875 and 1919, Wundt had 186 PhD students, including 19 from the United States, England and Canada, and at least 24 from Russia, Romania, and other Eastern European countries. The lists of his PhD students, assistants and foreign guests included many names that later became well known.

Bernhard Rost writes about Wundt's funeral (1920, p. 14): "On September 4, 1920, he was cremated at the Leipzig Südfriedhof (Southern Cemetery). I also attended the emotionally moving funeral ceremony. Attendance was low. A disgrace to the German people not to have honored one of their greatest minds." – The obituaries written by his Leipzig colleagues (1922/23) are far from being a consistent appreciation of Wundt and his lifework. The first article is an inconsistent

and stylistically poor contribution by his successor at Leipzig University, Felix Krueger, who appears barely able to convey Wundt's achievement as a pioneer in cultural psychology. Other contributions generally remain quite vague, giving a strangely superficial or one-sided picture. In contrast, Emil Kraepelin (1920) wrote a masterly articulated obituary and Aloys Fischer (1932) later commemorated Wundt on the occasion of the centenary of his birthday.

Distancing and the Break of Tradition

The retrospective on the 100-year anniversary of the *German Society of Psychology* (ed. Rammsayer und Troche, 2005), which intended to be representative, has special significance for two reasons. First, these reviews cover a century of the history of psychology in Germany. Second, the authors are former presidents of this Society, which means that their views can be considered to represent the views of a majority. Although Wundt is the psychologist most frequently listed in the index of names, he is often mentioned only casually, inaccurately or remarkably one-sidedly – in the sense of a “natural scientist stereotype” (cf. Chapter 4).

Fischer (1932), the philosopher and educational psychologist, wrote one of the few tributes in commemoration of Wundt's 100th birthday. “That Wundt, who in the course of his life was an authority of international prestige, has disappeared from the discussion a few years after his death, so that he seems to be unknown, almost as if he had never lived, speaks not so much against him as it does against the epigones of the World War period whose thinking focuses narrowly on issues of necessity and power... If the younger generations, even students, do not want to know Wundt, then the impression of him as a fashionable celebrity whose short-lived fame was already incomprehensible and undeserved and whose work, barren and vain, sank together with him into the tomb of oblivion grows stronger. Wundt has not been confined to empirical research, but starting from the empirical sciences, he arrived at a philosophical standpoint that afforded him an overview of the entire intellectual world of his era and made him impressive and worthy of admiration as one of the last encyclopaedic thinkers, which are not uncommon in the history of German philosophy. On the occasion of his last birthday and immediately after his death, Wundt was thanked and complimented as the great psychologist and creator of the first laboratory for experimental psychology ... but even in this respect ... there were more restrictive concerns and distance than an honest and thorough understanding of the fundamental importance of his life-work, especially for present-day psychology. The lasting merit of his work and school of thought is the rigour of the methodical requirements for psychological research.... He, who wants to study mankind as a psychologist, cannot abandon the connection between biology and history – or as Wundt put it, physiology and psychology – which Wundt first established.” (pp. 353-358).

Wundt's Legacies

Wundt is still quite well known as the founder of psychology as a discipline or at least as the founder of the first laboratory. But what do current professional psychologists associate with him in addition to this? Perhaps only his experimental psychology or maybe also his “other legacy,” namely his “Völkerpsychologie,” which is often mistaken for *ethnology* rather than recognized as *cultural psychology*, thus forming the basis of a psychological developmental theory of the mind. The year 1979 was the centenary of the founding of Wundt's laboratory in Leipzig and accordingly, the *XXIInd International Congress of Psychology* took place in Leipzig the

following year. A series of lectures was held and a number of books contained essays on Wundt's psychology, which revived interest in his complete work. After this relative peak (cf. Chapter 4), an increased interest in the history of psychology continued into the following decades. However, neither a thoroughly elaborated, concise biography of Wundt's life *and* work, nor an annotated edition of his outstanding books or an adequate overview representing his basic intentions and achievements in the theory and methodology of psychology emerged during this time.

In her retrospective *Wilhelm Wundt und seine Schüler* (Wilhelm Wundt and his Students), Meischner-Metge (2003) conveyed numerous historical details about the founding of the institute, doctoral students, publications and Wundt's relationships with his outstanding "students" Kraepelin, Külpe, Meumann, and Münsterberg. She also inquires into the reception history of his life-work, and agrees with Klemm (1922, p. 107) that Wundt probably had disciples, but no school (cf. Chapter 4). Wundt himself rejected the term *Leipziger Schule* (Leipzig School) in a letter to Külpe (1895, cf. Meischner-Metge, p. 156). Wundt was not a professor who sought to gather disciples around him. Wundt wanted to develop psychology in a state of composure and with high standards as an independent subject within philosophy. Within limits, he supported applied research together with the Leipzig Teacher's Association in the educational field ... At the Leipzig Institute, Wundt embodied a kind of gray eminence, which was kindly characterized by the authors of the *Festschrift* as 'unintendedly authoritative' and whose influence ended with his retirement.... The fact that important premises and viable approaches were forgotten for a long period of time did not avail the development of psychology (pp. 165-166).

In the preface of the essay collection *Wilhelm Wundts anderes Erbe. Ein Missverständnis löst sich auf* (Wilhelm Wundt's Other Legacy. Dissolving a Misunderstanding), Jüttemann (2006b) mentions three components of Wundt's intellectual legacy: the undisputed merit of establishing psychology as an institutionalized science and helping it to gain worldwide recognition; the resolutely antimaterialistic foundation of psychology as part of the humanities; and lastly, the establishment of a historical cultural and social psychology. "Together, these three components of his legacy, which must be considered as a whole, form the integrative model of psychology as a part of the humanities, which Wundt not only theoretically derived from the concept of mind, but also put into practice to an astonishing extent as a research program."

"From a historical perspective, Wundt earned almost exclusive praise over many years for founding the institute, such that the myth arose that he was the prototype of an experimenter and an uncompromising pioneer of psychology oriented towards the natural sciences. This is a huge misconception, which may even be called tragic considering some of its consequences. This misconception can be regarded as an expression of a distorted reconstruction and, at least partly, a consciously denied 'truth about Wundt,' which is only gradually dissolving. The aim of this book is to accelerate this process of clarification while at the same time rediscovering Wundt's 'other legacy' and bringing it recognition, despite, as is to be expected, now outdated terms and inadequate methodical conceptions. However, this book can at best initiate an effort towards this goal." (pp. 9-10). The problematic interactions between Wundt and Külpe as well as other obstacles appear to have also contributed to this misconception. "But since the *Zeitgeist* prevalent in the field of psychology at the time favored the orientation towards and guidance by the natural sciences, there was an extreme divergence between the perception of the overpowering founding father on the one hand, who could absolutely not be ignored by his successors, yet whose prestige they had to maintain in the interest of the field of study, and the image of Wundt as a scientist within the humanities with an antimaterialistic and antipositivistic orientation ... On the other

hand, they decidedly rejected him and his ten-volume *Völkerpsychologie*, which they preferred to ignore, as well as his advocating for a concept of psychology that is methodologically open and geared towards the whole subject. There were two approaches to solving the problem that arose from this discrepancy, both of which were widely used ... One approach consisted in a partial or complete ignorance of Wundt's lifework, which was sometimes equivalent to a denial. The other approach, which was temporarily applied with great success, consisted in converting Wundt from a scholar of the humanities who was partly active in the natural sciences to a pure natural scientist. This produced a huge misconception, which has been considerably difficult to rectify because—as another example of the irony of fate – the myth of Wundt as the prototypical positivist serves the interests of certain political issues within the profession in the eyes of some representatives and continues to persist to this day.” (pp. 26-27).

Jüttemann (2006b, 2007a) decidedly highlights Wundt's original conception of psychology and his legacy with its great “integrative potential.” He criticizes both the prevalent stereotype of the “natural scientist Wundt” and the “distorted history of reception.” Jüttemann regards Wundt primarily as a scholar of the humanities, and even as the actual founder of a psychology that is conceived as part of the humanities. However, this portrayal of the ‘other Wundt’ could entail new difficulties: How is it to be understood that, parallel to the publishing of the first volumes of the *Völkerpsychologie*, Wundt expanded the *Grundzüge der physiologischen Psychologie* (Principles of physiological Psychology (1902-1903) to three volumes and went beyond a detailed account of neurology and neurophysiology in trying to develop a *neuropsychological modeling* of the apperception process through further elaboration of the central theoretical foundation of his *general* psychology? From Wundt's point of view, this is not an irreconcilable contradiction, but rather stems from complementary perspectives on the psycho-physical unity, i.e. his “perspectivistic monism.”

How can Wundt's *other* legacy be updated without abandoning his *first* legacy? To combine both as Wundt conceived of and tried to elaborate them in his research is the more sophisticated, albeit difficult way. Writing about Wundt's relevance for today's psychology also requires the reconstruction of his guiding ideas and their mediating potential in modern terminology. This includes neuropsychology, psychophysics and experimental sensory psychology as well as Wundt's view of animal psychology and the ontological continuum of evolution that seemed strange to many scholars of the humanities at the time, including Wundt's students.

1. 2 Objectives

So far there is no overview of Wundt's entire work. Its extent and interdisciplinary horizon, as well as his sophisticated writing style constitute a demanding task for today's readers. However, a reasonable understanding of the complete work is necessary to investigate the reception of his ideas and their relevance to today's discussions about the foundations of psychology and ongoing controversies in theoretical psychology more precisely. Furthermore, there are additional reasons to attempt such an overview. The year 2020 is the centenary of Wundt's death, meaning that a number of recollections and commemorations are expected. There is, for example, an initiative for establishing a *Wilhelm Wundt Foundation at Grossbothen* near Leipzig in order to set up a research facility at Wundt's last place of residence intended to systematically complement the

projects carried out at the *Leipzig University Archives* and the *Leipzig Institute of Psychology*. In both respects, the following overview may be useful. In the past, there was never an attempt to write a comprehensive account that covers both his biography and his entire body of scientific work. Although such an account of Wundt's life and work cannot be accomplished here, the present book will convey contextual information and details aimed at this goal. An abbreviated biographical outline, however, is essential in order to provide background information about his family, education, professional activities, social attitudes, beliefs, and intellectual characteristics (cf. Chapter 2).

The outline of the main part in eight Chapters (3.2 - 3.9) corresponds to Wundt's fields of research, namely neuropsychology and the primary fields of psychology, as well as ethics, epistemology, and philosophy. Each chapter includes extensive quotations from Wundt's work and sections on methodology and the contemporary reception of his basic concepts. The overview includes several elaborations, i. e. on the system of categories and the controversy about measurement in psychology. Chapter 3.9 is summarized by referring to Wundt's plea for a closer connection between psychology and philosophy as a necessary precondition for critical reflection on philosophical presuppositions present in empirical psychology.

Chapter 4 deals with the reception of Wundt's work since 1858 and is based on contemporary reviews and textbooks as well as a number of recent sources and some bibliometric data. This chapter is mainly based on a previous study entitled *Wilhelm Wundt – Gründervater der Psychologie und Aussenseiter?* (Wilhelm Wundt – Founding Father of Psychology and Outsider?, Fahrenberg, 2011). Since this comprehensive documentation is easily accessible on the internet, extensive quotations and commentaries will not be repeated here (Fahrenberg, 2011, pp. 105-133, documentation pp. 231-623). Based on this resource, hypotheses were developed to interpret Wundt's significant loss of influence after the turn of the century in 1900 (pp. 143-175). Occasional cross references, a summary of the findings, and a number of more recent references since 2011 will suffice here. Since the results of bibliometric analysis on Wundt's reception have been previously provided, they are presented here only briefly. It is worth mentioning that, compared to the earlier presentation, a modified assessment of certain aspects of Wundt's conception was attained by further studying his work. The crosslinks between Wundt's general psychology and his cultural psychology (*Völkerpsychologie*) are now seen more clearly, as is the essential influence of Leibniz on Wundt's epistemology and methodology. Chapter 4 concludes with a renewed commentary about the conspicuous break of tradition.

Chapter 5 reviews previous attempts to reconstruct parts of Wundt's theory of science and of specific concepts in psychology. Particular importance is assigned here to the theoretical construct of *apperception* and Wundt's system of epistemological principles (*Prinzipienlehre*). The theory of apperception and the system of epistemological principles are of fundamental significance because they constitute the common basis for Wundt's general and cultural psychology. There are additional domains in Wundt's conception of psychology where a reconstruction using modern terminology should be pursued. Such concepts include Wundt's theory of motivation (*volition*), theory of language, and comprehensive account of common motives in cultural development. In this respect, only a few references can be provided since a careful reconstruction that adequately reflects Wundt's intentions would require interdisciplinary cooperation.

The final Chapter 6 aims to describe the essence of Wundt's work and provides a summary of what constitutes the continued relevance of Wundt's conception of psychology.

1. 3 Approaches to Wundt's Work

Contexts and Principles

Wundt's empirical psychology can only be understood in the context of his epistemology, which he developed in parallel starting in 1862 and systematically elaborated and published in the revised editions of *Logik und Wissenschaftslehre* (Logic and Theory of Science, 4th ed., 3 volumes, 1919-1921). Hardly any other psychologist has dealt so intensely with these complicated issues and the variety of seemingly incompatible positions (even in ethics and logic) as Wundt did. The postulates of his epistemology, methodologically explained in his *system of principles* (Prinzipienlehre), are original. Therefore, they cannot simply be subsumed under one of the main schools in epistemology like idealism, materialism, and positivism, or their derived versions, which Wundt criticised extensively, nor under the monist or dualist interpretation of the psychical-physical relationship ("mind-body problem"). The modern framing of physicalistic-reductionistic standpoints or neuroreductionism would have been equally unacceptable to him.

Wundt coined the concept of *psychophysical parallelism*, but he differs from other theorists. In following Leibniz's thinking, Wundt decidedly links the idea of the parallelism of psychical and physical processes with an epistemological and categorical distinction: the physical processes, e.g. neurophysiology, have to be investigated and explained from the point of view of *natural causality*; the investigation of psychical processes also requires *analysis* with respect to the ends and means formulated in the *principle of purpose*. Otherwise, psychologists could not attain adequate access to and understanding of voluntary action (intentional acts). Causal and teleological analysis complement each other in the conception of the psychophysical unity of man. Wundt, therefore, demands a coordinated strategy of both causal and teleological analysis, since the principle of cause and the principle of purpose constitute two aspects of the fundamental *law of sufficient reason* first recognized by Leibniz.

Wundt also writes about "complementary points of views" in many other contexts. Today, one could point to the *principle of complementarity* coined by Niels Bohr. However, Bohr was referring to the wave-particle problem in the theory of light in physics, and his later attempts at generalizing this idea were only partly convincing (Bedau und Oppenheim, 1961; Fahrenberg, 2013a). Thus, the term *perspectivity* (*perspectivism*) is more suitable for highlighting complementary reference systems based on fundamentally different categories. The concept of *perspective* was also introduced by Leibniz, however not in the context of his reflections on parallelism (cf. Chapter 3. 9).

Guiding Principles

Wundt's principles take either the form of *philosophical postulates* giving absolute presuppositions about scientific thinking, e.g., categories of space and time, substance and actuality (change), cause and purpose, or *epistemological principles* that could eventually be more or less revised according to further analyses and experience. Some of the most important postulates and epistemological principles are presented here in brief. Extensive citations and comments will follow in later chapters.

Psychology is *not* a science of the individual "soul". According to Wundt, *Seele* (psyche) is another term for inner experience that is in continuous flow. For an understanding of Wundt's psychology, his *postulate of actuality* should be mentioned from the outset. This *process theory* has far-reaching consequences for the definition of psychology because the actively organizing and motivating processes are no longer traced back and explained by assuming a transcendent soul or an underlying "metaphysical substance." Thus, not only the traditional reference and belief in the metaphysical concept of "soul" are absent in Wundt's psychology, but also the concepts of "Ego," "self" or "acting agent." The individual personality is the "unity of feeling, thinking and willing, in which the will appears as the bearer of all other elements." Personality means a "self-conscious being, acting with a consistent and selective will," and it includes "the freedom and responsibility of the will" in an ethical sense. Wundt conceives of *consciousness* as the entire content of the immediate experience, i.e. the formation of representations from sensory impressions in the "coming and going of representations (ideas) and feelings." He assumes that there is a continuum of conscious processes with various degrees of clarity and he discusses dreams and hypnosis, as well as unnoticed neurophysiological processes, but he rejects the conception of "the unconscious" because there is no methodically reliable access to it (cf. Chapters 3.7 and 3.8).

According to Wundt, one could say with sufficient certainty that nothing happens in our consciousness that does not find its physical basis in certain physiological processes. However, psychology cannot be reduced to physiology. Physiological methods are helpful and therefore important tools for psychophysics, research on emotions, and other fields of empirical psychology, but they remain principally inadequate for the essential task of psychology. Man, as a "thinking and willing subject," cannot be explained in terms provided by the *natural sciences*. Psychology, instead, requires specific categories and independent epistemological principles, especially with respect to the analysis of voluntary and purposeful action. Such inquiries are basic to the humanities (*Geisteswissenschaften*), but alien to physiology and natural science.

"We want to call the entry of an idea into the inner field of vision *perception*, its entry into the focus (or the attention field) *apperception*." Apperception is Wundt's central theoretical concept. He distinguishes between two meanings of apperception: First, a clear representation in contrast to a vague, mere perception, and second, the inclusion of such sensory representations into self-consciousness. Here, Wundt is aligned with two of Leibniz's assumptions, namely that there is a continuum between the unnoticed "little perceptions" and apperception as an inclusion of sensory impressions in the ongoing process of consciousness, whereby self-consciousness and individuality emerge. This dynamic process is influenced by man's active striving (*appetitus*). First and foremost, apperception refers to the control of selective attention. A more generalized notion of apperception denotes a motivated and integrative process. Sensory impressions and other mental representations, feelings, and volitional activity are selected, analyzed, combined, and expressed in various ways, as well as evaluated and directed, not merely "processed," but "creatively synthesized." Apperception is an active processing, representing, and orienting, superimposed on sensory impressions and passive associations, and eventually initiating voluntary action. With respect to this multimodal process, Wundt seeks to develop descriptive and experimental methods suited to differentiating motivational, cognitive, and emotional aspects, as well as coordinated neurophysiological functions in order to elaborate a comprehensive process theory.

Wundt's apperception theory is an excellent example in the history of ideas of how the views of an eminent philosopher and universal thinker such as Leibniz and his thoughts about

perception and apperception, consciousness and “striving,” parallelism and the perspectivity of thought, were transformed by a psychologist and neurophysiologist into empirical psychological concepts, and possibly, operational definitions suited to experimental psychology and aimed at understanding the complex integrative performance in consciousness and voluntary action. Wundt often mentions Leibniz, but does not comment on him in detail until 1917 when he published an essay on Leibniz.

According to Wundt, it is not the individual elements, but their links (“psychical connections”) in the integrative apperceptive performance and voluntary orientation that constitute the main subject of psychology. Many of Wundt’s guiding ideas converge in two concepts, namely in the generalized *theory of apperception* based on his experimental psychology, and in his *psychological developmental theory of the mind* derived from his empirical cultural psychology. The *apperception theory* and the *system of principles* constitute the common theoretical and methodological basis of both these fields.

In his work *Die Psychologie im Beginn des zwanzigsten Jahrhunderts* (Psychology at the Beginning of the 20th Century, 1904/1913), Wundt extensively explains the development from philosophical to empirical psychology in the 17th, 18th and 19th centuries in the context of the history of ideas, and highlights the prevailing ontological way of thinking by saying that one could set up apodictic sentences about God and the world, and even about the soul of man, without attending to the actual mental experiences at all (p. 180). Next, Wundt distinguishes between two important currents in more recent psychology, namely (1) *experimental psychology*, which developed into Fechner’s psychophysics under the influence of the natural sciences (nerve and brain physiology as well as sensory physiology), and (2) *comparative psychology* and *cultural psychology*. – Later, in his theory of science, Wundt presented his thematically ordered systematics of psychology in detail (1921, pp. 144-299, cf. Chapter 3. 8. 2).

Reflections on Wundt

There is a maxim that states when discussing epistemological and methodological controversies participants should clarify their standpoint – at least roughly – in order to enable others to evaluate their arguments within the given context.

Dealing with methodological questions – both with respect to the psychophysiological research in the laboratory and in academic teaching – gives rise over time to one’s own perspective. This is all the more true for someone who is from a generation in which training in the method of psychological interpretation, i.e. principles derived from hermeneutics and from psychoanalysis, along with experimental psychology, was an unquestioned part of the study of psychology, a course of study which was much more comprehensive at that time. The exam (Diploma in Psychology) included a number of secondary subjects that were taught in other institutes or faculties, such as philosophy, educational science, sociology, physiology, ethology (animal psychology), and psychopathology. The experience of distinct perspectives and methods certainly shapes one’s understanding of psychology.

During my own studies – as some of my existing lecture notes 1957-1961 prove – several of Wundt’s positions were presented, such as the definitions of attention and consciousness, apperception, experimental psychology, and other topics, as well as his interest in cultural development. However, this did not result in a systematic understanding of Wundt’s general psychology

or cultural psychology, not to mention the fact that Wundt's theory of science was completely omitted from textbooks. Wundt's psychology and philosophy, ideas, and principles, were largely forgotten. Later, in my own research work, Wundt's three-dimensional theory of emotions and the psychophysiological methods became important, as did the multi-method assessment, the notion of psychophysical parallelism, and consequently, the complementarity of reference systems.

It was only after these academic years that I undertook a more thorough reading of Immanuel Kant's *Anthropologie in pragmatischer Hinsicht* (Anthropology from a Pragmatic Point of View, 1798) and the question emerged regarding the reception of these thoughts by later psychologists. Despite its title, given the essence of his concise and succinct methodological critique and his range of psychological subjects, Kant's book could be regarded as the first textbook on psychology. Thus, the question regarding Kant's influence on Wundt arose. Apparently, Kant's psychological treatise was not appropriately received during or after Wundt's time (Fahrenberg, 2004a, 2004b, 2008, 2011; Sturm, 2009).

Wundt's views are attractive and inspiring for the following reasons:

- the critical realism and the demand for critical reflection on philosophical presuppositions in empirical psychology and methodology;
- the heuristics in the idea of psychophysical parallelism (with a monist orientation) and the coordinated taking of perspectives between psychical processes and their neurophysiological bases (epistemological dualism);
- the system of specific categories and epistemological principles in psychology (mental science) with respect to consciousness and cultural psychology as opposed to reductionism and physicalistic views in neuroscience;
- the intention to develop multimodal theoretical constructs and multimethod research strategies;
- the occasional scepticism with regard to a hasty involvement in applied psychology without sufficient evaluation of the scientific foundations;
- the openness to psychological aspects of ethics, including professional ethics.

Initially, I encountered some difficulties in understanding Wundt's conception with respect to the postulate of *psychical causality* and the *voluntaristic orientation* in his psychology. In both respects, it turned out to be useful to go back to Leibniz and read philosophical interpretations that deal with the difficult topic of cause and purpose. Although Wundt's considerations are more sophisticated, one has to agree with him that physical processes can be explained sufficiently with regard to their causality, whereas higher psychical processes, like voluntary action, require the concept of purpose. Without taking into account the subject's intention (will), many of the behavioral activities cannot be adequately interpreted. A theory of volitional processes is incomplete if it does not include assertions about the dynamism of these processes: An entelechy, an innate instinct, needs, the "selfish genes", and similar metaphors. In contrast to this, Wundt's "voluntaristic" assumptions are psychologically more differentiated, for instance through the demarcating of his motivation theory from the philosophy of naturalism and vitalism.