Hans Driesch

Hans Driesch (1867-1941), a German biologist and philosopher, advocated vitalism, a notion of biology in which human consciousness and other life phenomena are not explained solely by the laws that govern physical and chemical processes. Driesch published extensively on psychical research, considering psi phenomena to be important empirical support for vitalism. His work initiated the development of holistic biology and systems theory; some of his pioneering ideas continue to be relevant today.

Life and Career

Hans Driesch was born on October 28, 1867, in Bad Kreuznach (Germany).[1] He grew up in Hamburg, where his father traded gold and silverware. Driesch studied biology in Jena under Ernst Haeckel. In 1899 he married Margarete Reifferscheidt, with whom he had one son and one daughter.

For his biology work Driesch frequently visited marine biological stations to conduct experimental work on sea urchins and other marine organisms, becoming a leading expert in experimental biology. His findings led him to reject his original mechanist notion concerning the functioning of living organisms; instead, he came to adopt a 'vitalist' notion of life, according to which the development and functioning of organisms cannot be attributed to physics and chemistry alone. In 1899 Driesch presented this for the first time, highlighting that life possesses autonomous development dynamics that set it apart from processes occurring in inorganic matter.[2]

During the following years, he turned increasingly to writing about biological questions from an analytical and theoretical perspective. As a result of his published treatises he was invited to hold the Gifford Lectures at the University of Aberdeen in 1907 and 1908. These lectures were published in an elaborated version as *The Science and Philosophy of the Organism,* his most significant biological treatise and probably best-known English work.[3]

Thereafter, Driesch's interests turned even more towards theoretical problems of life and philosophy. After holding positions as a private lecturer, associate and later ordinary professor of philosophy at the university in Heidelberg, and a brief interval as a full professor at the university of Cologne, he was appointed full professor for philosophy at the university of Leipzig in 1921, becoming one of Germany's most influential philosophers of this time. From 1921 onward, Driesch increasingly covered psychological and parapsychological topics as well. His lectures might be visited by up to 700 students, requiring the university to hire a larger public hall or set up speakers in an additional lecture room.[4] As a philosopher, Driesch supervised more than 110 PhD theses.[5]

In 1933, Driesch was forced into premature retirement by the German national socialist regime. He died in Leipzig in 1941.

Driesch wrote more than 20 German-language books and hundreds of shorter biological and philosophical treatises; he also published numerous articles and nine books in English. Many of his writings have been published in different languages, including Chinese.

Biological Work

Driesch's practical biological work consisted of experiments on developmental biology of marine organisms. Probably his best-known experiment concerned eggs of sea urchins: when he artificially separated the two cells that emerged after the first cell division, each developed into a complete sea urchin instead of half a sea urchin. Driesch concluded that this finding contradicted the mechanistic view of biology, in which all organisms represent complex machines, questioning how one half of a damaged machine had the power to repair and complete itself.

Throughout the years to follow, Driesch collated several further arguments that in his view supported the notion that life is characterized by autonomous principles of organisation not found in inorganic matter, thus advancing a vitalist notion of life. Assessing the *modus operandi* of the principle that characterizes organisms and separates them from objects and processes of inanimate nature, Driesch argued for a teleological aspect, according to which the realization of an organism's final form and function is inherent throughout its development and later existence. To describe this, Driesch adopted the term *entelechy* first used by Aristotle, which refers to the property of 'having its goal (*telos*) in itself'. For example, the entelechy of sea urchins governs the repair and development of full organisms even after being separated in two halves.

Driesch often emphasized that his idea of entelechy does not represent a 'life force', as in many traditional concepts of vitalism. Rather, it facilitates the development and sustainment of organisms via a specific mode of organisation or causation he termed G*anzheitskausalität* (wholeness causality).[6] Furthermore, he argued that this teleological feature of organisms to exist as a goal-driven whole implies at least a rudimentary form of 'knowing' about the form and mode of functioning that is to be achieved, for example in the contexts of the complete sea urchins that grow from a split egg and the regeneration of amputated body parts in certain organisms. Relating such regulative processes to bodily effects of what is currently known as placebo and nocebo effects, and to effects on the body of hypnotic suggestion, Driesch maintained that a subconscious teleological factor resides in all forms of organismic growth and regulation.

Continuing this line of thought, he finally argued that motives that underpin actions belong to the same continuum of consciousness-related features of entelechy that influence the behaviour of organic bodies. Because in these behavioural realms, the relation of entelechy to a psyche would be much more prominent than in the realm of mere organic functioning, Driesch coined the term 'psychoid' for the entelechy at this action-governing end of the spectrum of goal-orientated biological processes.[7]

Driesch stressed that the regulating principles of entelechies and psychoids cannot be based on material processes. He conceived them as representing immaterial,

mind-related principles of organization, their roots lying outside of what we perceive as space. According to his strictly dualistic view, phenomena that manifest in our world are constituted both by the realm of inorganic matter and by the realm of life, which includes teleology, wholeness and consciousness.

Since the 1950s the overwhelming majority of biologists and other scientists have considered vitalism to be an obsolete concept; most are convinced that life can be explained by material processes alone. As a consequence, the work of Driesch as the main proponent of a new version of vitalism was (and is) habitually dismissed as a misguided approach.

However, Driesch's influence is still discernible in contemporary biological thinking, although it is often not known or recognized. An example is the development of 'holistic' and 'organismic' concepts of biology, including systems theory, from the 1920s onward, which owes a debt to his insistence that chief characteristic of organisms lies in their being a 'whole'.[8] It was Driesch who introduced the concept of 'system' to biology,[9] arguing that the growing complexity of a developing organism is mediated by a hierarchical 'system of entelechies', that is, a nested hierarchy of holistically organized intersecting parts that form a superordinate whole.[10] The term 'equifinality', which he coined to highlight the ability of organisms to reach the same state by different means, still plays an important role in systems theory.[11] Furthermore, thanks to his numerous early treatises in which he analyzed biological matters from a theory-orientated perspective, his contemporaries regarded him as the founder of theoretical biology.[12]

Philosophical Work

Driesch's writings about theoretical biology increasingly turned to epistemology and philosophy of nature. He developed these considerations in two books: *Ordnungslehre* (Theory of Order) and *Wirklichkeitslehre* (Theory of Reality) published in 1912 and 1917, respectively with later editions in 1923[13] and 1930.[14]

Driesch's philosophy is based on what he called the 'primordial fact'. He insisted that all one can ever know for sure is this: I know something, knowing that I know. Or, put more technically: 'I have something consciously.'[15] Apart from that, I must doubt everything. I cannot even know or prove that the world outside of me exists objectively and separately of me. It may as well be a dream. But to understand myself and my role in experiencing this world I need to examine how I order the precepts and thoughts by which I create my world. These ideas form the contents of Driesch's Theory of Order. However, Driesch recognized that it is unsatisfying to treat the world exclusively in this solipsist way: we experience the world and other humans as if they have an independent existence. So we must act accordingly, looking for signs that help us understand the nature of this assumed reality, even though to abandon the primordial fact of what we can be sure of constitutes a first step into metaphysics. These ideas form the contents of Driesch's Theory of Reality. Along with numerous smaller treatises, Driesch's philosophical writings provide a framework for his vitalist biological theory, as well as covering other aspects.

Driesch placed increasing emphasis on the mind/brain problem in his later writings, arguing that consciousness can be explained neither as an epiphenomenon of brain chemistry nor as a mirror image of physiological brain processes, as is assumed in models of psychophysiological parallelism.[16] He found support for this dualist thinking in the findings of psychical research (discussed below). Reported instances of telepathic interactions, he thought, seemingly indicate that individuals, behind the scenes of the phenomenal world, may be linked to each other via a mental aspect of a deeper stratum of reality. Instances of clairvoyance might even indicate that reality at large is 'one', that is, that the dualism of the phenomenal world does not exist at the fundamental level of reality.[17]

Driesch's main work on ethics deserves to be mentioned.[18] Throughout his life he spent much time travelling the world; he spoke several languages and gave philosophical lectures in numerous countries including the USA, Argentina, and China, advocating international understanding and pacifism. His public liberal and cosmopolitan views led to his forced retirement in 1933 by the German national socialist regime; in 1935, he was forbidden to travel and hold lectures[19] and in 1941 his book on ethics was suppressed.[20]

Psychical Research

Driesch first became interested in psychical research around the start of the twentieth century, when he was increasingly preoccupied with the role of causation in biological processes and their potential relation to consciousness. He was influenced by reading *Phantasms of the Living*, a large-scale survey and examination of psychic experiences by researchers associated with the Society for Psychical Research (SPR).[21] Driesch explicitly endorsed psychical research for the first time in his Gifford Lectures in 1908[22] and his interest deepened after 1913 when during a lecture tour he met Eleanor Sidgwick, widow of the SPR's co-founder and first president Henry Sidgwick, at which time he became a member.[23]

By the early 1920s Driesch was writing more and more about psychical research. In his 1925 English-language book *The Crisis in Psychology* he discussed research into psychic phenomena as a novel means to advance our understanding of the nature of the mind.[24] As a consequence of this contribution, Driesch was elected the SPR's president for the 1926/1927 term. During a sitting with the medium Gladys Leonard, arranged for him under an assumed name, he was impressed by statements concerning a deceased woman whose appearance, interests and activities, as described by her, closely corresponded to those of his deceased mother.[25]

Driesch continued to write about psychical research until his death. His most important publication on this topic is a monograph on the spectrum, investigation methods, and interpretations of psychical phenomena; this was published in 1932[26] and in English a year later in a translation by Theodore Besterman.[27] In common with Arthur Schopenhauer, whom he greatly admired,[28] Driesch considered psychical research to be the most important research discipline of all, since its findings empirically disprove the mechanist-materialist worldview.[29]

Research about postmortem survival in particular, he thought, offers a means to assess the vital question of what happens at and after death. He recognised that a definitive answer was impossible as long as phenomena seemingly indicative of survival might be explained in terms of telepathy and clairvoyance (the explanatory model currently known as 'living-agent psi'.)[30] However, he inclined towards belief in survival, considering that the evidence for it was becoming stronger year by year.[31] In a 1930 obituary he wrote: 'Where you are today and in what form of existence, we earthly people do not know. *That* you are still there many of us believe, as I believe it myself.'[32]

Driesch once stated that he found 'joy in tracing specifically those prospects the facticity of which has hardly yet been explored, perhaps only foreboded. Only new discoveries take us further, and the "newer" they are, the more do they take us further. *Hence my interest in parapsychology*.'[33] Elsewhere he wrote: 'One must look for exceptions, because exceptions are the best means for avoiding dogmatism. The abnormal is to be investigated; but naturally not because it is abnormal, but because it opens our view for understanding the essence of the normal.'[34]

For the study of psychical phenomena Driesch proposed three guiding principles:

- do not regard any fact 'impossible' in an aprioristic way
- do not believe that new facts must necessarily be explained by means of explanations already established
- try to construct bridges to established scientific disciplines[35]

The idea of 'building bridges' played an important role in Driesch's thinking, as evidenced by the way he linked experimental biology to theoretical biology, both of these biological disciplines to psychology and philosophy, and all of this to psychical research.[36] He saw five such paths, which can be summarized as follows:[37]

- The immaterial biological organization principles Driesch termed *entelechy* and *psychoid* constitute a break with the mechanist-materialist view of life, forming a bridge to psychical phenomena that would not be possible in a mechanist-materialist world.
- A dualist mind-brain model likewise forms a bridge to psychical phenomena, necessarily entailing soul-like qualities that cannot be produced by matter.
- Somatic changes induced via suggestion and hypnosis (such as false pregnancies and stigmata) cannot be explained by means of mechanist-materialist concepts alone. That applies to all bodily effects that are seemingly induced by consciousness-related stimuli and forms a bridge to the psychokinetic effects revealed by psychical research.
- 'Super-personal' aspects of biology that transcend individuality, visible for instance in communities of organisms such as gall midges and their host plants, imply an entelechy embedded in a larger context, which also applies to psychical phenomena such as telepathy and clairvoyance.
- Vitalism renders psychical research of postmortem survival a legitimate scientific topic, to explore what happens to the entelechy or psychoid following death of an organism, and whether it persists and becomes involved in a newly developing organism.

Impact

In Germany until World War II, Driesch was regarded as one of the most distinguished authors on psychical research, his work being frequently discussed and cited. Interest in parapsychology then declined until the 1950s, when Hans Bender, a psychology professor and parapsychologist, founded the Institute for Frontier Areas of Psychology and Mental Health in Freiburg. Driesch had supported Bender's early studies on telepathy and carried on a correspondence with him for some years. For his part, Bender held Driesch in high esteem and republished his 1932 German monograph on parapsychology in 1952 and again in 1975, giving updates on the discipline's later development.[38]

However, interest in Driesch's work never again reached the level it obtained during his lifetime. His psychical research work is sometimes discussed from a historical perspective,[39] but seldom with a full appreciation of his arguments.[40] This loss of influence is at least partly due to his advocacy of vitalism, now considered an obsolete concept by the overwhelming majority of scientists, who consequently characterize his thinking as misguided.[41]

This neglect even extends to some within the parapsychology community: Gordon Rattray Taylor, a distinguished SPR member who shared Driesch's interest in psychical research – and who also sympathized with teleological processes in biology and was convinced that consciousness cannot be regarded as a mere epiphenomenon of the brain – joined the chorus of authors who dismissively portray Driesch as a biologist who 'postulated a mysterious 'vital force' to account for the powers of living matter to form and repair itself'.[42] This is despite Driesch's insistence, as highlighted above, that entelechy does not represent a 'life force' as in older forms of vitalism, but rather entails a specific mode of causation.

Nevertheless, many of Driesch's arguments for vitalism remain significant today, especially for contemporary parapsychologists, most of whom are convinced that psi phenomena cannot be explained in purely physicalist terms. In fact in Driesch's terms, people who hold this notion naturally qualify as vitalists, and they include certain contemporary scientists and philosophers – evidence that some of his central arguments remain topical.[43] Many lines of thought in parapsychology that were advanced by Driesch a century ago continue to be discussed and updated, although seemingly without awareness of his writings, an example of the lack of historical continuity in parapsychology lamented by Carlos S. Alvarado.[44] Here are six such considerations:

- Driesch held that *all* perception involves psi; indeed, telepathy and clairvoyance may represent a normal, simpler mode of perception, direct cognition without the interposition of the material senses and brain – a complex process that is far harder to understand than as a purely mental act. This is congruent with one of the core ideas behind the 'First Sight' model recently developed by psychologist James Carpenter,[45] and it matches the neo-Leibnizian model of perception advanced by Paul Marshall.[46]
- Driesch subscribed to the idea that the brain does not *produce* consciousness, but rather filters, channels or transmits consciousness, enabling a stable

orientation in spacetime and the mediation of bodily movements. However, he is usually not mentioned among other authors who promoted such ideas, notably Aldous Huxley, Henri Bergson, William James and F.C.S. Schiller.[47]

- Driesch held that memory is not stored in the brain – referring to studies into psychometry, he speculated that the brain represents a 'psychometrical object of rapport' that somehow attracts memories. This concept might be considered relevant to recent cases of organ transplant, in which the patient seem to acquire memories and personality traits of the donor.[48]
- Another topic of discussion among contemporary parapsychologists is the conjecture, already advanced by Driesch, that psychosomatic effects on the body are mediated by psychokinesis.[49] His further proposal that bodily movements (or rather, the excitation of nerves that bring them about) might be triggered by a process comparable to psychokinesis is likewise proposed by more recent authors.[50]
- Driesch compared the way in which an individual comes into existence to dissociative identity disorder (formerly 'multiple personality disorder'), the process by which different 'alters' form. A conscious human, he thought, might develop by dissociating from a larger mind-like stratum. This idea has been proposed by later authors without reference to Driesch.[51]
- Driesch coined the term 'psychoid' to describe an ordering principle that possesses psyche-like attributes but yet is not equivalent with a psyche *per se*. The term was later adopted by psychologist Carl Gustav Jung in relation to his 'archetypes'[52] and the concept of psychoid structuring principles has recently been used by some authors to explain psychical phenomena in terms of dual aspect monism, but crediting Jung rather than Driesch.[53]

Selected Publications in English

The Crisis in Psychology (1925). Princeton University Press.

Psychical research and established science (1926). *Proceedings of the Society for Psychical Research* 36, 171-86.

Psychical research and philosophy (1927). In *The Case For and Against Psychical Belief*, ed. by C. Murchison, 163-78.

On the Methods of Theoretical Psychical Research (1927). *Journal of the American Society for Psychical Research* 21, 65-77.

Psychical Research: The Science of the Supernormal (1933). Bell.

The Breakdown of Materialism (1934). In *The Great Design*, ed. by F. Mason, 281-303).

Memory in its Relation to Psychical Research (1935). *Proceedings of the Society for Psychical Research* 43, 1-14.

Vitalism as a Bridge to Psychical Research (1939). *Journal of the American Society for Psychical Research* 33, 129-33.

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Literature

Addison, A. (2009). Jung, vitalism and 'the psychoid': An historical reconstruction. *Journal of Analytical Psychology* 54, 123-42.

Allesch, C.G. (2012). Hans Driesch and the problems of 'normal psychology'. Rereading his Crisis in Psychology (1925). *Studies in History and Philosophy of Biological and Biomedical Sciences* 43, 455-61.

Alvarado, C.S. (1982). Historical perspective in parapsychology: Some practical considerations. *Journal of the Society for Psychical Research* 51, 265-71.

Atmanspacher, H., & Fach, W. (2013). A structural-phenomenological typology of mind-matter correlations. *Journal of Analytical Psychology* 58, 219-44.

Bender, H. (1952). Zur Entwicklung der Parapsychologie von 1930-1950. In H. Driesch, *Parapsychologie* (135-76). Rascher.

Bender, H. (1975). Zur Entwicklung der Parapsychologie von 1950-1975. In H. Driesch, *Parapsychologie* (189-200). Kindler.

Bertalanffy, L. von. (1928). Eduard von Hartmann und die moderne Biologie. *Archiv für die Geschichte der Philosophie und Sozialwissenschaft* 38, 153-70.

Braude, S.E. (2002). *ESP and Psychokinesis: A philosophical examination*. Brown Walker Press.

Braude, S.E. (2003). *Immortal Remains: The evidence for life after death*. Rowman & Littlefield.

Carpenter, J. (2012). *First Sight. ESP and Parapsychology in Everyday Life*. Rowman & Littlefield.

Carpenter, J. (2015). First sight: A way of thinking about the mind, and a theory of psi. In *Extrasensory Perception: Support, skepticism, and science,* ed. by E.C. May & S.B. Marwaha (eds.), (vol. 2, 243-70). Praeger.

Chalmers, D.J. (2020). Is the hard problem of consciousness universal? *Journal of Consciousness Studies* 27, 227-57.

Donohue, C. & Wolfe, C.T. (eds.) (2023). *Vitalism and its Legacy in Twentieth Century Life Sciences and Philosophy*. Springer.

Driesch, H. (1899). *Die Lokalisation morphogenetischer Vorgänge. Ein Beweis vitalistischen Geschehens*. Engelmann.

Driesch, H. (1903). *Die „Seele" als elementarer Naturfaktor. Studien über die Bewegungen der Organismen*. Engelmann.

Driesch, H. (1908). *The Science and Philosophy of the Organism* (2 vols.). Black.

Driesch, H. (1920). *Leib und Seele. Eine Untersuchung über das psychophysische Grundproblem* (2. ed.). Reinicke.

Driesch, H. (1923). *Ordnungslehre*. Diederichs.

Driesch, H. (1925). *The Crisis in Psychology*. Princeton University Press.

Driesch, H. (1926a). *Grundprobleme der Psychologie. Ihre Krisis in der Gegenwart*. Reinicke.

Driesch, H. (1926b). Psychical research and established science. *Proceedings of the Society for Psychical Research* 36, 171-86.

Driesch, H. (1927a). *Die sittliche Tat. Ein moralphilosophischer Versuch*. Reinicke.

Driesch, H. (1927b). On the methods of theoretical psychical research. *Journal of the American Society for Psychical Research* 21, 65-77.

Driesch, H. (1927c). Psychical research and philosophy. In *The Case For and Against Psychical Belief*, ed. by C. Murchison, 163-78.

Driesch, H. (1929). *The Science and Philosophy of the Organism* (2. ed.). Black.

Driesch, H. (1930a). *Wirklichkeitslehre. Ein metaphysischer Versuch* (3. ed.). Reinicke.

Driesch, H. (1930b). *Ethical Principles in Theory and Practice*. Allen & Unwin.

Driesch, H. (1930c). Johannes Volkelt gestorben, 8. Mai 1930. Eine Trauerrede. *Blätter für deutsche Philosophie* 1, 147-50.

Driesch, H. (1932). *Parapsychologie*. Bruckmann.

Driesch, H. (1933). *Psychical Research: The science of the supernormal*. Bell.

Driesch, H. (1934). The Breakdown of Materialism. In *The Great Design*, ed. by F. Mason, 281-303.

Driesch, H. (1935). Memory in its relation to psychical research. *Proceedings of the Society for Psychical Research* 43, 1-14.

Driesch, H. (1936). Schopenhauers Stellung zur Parapsychologie. *Jahrbuch der Schopenhauer-Gesellschaft* 23, 15-99.

Driesch, H. (1938). *Alltagsrätsel des Seelenlebens*. Deutsche Verlags-Anstalt.

Driesch, H. (1939). Vitalism as a bridge to psychical research. *Journal of the American Society for Psychical Research* 33, 129-33.

Driesch, H. (1951). *Lebenserinnerungen*. Reinhardt.

Driesch, K. (1947). Hans Driesch als Mensch. *Philosophisches Jahrbuch* 57, 19-21.

Gabriel, M. (2020). *Fiktionen*. Suhrkamp.

Geisshuesler, F.A. (2019). A parapsychologist, an anthropologist, and a vitalist walk into a laboratory: Ernesto de Martino, Mircea Eliade, and a forgotten chapter in the disciplinary history of religious studies. *Religions* 10, article 304.

Grosso, M. (2015). The 'transmission' model of mind and body. A brief history. In *Beyond physicalism: Toward reconciliation of science and spirituality,* ed. by E.F. Kelly, A. Crabtree, & P. Marshall, 79-13. Rowman & Littlefield.

Grosso, M. (2016). *The Man Who Could Fly. St. Joseph of Copertino and the mystery of levitation. Rowman & Littlefield.*. Rowman & Littlefield.

Gurney, E., Myers, F. W. H., & Podmore, F. (1886). *Phantasms of the Living*. Trübner.

Kastrup, B. (2019). *The Idea of the World: A multi-disciplinary argument for the mental nature of reality*. iff Books.

Kastrup, B. (2021). *Science Ideated: The fall of matter and the contours of the next mainstream scientific worldview*. iff Books.

Kelly, E.F., Kelly, E.W., Crabtree, A., Gauld, A., Grosso, M., & Greyson, B. (2007). *Irreducible Mind: Toward a Psychology for the 21st Century*. Rowman & Littlefield.

Klimo, J. (1987). *Channeling: Investigations On Receiving Information from Paranormal Sources*. Tarcher.

Krall, S., Nahm, M., & Waldrich, H.-P. (2021). *Hinter der Materie: Hans Driesch und die Natur des Lebens*. Graue Edition.

Marshall, P. (2015). Why we are conscious of so little. A neo-Leibnizian approach. In *Beyond Physicalism: Toward reconciliation of science and spirituality*, ed. by E.F. Kelly, A. Crabtree, & P. Marshall, 387-422. Rowman & Littlefield.

McGilchrist, I. (2021). The Matter with Things: Our Brains, Our Delusions, and the Unmaking of the World. Perspectiva Press.

Meyer, A. (1935). *Krisenepochen und Wendepunkte des biologischen Denkens*. Fischer.

Meyer, S.C. (2014). *Darwin's Doubt: The explosive origin of animal life and the case for intelligent design*. HarperOne.

Meyer-Abich, A. (1944). Nachruf. Hans Driesch, der Begründer der theoretischen Biologie. In H. Driesch, *Biologische Probleme höherer Ordnung* (2. ed., 79–90). Barth.

Miller, T. (1991). *Konstruktion und Begründung. Zur Struktur und Relevanz der Philosophie Hans Drieschs*. Olms.

Morris, S.C. (2015). *The Runes of Evolution: How the universe became self-aware*. Templeton Press.

Nagel, T. (2012). Mind and Cosmos. Why the materialist neo-Darwinian conception of nature is almost certainly false. Oxford University Press.

Nahm, M. (2007). *Evolution und Parapsychologie. Grundlagen für eine neue Biologie und die Wiederbelebung des Vitalismus*. Books on Demand.

Nahm, M. (2018). Plötzliches und ungewöhnlich rasches Weißwerden von Haaren: Eine Übersicht über 212 Fallberichte aus der medizinischen Literatur der letzten

200 Jahre. *Zeitschrift für Anomalistik* 18, 248-76.

Nahm, M. (2021a). Ganzheitsbiologische Strömungen im Umfeld der Philosophie von Hans Driesch. In *Hinter der Materie. Hans Driesch und die Natur des Lebens,* ed. by S. Krall, M. Nahm, & H.-P. Waldrich, 143-201. Graue Edition.

Nahm, M. (2021b). Hans Drieschs Beschäftigung mit der Parapsychologie. In *Hinter der Materie. Hans Driesch und die Natur des Lebens,* ed. by S. Krall, M. Nahm, & H.-P. Waldrich, 127-43. Graue Edition.

Nahm, M. (2022). Toward a 'Parapsychological Synthesis': Proposals for integrating theories of psi. *Journal of Parapsychology* 86, 299-321.

Pareti, G. (2017). Hans Driesch's interest in the psychical research. A historical study. *Medicina Historica* 1, 156-62.

Sneller, R. (2014). Science of the future: Hans Driesch and parapsychology. In *Wild beasts of the philosophical desert: Philosophers on telepathy and other exceptional experiences*, ed. by E.F. van Dongen, H. Gerding, & R. Sneller, 110-20). Cambridge Scholars Publishing.

Sudduth, M. (2016). *A Philosophical Critique of Empirical Arguments for Postmortem Survival*. Palgrave Macmillan.

Taylor, G.R. (1979). *The Natural History of the Mind*. Dutton.

Waldrich, H.-P. (2021). Vitalismus als begründetes Paradigma. In *Hinter der Materie. Hans Driesch und die Natur des Lebens,* ed. by S. Krall, M. Nahm, & H.-P. Waldrich, 201-324. Graue Edition.

Wolffram, H. (2003). Supernormal biology: Vitalism, parapsychology and the German crisis of modernity, c. 1890-1933. *The European Legacy* 8, 149-63.

Endnotes

Footnotes

1.^ For a recent monograph on the life and work of Hans Driesch, see Krall, Nahm & Waldrich (2021.
2.^ Driesch, 1899).
3.^ Driesch (1908).
4.^ Driesch (1951).
5.^ Miller (1991).
6.^ Driesch (1929. Without giving a specific reason for his choice, Driesch translated the German term 'Ganzheitskausalität' as 'individualising causality.' However, this is not an exact translation. Strictly speaking, 'Ganzheitskausalität' in the sense in which Driesch usually used the term translates as 'wholeness causality.'
7.^ Driesch (1903).
8.^ Ludwig von Bertalanffy, the founder of so-called 'organismic' biology and general systems theory, was strongly influenced by Driesch and originally

called his approach ‘methodological vitalism’ (Bertalanffy, 1928). Adolf Meyer-Abich, who endorsed the holistic approach developed by Jan-Christiaan Smuts, was the most important promoter of holism in Germany. He held Driesch in high esteem as well and stated that holism would ‘stand on the shoulders of vitalism’ (Meyer, 1935, 28); author’s translation). For a more detailed discussion of the relations of organicism and holism to vitalism, see Nahm (2021a).
9.^ Driesch (1899).
10.^ Driesch (1903).
11.^ Driesch (1903).
12.^ Meyer-Abich (1944).
13.^ Driesch (1923).
14.^ Driesch (1930a).
15.^ Driesch (1925).
16.^ Driesch (1920).
17.^ Driesch 1938).
18.^ Driesch (1927a); also published in English: Ethical principles in theory and practice: Driesch (1930b).
19.^ Driesch (1951).
20.^ Driesch, K. (1947).
21.^ Gurney, Myers & Podmore (1886).
22.^ Driesch (1908).
23.^ Driesch (1951).
24.^ Driesch (1925).
25.^ Driesch (1951).
26.^ Driesch (1932).
27.^ Driesch (1933).
28.^ Driesch (1936).
29.^ Driesch (1939.
30.^ Driesch (1933). For a recent exposition of living-agent psi, see Sudduth (2016).
31.^ Driesch (1929), 335.
32.^ Driesch (1930c), 150, (author’s translation).
33.^ Driesch (1951), 300, (italics in the original).
34.^ Driesch (1926a), 261, (author‘s translation).
35.^ Driesch (1927b).
36.^ Driesch (1926b).
37.^ Driesch (1933).
38.^ Bender (1952, 1975).
39.^ See for example Allesch (2012); Geisshuessler (2019); Pareti (2017); Sneller (2014); Wolffram (2003).
40.^ Nahm (2007, 2021a, 2021b, 2022).
41.^ Donohue & Wolfe (2023).
42.^ Taylor (1979, 297).
43.^ Nahm (2021a,b; Waldrich (2021). Recent authors Driesch would probably consider to be vitalists include Iain McGilchrist *(2021)*, Thomas Nagel (2012), Stephen C. Meyer (2014), Simon Conway Morris (2015), Bernardo Kastrup (2021), and David S. Chalmers, who concluded that “a transparent

explanation of consciousness in physical terms is impossible" (Chalmers, 2020, 254). As a very rare exception among contemporary authors of high profile, German philosopher Markus Gabriel (2020) endorsed Driesch's holistic concept of vitalism and maintained it has been discarded without good reasons.

44.^ Alvarado (1982).

45.^ Carpenter (2012, 2015).

46.^ Marshall (2015).

47.^ For example, see Grosso, 2015).

48.^ For a brief overview on such 'transplant cases', see Braude (2003).

49.^ E.g., Braude (2002); Kelly et al. (2007); Nahm (2018).

50.^ Carpenter (2012); Grosso (2016).

51.^ Kastrup (2019); Klimo (1987).

52.^ Jung was familiar with the treatise in which Driesch introduced the term 'psychoid' (Driesch, 1903). See also Addison (2009).

53.^ Atmanspacher & Fach (2013).