

The psychodynamics of the consequences of immaturity at birth

Ludwig Janus

Abstract: Special for Homo sapiens is the immaturity at birth with the consequence that the infant's behavior in the first year of life is essentially controlled by impulsive affectivity due to the still missing functionality of the hippocampus and the prefrontal cortex, which can only be developed into a coordinated emotional relationship through an empathetic parent-child relationship. Under unfavorable conditions, this impulsive affectivity remains more or less dominant in experience and behavior. This is particularly pronounced in the case of dissocial people like violent criminals, whose time before and during birth was regularly characterized by deprivation and violence. Since in the history of larger population groups, hardship and misery were often, if not regularly, accompanied by traumatic conditions, this naturally applied particularly to pregnancy, birth and the first year of life. The devaluation of women in connection with the patriarchal nature of our culture also played a fateful role. Even though the emancipation of women and the democratic approaches in Western societies have sustainably improved parent-child relationships and made them more empathetic, they are still largely traumatically burdened, as has been extensively documented in the context of the psycho-historical research into the history of childhood.

Key Words: immaturity at birth, birth trauma, prenatal trauma, early parent-child-relationship, prenatal psychology, psychohistory.

Introduction

In the discussion about the psychological dimension of birth, as outlined by Otto Rank in his book "The Trauma of Birth and its Significance for Psychoanalysis" (1924), Sigmund Freud came to a fundamentally significant additional insight in his work "Inhibition, Symptoms and Anxiety" (1926), which he formulated in the following sentences: "The biological factor is the protracted helplessness and dependence of the small human child. The intrauterine existence of man appears relatively shortened compared to that of most animals; he is sent into the world more unfinished than they are. This reinforces the influence of the real outside world, promotes the differentiation of the ego from the id at an early stage, increases the significance of the dangers of the outside world and enormously increases the value of the object, which alone can protect against these dangers and replace the lost intrauterine life. This biological moment thus

establishes the first situation of danger and creates the need to be loved, which will never leave the human being" (Freud 1926, p. 186). Elsewhere, the biopsychological connection is made explicit once again: "The psychological mother object replaces the fetal situation for the child" (Freud 1926, p. 169). The discovery of "physiological prematurity" (Portmann 1969) was thus anticipated on a psychological level over 40 years earlier. Unfortunately, Freud's groundbreaking findings did not find any resonance in the later tradition. However, this would have been urgently necessary because these psychological implications have a significance that goes far beyond Freud's formulations. One consequence of the situation of prematurity for the infant in its still fetal mentality, that it is primarily unadapted for life in the real outside world, which manifests itself, among other things, in a confusion of perceptions with gross misjudgments between inside and outside, as described in detail by Crisan (2013, 2021). This primary maladaptation and confusion in perceptions is a background to the phenomena described by Melanie Klein as "schizoid position" and "projective identification" and also to the beta elements described by Bion.

This makes the peculiarity of early human development of fundamental importance for understanding the evolutionary-biological peculiarity of *Homo sapiens* in comparison to other primates. This insight is confirmed empirically by the primate researcher and developmental psychologist Michael Tomasello (2020). For him, it is in particular the ability to identify with each other and the resulting deep possibilities for communication and cooperation that make *Homo sapiens* so special. This "mutual identification" comes about through the emotional co-regulation between mother and child that is necessary due to prematurity. There are very different research paths that converge on this insight. I will first trace the development within the psychoanalytic tradition and the tradition in prenatal psychology and psychohistory and then return to the comparison between psychological and anthropological developmental psychology research.

The special status of human birth

The prematurity of human birth means that for humans, birth is more of an elementary experience of change and transformation than an arrival in the real world, such as for the small elephant, which is born at 21 months and, guided by its instincts, can immediately move and orient itself socially in this world. The human newborn, on the other hand, lands in a magical-mystical transitional space of the "extrauterine early year", in which it is still in a dream-like prenatal state of consciousness and at the same time in an external world with which it must come to terms with its prematurely developed ego. As we know today, this can only succeed

with emotional co-regulation by the primary caregivers. If this is not the case, the child remains stuck in a purely affective regulation of behavior, which then becomes the background for more or less pronounced restrictions in the regulation of relationships with neurotic, psychosomatic, dissocial symptoms or even psychotic experience. The consequence of all this is that people are not only "unfinished" on an individual level, but also on a collective psychological level. Because they do not really fit into the world due to their immaturity caused by their prematurity and therefore cannot accept it as their "home" like the little elephant, they have a genuine impulse to change the world so that it not only feels a bit like an all-satisfying womb world, but also truly fulfills fetal desires in the real world (Janus 2018, 2021a). This happens at the level of the Stone Age through the invention of fire, clothing, dwellings, tools and so on. This gives a whole new meaning to the mind, which on the biological level only had the function of mediating instinctive impulses with external reality, while here the mind develops the function of mediating fetal desires with reality, which is only possible through their fundamental transformation into an artificial world of civilization and culture, as happens in ancient cultures, but all this still under the spell of a projected prenatal world of spiritual and secular authorities. In modern times, the human capacity for action and organization achieves such independence that it can be explicitly formulated as self-determination and self-awareness in the context of the Enlightenment (Janus 2024a). The greater ability to act goes hand in hand with an increasingly clear differentiation between inner and outer perceptions and the inner and outer world, which was captured and described by the Swiss Jungian and psychohistorian Willy Obrist as a "mutation of consciousness" (1988, 2013). In terms of brain physiology, this corresponds to a change from the dominance of the right side of the brain to the left side (Stevenson et al. 2008), as was already apparent in the early days of Greek culture (Jaynes 1993) and can be recorded and described in more detail today (Gilchrist 2017). At the individual level, this change is modeled on the change from the dominance of the right brain hemisphere in infancy to a dominance of the left brain hemisphere at the age of three and even more completely with the achievement of the "theory of mind" at the age of five (Ocklenburg, Güntürkin 2024). Cultural development is therefore a continuation of biological evolution at the level of experience and behavior, as has been researched in particular in the context of psychohistory (deMause 1979, 2000, 2005, Janus 2006, 2018, 2021a, 2021b, etc.) and also at the level of sociology (Oesterdieckhoff 2006, 2013a, 2013b, etc.). Immaturity at birth is therefore the background for creativity in both individual and collective development. In order to better understand the resulting traumatic, dysfunctional and destructive aspects, it is necessary to describe the relevant aspects of birth.

The traumatic side of birth

To put it simply, walking upright freed up the hands and opened up completely new possibilities for action, which in particular also promoted imaginative thinking and brain growth. However, this was associated with a disadvantage in terms of birth, the drama of which was only explored to some extent in the last century: the upright gait required a firm pelvic ring and an S-shaped spine with a protrusion of the promontorium, the transition from the dorsal vertebrae to the pelvic vertebrae, into the birth canal, which became a transverse oval shape due to this narrowing, among other things. This in turn meant that the child had to make a turn on the pelvic floor in order to be able to exit the birth canal in a longitudinal oval shape. This tortuous path required a deformability of the head, which was enlarged by brain growth, as can be seen today in all its drama through the MIT (Maran et al. 2019). Birth can therefore be much more traumatically stressful than we knew from our earlier understanding of it as a "natural event", as researched in detail by the pathologist Philipp Schwarz (1964) and the neuropathologist Dagobert Müller (1968, 1973). Today, by bringing together the various research approaches or levels of research, it is possible to achieve a complete picture of the reality of birth, as I have described in detail in my work "The bio-psycho-social model of birth and its reflection in social structures" (2024b). These dramatic aspects of human birth are a background for the staging of violence that characterizes the historical process. For example, an inscription in Pompeii describes the daily program as follows: "Gladiator games in the morning, crucifixions at noon, animal hunts in the afternoon" (Bollmann, Schubert 2024). A third of the population were slaves at the time. The "nightmare of history" (James Joyce) or the "human slaughterhouse of history" (Wilhelm Lamszus) is glossed over or denied in the usual view of history in a way that is actually unbelievable. But only if we are aware of these aspects do we have a chance of understanding them and growing out of them (Janus 2018b), as has been discussed in psychohistorical research for decades (www.psychohistory.com, www.psychohistorie.de). This dissociation in the incomplete perception of history is a larger problem in the entire field of science, which I would like to explain using the example of dissociation in the history of psychoanalysis.

The problem of dissociation in science explained using the example of the dissociative psychoanalytic tradition

Much more than most scientists realize, their field of perception is shaped and also limited by their family and group background. On the one hand, this makes it possible to focus on

individual fields of research and associated findings. The problem with this, however, is that these findings are taken as absolute due to the evidence from the personal background and the limitations are not seen or reflected upon. These aspects are particularly evident in the tradition of psychoanalysis because they are documented in great detail. While Freud, who grew up in a “Kaiserreich” (empire ruled by a ruler), focused on the father-son problem and the problem of authority, his students in the contrary focused on various aspects of the maternal dimension of life, each according to their own personal perspective: Adler captured the traumatic aspects and the associated anxiety in primary socialization, Jung the pre-personal aspects in the maternal relationship, Rank the birth aspects and Ferenczi the early relationship aspects, Fodor (1949) the traumatic aspects in the prenatal period, et. etc. . The one formulated the shadow aspects of the other, made them conscious and in turn made them absolute from the evidence of his personal background. In this sense, I have described the history of psychoanalysis as a sociodynamic group process (Janus 2023).

However, this problem of dissociation exists in the entire field of science, in the large format between the humanities and the natural sciences and in the small format in various fields of science. To name just one prominent example, Michael Tomasello, who in his book "Becoming Human: A Theory of Ontogenesis" (2020) with a scientific claim covering the whole of anthropology, is apparently unaware of the basic research into the dynamics of drive processes within the framework of ethology that is necessary for understanding human behavior, as summarized, for example, by Nikos Tinbergen in his "Instinktlehre (Theory of Instinct)" (1966). He is also apparently unaware of the research on "physiological prematurity" (Portmann 1969, Gould 1987, Haeusler 2021, etc.). If he were aware of it, he would have to justify not taking it into account in his topic of ontogenesis. And of course he is not aware of the observations made in the context of psychotherapy about the continued effect of prenatal and postnatal experiences, for which there is empirical evidence from stress research, brain research, epidemiology, psychological learning research, empirical social research, etc. (Evertz, Janus, Linder 2014, 2021). At the same time, Tomasello is someone who is very comprehensively oriented towards and refers to various areas of research, in particular primatology and academic developmental psychology and others. I have only taken him as an example of the fact that even in this field of so-called "cutting-edge research" the problem of dissociation exists, even if Tomasello in particular is an example of at least partially overcoming this dissociation. In this sense, I have argued elsewhere that psychotherapy should be characterized as a new type of research that simultaneously utilizes internal and external data (Janus 2013a). The hiatus between the humanities and the natural sciences can be attributed to a

different relationship to the prenatal dream-like consciousness that lives on in us from the time before birth in the humanities and a reference to the overwhelming sensory presence of the outside world in the postnatal period of the natural sciences, as I explain in the 'supplementary epilogue to the current state of research in prenatal psychology' in my book "Enduring Effects of Prenatal Experiences. Echoes of the Womb" (Janus 2024, p. 292ff.)

A special example that is very significant for psychotherapy is the still unresolved conflict between Freud, who focused on the father dimension and the experience dynamics of the three-year-old child when investigating psychologically conditioned disorders, and Rank, who focused on the experience dynamics of the pre-linguistic child with its dream-like experience dynamics from the time before, during and after birth up to around one and a half years of age when investigating psychologically conditioned disorders. Due to the insolubility of the conflict because of the very different family backgrounds of the two protagonists and the still patriarchal spirit of the times, the further development then proceeded dissociatively with a Freudian interpretation-related mainstream tradition, which is associated with the names of Melanie Klein, Wilfred Bion, Donald Winnicott et al. and a Rankian experiencedly and relational tradition within the framework of "humanistic psychology", which is associated with the names of Artur Janov, Stanislav Grof, William Emerson and others. There was also a psychoanalytical background tradition of "prenatal psychology", which is associated with the names of Gustav Hans Graber, Igor Caruso, Arnaldo Rascovsky, Liethart Peerbolte and others, as well as a psychoanalytical tradition in England, which is associated with the names of Francis Mott, Frank Lake, Ronald Laing, Terence Dowling, Simon House and others. The dissociation in this field of research is so great that the respective groups often do not even know about each other. In order to counteract this, I wrote a book on these lines of research under the generic title "Die Psychoanalyse der vorgeburtlichen Lebenszeit und der Geburt (The Psychoanalysis of Prenatal Lifetime and Birth)" (2000), which to my impression has never been reviewed or even discussed anywhere and is as yet unwritten. No colleague has ever approached me about the book, nor has any female colleague, although the title could also have been "Psychoanalysis of the Primary Female-Maternal Dimension in Our Lives". I understand this decided lack of interest as a still effective echo of our dominant patriarchal tradition.

These perhaps somewhat extensive preliminary remarks seemed necessary to me in order to explain why such a fundamental element of Homo sapiens' special status as immaturity at birth has so far remained outside of scientific perception. This applies in particular to the psychological implications of this situation.

The psychological implications of immaturity at birth

In particular, the immaturity of the hippocampus and prefrontal cortex determine the survival of the prenatal dream-like consciousness (Janus 2021b) within Portmann's "extrauterine early year" or Winnicott's "transitional space" until an increasing spatial and social orientation and corresponding behavior becomes possible with learning to walk at 2-3 years of age. The pre-linguistic period forms its own cosmos of experience and its own world orientation, as it lives on in the magical-mythical experience of fairy tales, myths, many religious ideas and also in ideological theories. It is therefore not, as Rank thought, the birth trauma alone that causes this pre-linguistic world view, but rather the "prematurity" and "immaturity" at birth, as added by Freud, which results in this dream-like world reference of Homo sapiens at the beginning of his individual development, but also at the beginning of his historical development. After twenty years of close collaboration with Freud and the associated training in the perception of inner sensitivities, Rank was able to recognize the persistence of pre-linguistic experience in the analytical situation and the neurotic reproductions, as well as in the world of symbols, heroic legends, religious ideas, the design of art and philosophical speculation in individual chapters (Rank 1924).

To illustrate this, I quote his remarks on religion: "The ultimate tendency of all religious formation lies in the creation of a helping and protective primordial being into whose bosom one can flee from all hardships and dangers and to whom one finally returns in an otherworldly future life, which is the faithful, albeit strongly sublimated, image of the paradise once left" (Rank 1924, p. 113). Due to the times, it could not yet be grasped that "hell" is of course also a denied aspect of paradise.

A further example of the persistence of the earliest experience in later times can be seen in artistic creation, as Rank describes in chapter 8 of "Art and Artist" (1932): "The work of art, as we can guess from the nature of aesthetic pleasure, also establishes a unity in its effect and not only in its creation, which in this case means a spiritual unity between the artist and the recipient. This unity is, of course, only temporary and symbolic, but the resulting satisfaction indicates that it is not just a matter of the temporary identification of two individuals, but of the potential restoration of a once lost unity with the universe. I found the individual psychological roots of this feeling of unity in the "Trauma of Birth" in the prenatal state, which the individual strives to restore in the sense of the longing for immortality At the time, I identified the individual urge to restore this lost unity as an essential factor in the creation of human cultural values" (Rank, 1932, p. 125).

The insights into the presence of early experience in cultural formations, which in my view are so illuminating, can be particularly helpful in perceiving the presence of earliest experience in children and adults, as Rank explains in the chapters "Infantile anxiety", "Sexual gratification" and "Neurotic reproduction" using many examples, some of which I quote: "As the analyses of infantile phobias have unquestionably shown, the size or thickness (abdominal girth) of the fearful animals refers to gravidity, of which, as we show, the child has more than a dim memory, and the predatory animals then also provide a rationalization, apparently still sufficient for the adult psychologist, for the desire - by being eaten - to return to the animal womb of the mother" (Rank 1924, p. 16). And another example: "A little girl of three and three-quarter years, who is just as or more afraid of small dogs as of large ones, is also afraid of insects (flies, bees and so on). When her mother asks her why she is afraid of these small animals that can't hurt her, the little girl replies without hesitation: 'They can swallow me! When small dogs approach, she makes the same characteristic defensive movements as an adult against a mouse: she bends her knees so low, pressing her legs tightly together, that she can pull her dress all the way to the ground and cover herself with it, as if to prevent them from slipping in. Another time, when asked directly by her mother about the cause of her fear of bees, she explains contradictorily that she wants to get into the bee's stomach and yet does not want to" (Rank 1924, p. 17).

Rank explains the correlations in the sexual disorders of adults as follows: "Analysis has proven anxiety to be the core of every neurotic disorder, and since we know the origin of primal anxiety from the birth trauma through Freud, the relationship to it should actually be easy to prove everywhere, very similar to the affect reactions of the child. But it is not merely a question of the view that the anxiety effect, which then attaches itself in various forms to certain contents, comes from that primal source, but it can be shown analytically in the individual symptom and the whole neurosis with all certainty that it is really a question of reproduced reminiscences of birth or its pleasurable preliminary stage. ... In 'statu nascendi we can follow this neuroticization, as a short circuit, so to speak, in the genuine traumatic neurosis, as was to be observed particularly in war ("war neuroses"). There, the shock directly mobilizes the primal fear itself, as the external danger of death "affectively realizes" the otherwise unconsciously reproduced birth situation (Rank 1924, p. 47). He also sees fears of abandonment in a similar way: "In the fear of being alone, the anxiety effect of the first separation from the libido object is obviously remembered through real re-experience, through reproduction and rejection. All forms of male impotence - the penis shies away from penetration - and female anesthesia (vaginismus) are based on the same maternal primal fixation and the infantile development described above. ..." (Rank 1924, p. 49). On the symptoms of hysteria he writes: "... thus the

physical symptoms of hysteria show not only in their manifest form, but also in their deepest unconscious content, in many cases quite direct physical reproduction of the act of birth with a marked tendency to denial, i.e. a return to the previous pleasurable situation of intrauterine life. This includes above all the phenomena of hysterical paralysis, of which, for example, the inhibition of walking is nothing other than the physically represented claustrophobia and represents the immobility of the pleasurable primal situation together with the terror of liberation from it" (Rank 1924, p. 49).

In the same sense, Rank can also establish connections with headache symptoms due to the strain on the head during birth and the birth situation, as well as with the fear of suffocation due to the endangered oxygen supply during birth in the case of asthma symptoms. He also sees connections to birth anxiety in psychotic symptoms: "In the sense of this tendency to return to the mother, which the psychotic strives for by way of projection, the psychotic course of the illness, as Freud recognized, is actually to be understood as an attempt at healing, which we also clearly see in the analytical healing process that we started from. Only the psychosis can no longer find its way out of the subterranean labyrinth of the womb situation to the daylight of recovery, whereas the neurotic is able to find his way back to life by the Ariadne's thread of memory thrown to him by the analyst" (Rank 1924, p. 71).

I have quoted Rank so extensively here because the wealth of his insights have been largely confirmed in research and treatment practice (Janov 1984, Grof 1985, Hollweg 1995, Janus 2013b, 2013c, Schindler 2010, etc.). In addition, his insights into the formative prenatal and birth experiences have now been validated many times over on several methodological levels of stress research, brain research, epidemiology, epigenetics and so on. For psychoanalysts and psychodynamically oriented psychotherapists, reading his observations in "Trauma of Birth" (Rank 1924, pp. 1-13, 175-207) could be or become a great resource. His "Technique of Psychoanalysis" (Rank 1926, 1929, 1931) is of fundamental importance for treatment practice. In the first volume, "The analytic situation - illustrated by the dream interpretation technique", Rank uses a specific treatment example to explain the implicit presence of prenatal relationship aspects and reproductions of birth experiences in the "analytic situation", which in this case could be grasped and conveyed in a special way through dream analysis. In the second volume, "The analytic reaction in its constructive elements", Rank explains how these aspects can be dealt with in a therapeutically growth-promoting way, and the third volume, "The analyst's analysis and his role in the overall situation", explains the way in which the analyst himself sensibly adjusts to these early pre-linguistic aspects and what his role in the patient's treatment and development process is to be understood. One can only hope that a discussion on this will

soon be initiated within the framework of psychoanalytic and psychodynamic groups (Janus 2010). The prospects for this are actually favorable, because especially in contemporary psychoanalysis authors such as Thomas Ogden, Sebastian Leikert, Jörg Scharff, Reinhard Plassmann, Uta Zeitschel, among others, are very close to Rank's psychological dimension, without making his developmental psychological background of prenatal, birth and postnatal experiences explicit.

This is necessary, however, because, as already mentioned, the main consequence of immaturity at birth is that the infant's behavior in the first year of life is essentially controlled by impulsive affectivity due to the still missing functionality of the hippocampus and the prefrontal cortex, which can only be developed into a coordinated emotional relationship through an empathetic parent-child relationship. Under unfavorable conditions, this impulsive affectivity remains more or less dominant in experience and behavior. This is particularly pronounced in the case of murderers, for example, whose time before and during birth was regularly characterized by deprivation and violence (Gareis, Wiesnet 1974, Raine 1997, Verny 2005, Janus 2024, p. 133ff., among others). Since in the history of larger population groups, hardship and misery were often, if not regularly, accompanied by traumatic conditions, this naturally applied particularly to pregnancy, birth and the first year of life. The devaluation of women in connection with the patriarchal nature of our culture also played a fateful role. Even though the emancipation of women and the democratic approaches in Western societies have sustainably improved parent-child relationships and made them more empathetic, they are still largely traumatically burdened, as has been extensively documented in the context of the psycho-historical research into the history of childhood (DeMause 1979). It is therefore not surprising that even in the 20th century, people with extremely irrational affective control, such as those in the dictatorships of Russia, Germany, Italy and Spain, were able to interact with the corresponding segments of the population and become as socially effective as the psychohistorian Sven Fuchs (2019, see also Janus 2021c) has described in detail. In the impressive double biography of Dieter Wunderlich "Göring and Göbbels" (2002), their affective-irrational part is very well worked out descriptively in its relation to childhood experiences and in interaction with the also early traumatized part of the population, so that the dynamics can be directly derived, as I want to elaborate in a later work.

Concluding remarks

The meaning of the experience of pregnancy and birth cannot be directly grasped by linguistic consciousness, neither on the level of individual experience nor on the level of collective

psychological experience. In addition, our history, which is still shaped by patriarchy, denies the significance of the female-maternal reality of life, so that it is only very incompletely represented in cultural and social consciousness. Freud was the first to overturn this denial by demonstrating the relevance of childhood experiences for our later experience. Rank's twenty-year collaboration with Freud and the birth of his daughter in 1922 enabled him to intuitively perceive the survival of even the earliest pre-linguistic experiences from the time before birth and the birth itself. The vehement rejection of his observations enabled him to recognize and describe their background in the defensive mechanism of 'denial', as he did in detail in his book "Grundzüge einer Genetischen Psychologie (Basic Points of Developmental Psychology" (1927/1928). In the second half of the last century, the life-historical relevance of prenatal and birth experiences was now proven on several methodological levels, which could not be sufficiently related to each other due to the previous dissociation in this transdisciplinary field of research. I have carried out this merging in essential aspects under the title "Das bio-psycho-soziale Modell der Geburt und seine Widerspiegelung in den gesellschaftlichen Strukturen (The bio-psycho-social model of birth and its reflection in social structures)" (Janus 2024b). This also makes clear the systemic significance of "immaturity" at birth and its psychological implications of the two basal modes of experience of a right-brain-determined magical-mythical experience and a left-brain-determined cognitive consciousness. These insights also make it possible to relate the "extrauterine early year" caused by "physiological prematurity" to Winnicott's "transitional space". In addition, they also make it possible to relate the effects of different psychotherapeutic settings to each other and to better adapt them to the circumstances of the respective patient, as the treatment reports in the "Handbook of Prenatal and Perinatal Psychology" (Evertz, Janus, Linder 2021) for children (Stulz-Koller 2021) and adults (Hochauf 2021) have already paradigmatically shown. Of particular importance are certainly the completely new preventive possibilities offered by supporting the prenatal mother-child relationship, as initiated by the Hungarian psychoanalysts György Hidas and Jenő Raffai (2006, see also Blazy 2015).

Literature

Blazy H (2015) Jenő Raffai – Gesammelte Vorträge (Collected lectures). Mattes, Heidelberg.

Bollmann R, Schubert C (2024) "Crucifixions during the break". FAS from 2.6.2024.

[https://zeitung.faz.net/fas/wirtschaft/2024-06-02/ea8d1be887adf4fa85ae839cf6ee9030?](https://zeitung.faz.net/fas/wirtschaft/2024-06-02/ea8d1be887adf4fa85ae839cf6ee9030?GEPC=s9)

GEPC=s9

- Crisan H (2013) Die pränatale und perinatale Psychologie der Mentalitätsentwicklung (The pre- and perinatal psychology of mental development). In: Janus L (ed.) Die Psychologie der Mentalitätsentwicklung (The psychology of the development of the mentalities). LIT, Münster. S. 111-172.
- Crisan H (2021) The Mental Echo of the Preverbal Existence. In: Evertz K, Janus L, Linder R (eds.) Handbook of Prenatal Psychology. Springer, New York. p. 753-782.
- DeMause L (1979) Hört ihr die Kinder weinen? (Do you hear the children crying?). Suhrkamp, Frankfurt.
- De Mause L (2000) Was ist Psychohistorie? (What is psychohistory?). Mattes, Heidelberg.
- DeMause L (2005) Das emotionale Leben der Nationen (The emotional life of nations). Drava, Klagenfurt.
- Evertz K, Janus L, Linder R (2014) (eds.) Lehrbuch der Pränatalen Psychologie (Textbook of prenatal psychology). Mattes, Heidelberg.
- Evertz K, Janus L, Linder R (2021) (Eds.) Handbook of Prenatal Psychology. Springer, New York.
- Fodor N (1949) The search for the beloved. A clinical investigation of the trauma of birth and the prenatal condition. University Books, New York.
- Fuchs S (2019) Die Kindheit ist politisch! Kriege, Terror, Extremismus, Diktaturen und Gewalt als Folge destruktiver Kindheitserfahrungen (Childhood is political! Wars, Terror, Extremism as consequences of destructive childhood experiences). Mattes, Heidelberg.
- Gareis B, Wiesnet E (1974) Frühkindheit und Kriminalität. Goldmann, München.
- Gilchrist I (2017) The Master and his Emissary. Yale University Press, New Haven, London.
- Gould S (1992) Human Babies as Embryos. In: Gould S "Ever since Darwin". Norton, New York. S. 70-77.
- Grof S (1985) Geburt, Transzendenz und Tod (Birth, Transcendence, Death). Kösel, Munich.
- Haeusler M, Grunstra N, Martin R, Krenn K, Fornai C (2021) The obstetrical dilemma hypothesis: there's life in the old dog yet. Biol. rev.: 1-27.
- Hochauf R (2014) Der analytische Zugang zur Psychotherapie von früheren Traumatisierungen (The approach of analytical psychotherapy to early traumatizations). In: Evertz K, Janus L, Linder R (Eds.) (2014) Lehrbuch der Pränatalen Psychologie (Textbook of prenatal psychology). Mattes, Heidelberg. S. 383-424.
- Hollweg W H (1995) Von der Wahrheit, die frei macht (From the truth, that makes free). Mattes, Heidelberg.
- Janov A (1984) Frühe Prägungen (Early imprints). Fischer, Frankfurt.

Janus L (2008) Die Geschichte der Menschheit als ein psychologischer Entwicklungsprozess (Human history as a psychological developmental process). Mattes, Heidelberg.

Janus L (2010) Die Technik der Psychoanalyse von Otto Rank als eine Ressourcen für die zeitgenössische Psychoanalyse (The "Technique of Psychoanalysis" by Otto Rank - a resource for contemporary psychoanalysis). Forum of Psychoanalysis 26: 129-149.

Janus L (2013a) Überlegungen zum wissenschaftlichen Status der psychodynamischen Psychologie (Reflections on the scientific status of psychodynamic psychology). Psychodynamic Psychotherapy 12: 61-69.

Janus L (2013b) The prenatal dimension in psychotherapy. Mattes, Heidelberg.

Janus L (ed.) (2013c) Die Prenatal Dimension in der psychosomatischen Medizin (The prenatal dimension in psychosomatic medicine). Psychosozial, Giessen.

Janus L (2018a) Homo foetalis-das Wechselspiel des fötalen Erlebens mit den Primateninstinkten und dem Verstand als Wesenskern der menschlichen Natur (Homo foetalis - the interplay of fetal hereditary life, primate instincts and the mind as the core of human nature). Mattes, Heidelberg.

Janus L (2018b) Psychohistorische Überlegungen zum Herauswachsen aus dem „Schlachthaus der Geschichte“ (Psychohistorical reflections on emerging from the "slaughterhouse of history"). In: Knoch H, Kurth W, Reiß H (Eds.) Gewalt und Trauma. (Violence and trauma). Mattes, Heidelberg. S. 253-280.

Janus L (2021a) Mundus foetalis – Überlegungen zur Widerspiegelung, der Struktur der fötalen Lebenswelt in der sozialen und kulturellen Lebenswelt (The reflection of the structure of the fetal lifeworld in the social and cultural lifeworld). Mattes, Heidelberg

Janus L (2021b) Die Entdeckung des traumartigen Bewusstseins im Rahmen der Bindungsanalyse (The discovery of dream-like consciousness in the context of bonding analysis). In: Mundus foetalis – Die präinatale Dimension in der Geschichte und im gesellschaftlichen Bewusstsein (The Prenatal Dimension in History and Social Consciousness). Heidelberg, Mattes. S. 315-328.

Janus L (2023) Die Sozialdynamik und Psychodynamik in der Geschichte der Psychoanalyse – ein Schwanken zwischen Innovation und Verleugnung (Socio- and psychodynamic of history psychoanalysis - an oscillation between innovation and denial. Psychosozial, Giessen. S. 287-305.

Janus L (2024a) Auf dem Wege zu einer Verantwortlichkeit für den historischen Prozess, der wir selbst sind (Towards responsibility for the historical process that we ourselves are). Download from www.Ludwig-Janus.de.

Janus L (2024b) Das bio-psycho-soziale Modell der Geburt und seine Widerspiegelung in den gesellschaftlichen Strukturen (The bio-psycho-social model of birth and its reflection in social structures. Download from www.Ludwig-Janus.de.

Janus L (2024c) Wie die Seele entsteht. Unser seelisches Leben vor, während und nach der Geburt (How the soul is created. Our psychic life before, during and after birth. Mattes, Heidelberg.

Jaynes J (1993) Der Ursprung des Bewusstseins (The Origin of Consciousness). Rowohlt, Einbek near Hamburg.

Maran J C, Ami O, Gabor P, Whitacre E B, Musset D, Dubray C, Mage G, Boyer L (2019) Three-dimensional magnetic resonance imaging of fetal head molding and brain shape changes during the second stage of labor. Plus One: <https://doi.org/10.1515/plusone-2019-0188>

Müller D (1968) Birth as the cause of topically detectable brain, spinal cord and nerve damage. In: Neurological examination and diagnosis in childhood. Springer, Vienna. S. 151-195.

Müller D (1973) Die subakuten Massenverschiebungen des Gehirns während der Geburt (The subacute mass shifts of the brain during childbirth). VEB, Leipzig.
Georg Thieme, Leipzig

Obrist W (1988) Die Mutation des Bewusstseins (The Mutation of Consciousness). Lang, Frankfurt.

Obrist W (2013) Der Wandel des Welt- und Menschenbildes im Verlauf der Neuzeit unter dem Blickwinkel der Bewusstseins-Evolution betrachtet (The transformation of understanding of the world and of man during modern times under the perspective of the evolution of consciousness). In: Janus L (ed.) Die Psychologie der Mentalitätsentwicklung (The psychology of the development of mentality). LIT, Münster. S. 11-24.

Ocklenburg S, Güntürkin O (2024) The Lateralized Brain - The Neuroscience and Evolution of Hemispheric Asymmetries. Academic Press.

Oesterdieckhoff G W (2006) Archaische Kultur und modern Zivilisation (Archaic culture and modern civilization). LIT, Münster.

Oesterdieckhoff G W (2013a) Die Entwicklung der Menschheit von der Kindheitphase zu Erwachsenenphase (The development of humanity from childhood to adulthood). Springer, Heidelberg.

Oesterdieckhoff G W (2013b) Die Psycho – und Sociogenese der Menschheit (Psycho- and sociogenesis of humanity). In: Janus L (ed.) Die Psychologie der Mentalitätsentwicklung -

- vom archaischen zum modernen Bewusstsein (The psychology of the development of mentality - from archaic to modern consciousness). LIT, Münster. S. 25-52.
- Portmann A (1969) Fragmente zu einer Lehre vom Menschen (Fragments for a doctrine of man). Schwabe, Basel.
- Raine A (1997) Criminal Behavior as Social Disorder. Elsevier, Oxford.
- Rank O (1924) das Trauma der Geburt und seine Bedeutung für die Psychoanalyse (The trauma of birth and its significance for psychoanalysis). Psychosozial, Gießen 1998.
- Rank O (1927/1928) Grundzüge einer Genetischen Psychologie (Basic lines of a developmental psychology). Psychosozial, Giessen 2024.
- Schindler P (2010) (ed.) Am Anfang des Lebens (At the beginning of life). Schwabe, Basel.
- Schwartz P (1964) Geburtsschäden bei Neugeborenen (Birth defects in newborns). Gustav Fischer, Jena.
- Stulz-Koller A (2014) Therapie Geschichten von vorgeburtlichen und geburtlichen Erfahrungen. Wie Kinder vorgeburtliche und geburtliche Erfahrungen in der Psychotherapie ausdrücken (Therapy stories about pre- and perinatal experiences. How infants express pre- and perinatal experiences in psychotherapy). In Evertz K, Janus L, Linder R (eds.) Lehrbuch der Pränatalen Psychologie (Textbook of prenatal psychology). Heidelberg, Mattes. S. 355-382.
- Tinbergen N (1966) Instinktlehre (Doctrine of Instincts). Parey, Berlin.
- Tomasello M (2020) Mensch werden: eine Theorie der Ontogenese (Becoming human: a theory of ontogenesis). Suhrkamp, Berlin
- Verny T (2005) Birth and Violence. In: Brekman G, Fedor-Freybergh (Eds.) The Phenomenon of Violence. S. 33-44. Download von www.Ludwig-Janus.de.
- Wunderlich D (2002) Göring und Göbbels. Eine Doppelbiographie. Pustet, Regensburg.

Author's address:

Dr. med. Ludwig Janus

Jahnstr. 46, 69221 Dossenheim

Tel. 06221 801650, e-mail: janus.ludwig@gmail.com

Website: www.Ludwig-Janus.de, www.praenatalpsychologie.de