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Der Begriff des Gegenraumes

Oliver Conradt

The concept of counter space or negative space is developed from Goethe's concept of space as described by the young Rudolf Steiner. Whilst the three dimensions of space are based on the relation between two separated objects, the three dimensions of counter space are based on the separation of two intertwined contexts or surroundings. In order to familiarise the reader with the notion of context, the article starts with a geometric exercise and a reflection on the relationship between the human being and the context of a specific percept using the eyes.

Doppeldrehung und Polarisation

Johannes Grebe

Based on a discovery of Haidinger, cyclic sequences of images as a result of an interplay of the optical elements analyser, transformer and polariser are investigated. The change of the image intensity shows characteristic deviations from Malus' law. Following a hint given by Howald-Haller, the spatial formations of the optical elements are related multiplicatively to each other by scalar product. The image intensity can then be described as a function of these relations.

Der blaue Planet – Erdgeschichtliche Betrachtungen über das Weltmeer

Wolf-Christian Dullo

Understanding the Earth as a self-contained organism is fundamental to a Goethean approach. But how can we develop a concrete picture of it based on sensorial experience? An autonomous organism is recognisable by three essential components: rhythmical life processes, heat cycle regulation and biography. Using examples from geological history, this paper shows how these three components can be seen most clearly in precisely that element which distinguishes the Earth from all other planets, namely the ocean and its associated processes in the bio-, atmo-, cryo- and lithospheres. The annual cycles are related to the longer decadal and centennial cycles as well as to the far longer rhythmic fluctuations between glacials and interglacials. Interactions in the biosphere make possible the regulation of the heat cycles on the Earth's surface. Finally, plate tectonic dynamics is the third component controlling the flow conditions in the ocean by opening and/or closing oceanic gateways thereby 'biographically' determining the oceanic heat cycles. Modern Earth sciences have for a long time treated the earth as a whole and an attempt is made here to present the step from this to the organism.

Einflüsse unterschiedlicher Behandlungen auf die biologische Wertigkeit von Kuhmilch – Untersuchungen mit der Methode der Empfindlichen Kristallisation

Haijo Knijpenga

The biological value of cow's milk after pasteurisation and homogenisation was investigated by sensitive crystallisation. Thermal treatment of milk normally involves homogenisation. These investigations demonstrate that changes occur not only with thermal treatment but also

with the process of homogenisation. The latter's influence is not restricted to the fat component of the milk but affects the food product as a whole.

Die biologische Wertigkeit von Kuhmilch nach Pasteurisieren und Homogenisieren wurde mit der Methode der Empfindlichen Kristallisation untersucht. Die thermische Behandlung der Milch schließt das Homogenisieren normalerweise ein. Die Untersuchungen zeigen Veränderungen sowohl in Bezug auf die thermischen Behandlungen als auch in Bezug auf die Homogenisierungsverfahren. Der Einfluss der Letzteren beschränkt sich nicht auf Veränderungen der Fettbestandteile, sondern betrifft das Lebensmittel Milch als ein Ganzes.

Getting rid of Metaphysics

Ronald H. Brady

When Immanuel Kant was awakened from what he termed his 'dogmatic slumbers' by reading David Hume, he decided that there could be no justification for the metaphysical speculations of his day, and set out to discredit them. History has judged him correct – i.e., on the thought of his day, which was much given to speculation beyond experience, founded on nothing more than the common assumptions of society. Naturally, modern thought since Kant has attempted to defend itself from any accusation of 'metaphysics'. Since that thought has been deeply invested in the results of modern science, however, it did so by assuming that Kant's project had been carried through by science. This conclusion followed from translating 'metaphysics' as 'beyond the physical', and substituting 'physical reality' for 'experience'. The last substitution was made in order to advance a notion of reality that could not be identified with experience, but that very restriction has turned out to be problematic.