

Conceiving Reproduction: The Impact of German *Naturphilosophie*

Participant Abstracts- May 2018

The Uncanny Copula: Schelling, Hoffmann, Freud

Stefani Engelstein

The definition of the uncanny that Freud elevates in his foundational essay on the topic comes from Schelling's late-life lectures on the *Philosophy of Mythology*. What "*im Geheimniß, im Verborgnen, in der Latenz bleiben sollte und hervorgetreten ist*" refers to the religious mysteries that require precipitation (Schelling chooses the chemical term) for spirit to make an appearance as free. Mystery is not, however, precipitated *out*, but rather hidden within the interior. Schelling draws parallels between the progress of religion (a product of spirit) and the progress of nature; indeed, both are part of the same duplicitous and yet unitary and organized world-system. This paper will thus investigate the parallel uncanny principle within the natural system and ask whether the compound, involuted world-organism Schelling establishes is not only hidden from empirical inquiry, but also tabooed. If so, the aesthetic experience Schelling posits as the methodology for approaching the duplicity of the organism from our human position within the system becomes fraught in a particular way. The question is relevant not only to Schelling, but also to Freud's other touchstone in the uncanny essay, Hoffmann, whose story "The Sandman" involves an invidious doubled figure, Coppélius/Coppolo. Domesticating Schelling's *copula* between the finite and the infinite, Coppélius straddles the empirical and the supernatural, and enables human aesthetic production while disrupting the appearance of freedom. Freud's castration anxiety, meanwhile, shades into fear of a Schellingian indifferenciation. While Hoffmann mines the nightmarish aspect of human imbrication in ambiguous organic systems, Schelling's *Naturphilosophie* may instead turn the uncanny interdiction inside-out, inviting rather than despairing over a relinquishment of instrumental freedom.

Conceiving Generation: The Notion of *Bildungstrieb* in "Romantic Biology"

Andrea Gambarotto

Throughout the so-called *Goethe-Zeit*, the conception of reproduction was just a sub-category of a more general problem concerning "generation." This notion was used to identify the unique properties that characterize organized beings, such as self-organization, regeneration, the ability to heal in cases of injury, miscarriage, or growth malformation. The case of Abraham Trembley's hydra was somewhat epoch-making in this sense, prompting a revival of epigenetic theorizing in the late eighteenth century, and suggesting a fundamental difference between artificial machines and living organisms.

In the German lands, *Bildungstrieb* was probably the most influential concept in the understanding of generation for the entire era. First formulated by physiologist and natural historian Johann Friedrich Blumenbach, it went on to spark debate and fuel theoretical projects of natural historians and philosophers alike for several decades. Historical and philosophical scholarship has focused on the understanding of the *Bildungstrieb* especially (or, better, almost exclusively) with regard to the relation between Blumenbach's physiological project and Kant's philosophical account of organized beings, which has been a major theme of debate since Timothy Lenoir's pioneering work in the 1980s. For Lenoir and his followers, the focus on this relation was aimed primarily at grounding the

idea of a “naturalistically inclined” biology in opposition to the “metaphysical vagaries” of Romantic *Naturphilosophie*. Following the path opened by Bob Richards’ *The Romantic Conception of Life* (2002), recent scholarship has called this interpretative framework into question. As a notable result, three research monographs, all appeared or forthcoming in 2018 – Andrea Gamberotto’s *Vital Forces, Teleology and Organization*, John Zammito’s *The Gestation of German Biology*, and Joan Steigerwald’s *Rethinking Organic Vitality in Germany around 1800* – are currently proposing a different narrative.

Using the words of François Duchesneau, this new trend suggests that “Romantic *Naturphilosophie*, in Friedrich Wilhelm Joseph von Schelling’s paradigmatic formulations, did not steer a course entirely independent of, not to say antagonistic to, the more scientifically oriented synthetic theories.” It is an unprecedented development in the field, one likely to shape the landscape of studies towards new frontiers of investigation. In the wake of these developments, I advocate the use of a unitary label to define the peculiar “discursive configuration” that united German physicians, physiologists, natural historians, poets and philosophers towards a non-mechanical, organicist understanding of life: “Romantic Biology.”

By exploring the conceptual history and philosophical variations of the notion of *Bildungstrieb* at the turn of the nineteenth century, the paper aims to define the fundamental features of “Romantic biology” as a historical and philosophical category.

Zeugung und Fortpflanzung bei Franz von Baader und Ignaz Paul Vital Troxler

Brigitte Hilmer

Baader und Troxler behandelten Zeugung und Fortpflanzung im Spannungsfeld zwischen hermetisch – paracelsistischer Spekulation und akuter Forschung. Troxler setzte sich zunächst mit Kilmeyer auseinander (*Versuch die Tiere zu ordnen*) und fundierte dann die Kategorie des Raumes physiologisch-anthropologisch in der Zeugung (*Blicke in das Wesen des Menschen*). Bei Baader rückt der gnostische Androgynen-Mythos und die biblische Gleichsetzung von Zeugung und Erkenntnis in den Vordergrund.

Rotation as Reproduction

Jocelyn Holland

My contribution to the workshop on reproduction in the nature-philosophical context will be an extended gloss of Johann Wilhelm Ritter’s statement that “rotation is for the finite, what reproduction is for the infinite” (fragment 446). For Ritter, rotation is the necessary basis for all organic and inorganic individuality, and indeed, for all organization in a planetary context. Elsewhere, he also claims that without rotation there is no organization (fragment 525). Although there have been significant contributions to the themes of spirality and rotational movement during the past years, the question has not yet been addressed, to what degree rotational movement might play a more complex role in nature-philosophical thinking than has previously been acknowledged when coupled with the concept of reproduction. Schelling’s concept of the “annular drive” (*Umtrieb*), which appears in his 1798 *Weltseele* treatise, is certainly an important

component of this discussion, but, as is often the case with the Ritter/Schelling connection, questions around the dating of Ritter's fragments make it difficult to determine precedence. Such issues aside, Ritter's interest in connecting various régimes of organic and inorganic motion under the aegis of rotation far exceeds Schelling's early references to the *Umtrieb* (and arguably lay some foundational work for Schelling's later return to the annular drive in the context of the *Weltalter* project).

Apart from Schelling, other potentially useful reference points include Leibniz's writing on the generation of animals (see, for example, his discussion of the *bullae* in the *Hypothesis physica nova* from 1672), Böhme's mystical connection between the wheel of nature and birth, as well as numerous eighteenth-century mechanical texts (such as Lagrange's) that provided extensive analyses of rotational movement for various systems of bodies in and out of equilibrium. In light of the rich scientific and speculative environments within the concept of rotation is embedded, it would be easy to let a basic question at the heart of this discussion to remain overlooked: what, exactly, is "reproductive" about rotation, particularly in an organic sense? How are we to come up with a theoretical framework for describing the conditions under which rotation may be understood to have a generative capacity? These are the questions which will guide my workshop presentation.

The Genealogy of Dwarfs: Reproduction and Desire in Goethe's *Neue Melusine*

Christine Lehleiter

In Goethe's fairy tale *Die Neue Melusine*, a family of dwarfs suffers from an inherited tendency to have smaller and smaller offspring. When the most recent offspring is born so tiny that he falls out of his diapers and is never found again, the family decides to send a female offspring in the human world so that she finds a suitable mate to refresh the blood line. While her pregnancy brings new hope to the genealogy of dwarfs, her relationship with the human companion soon fails because he cannot live up to the level of secrecy and self-control that she requests. The short text, which is part of the *Wanderjahre*, has been discussed in terms of social order and the fairy tale genre (Brown), in the context of Goethe's reception of the medieval myth (Keppler, Schmitz-Emans), and as a piece that reveals Goethe's poetological program (Geulen). Drawing on these approaches, I follow in this paper a suggestion by Jane Brown who recently pointed out that dwarfism in Romantic literature in general and Goethe in particular has not yet received the attention it deserves (15). I examine the figure of the dwarf against the backdrop of eighteenth-century models of reproduction and heredity. The objective in discussing this figure is twofold: first, to gain an understanding of contemporary models of reproduction and their relevance to dwarfism (as depicted by Goethe), and, second, to ask for the significance of this knowledge for an understanding of the *Neue Melusine*. My inquiry is guided by the hypothesis that a close connection between biological and textual reproduction informs Goethe's fairy tale.

Referenced works:

J. K. Brown. "Building Bridges: Goethe's Fairy-Tale Aesthetics." *Goethe Yearbook* 23 (2016): 1-17.

Hans Geulen. "Goethes Kunstmärchen Der neue Paris und Die neue Melusine: Ihre poetologischen Imaginationen und Spielformen." *Deutsche Vierteljahrsschrift für Literaturwissenschaft und Geistesgeschichte* 59.1 (1985): 79-92.

S. Keppler. "Im Bann der Melusine: Goethes Mythenrezeption unter den Bedingungen seines Mittelalterbildes." *Goethe-Jahrbuch* 123 (2006): 25-38.

M. Schmitz-Emans, M. "Vom Spiel mit dem Mythos: Zu Goethes Märchen 'Die neue Melusine'." *Goethe-Jahrbuch* 105 (1988): 316-332.

Reproduction, Territory and Human Diversity. Post-Kantian Articulations of “Race”

Susanne Lettow

When the concept of reproduction emerged in disputes over epigenesis and preformation, it was closely linked to controversies about ‘race mixing’, and the hereditary transmission of bodily features. Kant referred to these debates by defining ‘race’ as hereditary differences that are persistently transmitted halfway from parents to offspring. He thus explained human diversity by focusing on reproductive relations instead of climate and milieu, i.e. the geographic environments in which humans exist. Indeed, the very notion of reproduction only ‘moved to the center of the life sciences’, as Staffan Müller-Wille put it, when living beings, including humans were removed from their local environments and mobilized ‘on a global scale’ in the context of the European colonial expansion. However, environmental factors were not entirely excluded from Kant’s account of race. On the contrary, the division of planetary space into specific territories forms the basis of his understanding of ‘germs’ that initially were contained in a ‘stem race’ and then unfolded differently. Kant’s *Physical Geography* is therefore of utmost importance for his account of race. If, as Robert Bernasconi has claimed, Kant’s definition ‘set a direction for further inquiries,’ the question arises how these inquiries re-articulated and modified Kant’s ideas. In my paper, I explore articulations of human diversity in post-Kantian *Naturphilosophie*. In particular, I will pay attention to the intersections of biological and geographical knowledge, or the intersecting roles of played by reproduction and territorial differences. In the first part, I discuss Alexander von Humboldt’s geography of plants. Although Humboldt did not use the term ‘race’ he built on Kant’s distinction between (teleologically oriented) ‘natural history’ and ‘natural description’ and introduced an understanding of regionality that impacted widely on accounts of human diversity in the 19th century. In the second part, I turn to Henrik Steffens who, in his *Anthropologie* (1822) adopted elements from Kant’s account of race and Humboldt’s plant geography and articulated them with further geological, theological and mythological considerations. Building on Schelling’s *Naturphilosophie*, Steffens at the same time attempted to overcome epistemic restrictions set by Kant. In particular, he overthrew Kant’s distinction between physical and pragmatic anthropology and thus established ‘race’ as a total object of anthropology, or of the field that later in the century came to be called ‘racial anthropology’.

The Secret Moment of Fecundation – Experimental and Philosophical Speculations at the Turn of the 19th Century

Barbara Orland

What happens during the moment of conception, or first contact between the generating materials of the sexes? Does conception consist of nothing but the ovary, the male semen and the unification of these opposed representations of generation, as for instance Hegel asked in his *Philosophy of Nature*? Which agents or principles are the immediate causes of impregnation and determine the formation of the embryo? The emergence of “Artificial Fertilization” and the techniques that were grouped under this new experimental concept, introduced over the course of the eighteenth century, did not give clear answers on such

questions. Quite contrary, such experiments on animal generation introduced a range of new problems, from abstract discourses on the definition of species, to very mundane challenges of, for example, how best to collect semen. Hence, new information on the mechanisms of fertilization undermined the self-evident character and usability of familiar concepts like germs, seed, conception, and hereditary transmission, disrupting previous ways of classifying, representing, and narrating the generation and origin of living beings. At the turn of the 19th century debates on preformation versus epigenesis were still hotly debated, and concepts of hybridity alongside with evolutionary thinking became influential.

In my paper, I will first give a rough overview of the development of experiments on artificial fertilization during the 18th century. The intention is to present some of the epistemological problems that resulted from these experiments. With respect to the question, what kind of hereditary factors might be determined at conception, the second part of the paper will introduce some of the philosophical reactions and speculations about the concept of conception in the German *Naturphilosophie*.

Herder's Naturalism and Holism

Dalia Nassar

This paper is part of a larger book project on what I have called “romantic empiricism.” Romantic empiricism emerged alongside and in dialogue with romanticism, but it emphasizes empirical knowledge and experience to a greater degree than the mainstream romantics (i.e., Novalis and Schelling). Moreover, the thinkers whom I designate “romantic empiricists” were either contributing to science through armchair science—what we today would call theoretical biology for instance—or by developing new fields of scientific enquiry—such as anthropology (Herder), morphology (Goethe), or geography (Alexander von Humboldt).

The part of the project I wish to discuss at the workshop concerns Herder and his “naturalism”—a highly ambiguous term, both in his own time and ours. Though I will likely not be able to cover all the points I make below, I hope that they will come up in discussion:

Kant offered the most caustic assessment of Herder’s naturalism. In his review of Herder’s 1784 *Ideen zu einer Philosophie der Geschichte der Menschheit* Kant claimed that Herder reduces the distinctively human feature of reason to a physiological characteristic, namely uprightness. In other words, according to Kant Herder furnishes nothing more than a physical-causal account of reason based on the contingent development of the capacity to stand upright. Yet, throughout his work, Herder is careful not to rely on reductive physical explanations of either natural or cultural phenomena, as he is well aware of the difficulties that his naturalistic predecessors (Condillac and Rousseau) had faced. In fact, in his essay on the origin of language, Herder attempts to maintain a naturalistic position that is non-reductive (and thus does not run into the problems of Condillac and Rousseau’s positions). Furthermore, in the *Ideen*, Herder’s naturalism is intimately tied to a non-reductive or holistic understanding of natural phenomena, in which the phenomena are regarded not as mere effects of contingent (physical or historical) causes, but as integral unities. He achieves this through a new methodological approach to both nature and history—an approach that does not reduce the phenomenon to its contingent historical causes. The aim of this paper is to examine Herder’s naturalism and his holism, and more specifically to consider the ways in which he develops his non-reductive naturalistic account of the human being in both his prize essay on the origin of language and in the *Ideen*. In this way, the paper seeks to undercut the Kantian critique of Herder, and show the relevance of Herder’s distinctive form of naturalism. The paper will argue that Herder’s

naturalism is both ontological and methodological, and note that while it differs from contemporary scientific naturalism, it is a clear predecessor of the contemporary notion of "liberal naturalism," and thus deserving of serious attention.

Sex as Nature's Summit? Goethe on Organisms, Teleology, and Reproduction

Gregory Rupik

In Goethe's work *The Metamorphosis of Plants*, written relatively early in his scientific career, he wrote that in the process of regular metamorphosis plants ascend, step by step, "zu jenem Gipfel der Natur, der Fortpflanzung durch zwei Geschlechter," [towards the summit of nature: propagation through two genders](§6). Near the end of his life at age seventy five, Goethe maintained that the moment of sexual maturity is "the zenith of life" (Portmann 1987, 143). Throughout Goethe's scientific corpus, sexual propagation features as an end-goal of organismal development, the terminus of the many metamorphoses which characterize life. But this commitment is rather more nuanced than it may seem at first glance.

The prominence of sexual reproduction in passages like these, for instance, seems to be undercut by Goethe's insistence that all vital activity in plants (and perhaps even organisms in general) is *reproductive*. The serial, repetitive growth associated with the word *Wachsthum* and the synchronic, more obviously sexual act associated with the phrase *große Fortpflanzung*, are nevertheless both categorized as types of *Fortpflanzung* [propagation/reproduction] generally. Further Goethe can articulate this reproductive vital activity, even at the level of *Wachsthum*, as manifesting gendered polarities, but in a way that does not overtly bind those polarities to the manifestation of their traditionally-associated sex organs.

Goethe's notion of life's *ascent* to the *summit of nature* seems to attribute to life a goal-orientedness or directionality, features usually associated with *teleology*. But Goethe often (and vehemently) expresses his disdain for, and avoidance of, teleology in his biological writings. Whereas Linnaeus elides the organism's purpose with the achievement of its sexually-mature form (Type), Goethe's understanding of types and archetypes—shaped as they are by his theory of metamorphosis—makes a similar elision far more difficult. Indeed, Goethe's understanding of goal-orientedness seems to differ not only from that of Linnaeus and Christian Wolff, but from Kant and some of the other German romantic biologists as well.

In this paper, I will argue that by analytically dissecting this passage from *The Metamorphosis of Plants* into two discreet parts—namely, what Goethe means by *propagation through two genders*, and what he means by an *ascent to the summit of nature*—we can catch a glimpse of the synthesis underlying Goethe's understanding of organisms, biology, and nature.