The Excremental Challenge to Hegel's Organic Systematicity: The Superfluity, Individuality and Purposiveness of Science

Introduction: Systematic Stakes

Recent Hegel scholarship readily acknowledges the organicity of his system of philosophy, also known as Science (Wissenschaft). For example, Karen Ng begins her book, Hegel's Concept of Life, by noting that "throughout his philosophical system", Hegel describes "the activity of Reason and thought in terms of the development and activity of organic life". Indeed, acknowledging the organic trope has several advantages for presenting Hegel's thought. It allows the essential systematicity of his philosophy to be seen as living rather than as a dead, mechanistic configuration of 19th Century metaphysics. Representing Science as organic also allows it to skirt accusations of systematic, totalizing closure. Organic systems are "holistic" and open to otherness. The system as a living organism also puts it into movement, even selfmovement, thereby overcoming charges of historical ossification. The living, organic philosophical system as open and self-moving may even claim a degree of progression, without actually claiming to tell a tale of "progress", an idea largely discounted or avoided in contemporary intellectual narratives. Perhaps best of all, the organic paradigm evokes a selfmoving articulation of difference within identity, where the parts are holistically and vitally integrated into the whole, which, in turn, gives life and meaning to the different, incorporated parts or organs. Finally, we cannot ignore how the positive associations that we tend to lend the term "organic", as an expression of what is natural and therefore essentially authentic and good, according to the deep-seated romantic-expressivist tenor of our times, gives Hegel's systematic

¹ Karen Ng, Hegel's Concept of Life (Oxford: Oxford University Press, 2020) p. 3.

intellectual enterprise a more positive branding than it might normally have. I see my students visibly relax when I refer to Hegel's conception of the state as "organic".²

In fact, it was a former student who recently made me aware of the contemporary pervasiveness of the organic trope in Hegel studies. Emmanuel Chaput's remarkable doctoral thesis, Vie et Système chez G.W.F. Hegel (Ottawa, 2021), which I had the pleasure of supervising, along with its other virtues, explores the vital organicity of Hegel's system through the French scholarship of such contemporary Hegelians as Gilles Marmasse, Emmanuel Renault, Bernard Bourgeois and Christine Daluz Alcaria, in the German literature through, for example, Olaf Breidbach, Wolfgang Neuser and Annette Sell, and recently, in English, through the work of Karen Ng. What these readings have more or less in common is the notion that the animating life of the system is actualized through the conceptual movement of the Idea, which desports itself syllogistically. Further, to the extent that the elements, parts or members of the system are themselves expressive of syllogistic movement, it is not too much of a stretch to conceive of the whole system as an organic individuality, whose life is present in the purposive, dynamic interrelation between the whole and its constituent organs. As Hegel puts it in the Encyclopedia's Philosophy of Nature, in an organism , each member is both an end [in itself] and a means [to an end] (EN 356, M377, W9 459)3". The organic trope thus resonates throughout the *Encyclopedic* system, through to its highest level of accomplishment in Spirit, whose most determinate, absolute expression is philosophy itself.

Spirit, just as it is something true, is something living, organic [organisch], systematic, and it is only through the knowledge of that nature as its own that the science of

² For the record, Hegel himself describes society as "an organism" in the *Philosophy of Right*, s. 269, and its addition.

³ "EN" refers to the *Encyclopedia*'s *Philosophy of Nature*, followed by the section numbers. "M" refers to the English translation by A.V. Miller (Oxford: Clarendon Press, 2004 (1970), followed by the page numbers. "W" refers to *Werke in 20 Bänden*, Eva Moldenhauer and Karl Markus Michel eds., (Frankfurt am Main: Suhrkamp, 1970), followed by the volume and page number.

spirit is equally true, living, organic and systematic (*Encyclopedia, Philosophy of Spirit* §379 Add., W10 15).

Most of the commentators who recognize the organic nature of the system rightly conceive the organism of Science as a dynamic individuality that is open to externality and animated by internal difference: the living, organic system is the identity of identity and difference, "capable of containing and enduring its own contradiction (EN 359 Remark, M385, W9 469)". However, the question that I want to raise is whether such features of internal differentiation within individual embodiment are sufficient **for an organic** comprehension of Hegel's philosophical Science. Given the power of the organic trope in comprehending Science's systematicity, I believe it is beholden upon us to look closely at how Hegel actually conceives of the living organism, beyond the reassuring generalities that I mentioned at the outset. Indeed, if organicity is meant to characterize the Hegelian system, then should we not investigate how Hegel presents the animal organism itself, particularly, the animal organism, which alone possesses the self-moving, vital complexity that is apparently so essential to his philosophical system?

There has been marked contemporary interest in Hegelian biology, as attested to by a recent issue of *Hegel Bulletin* devoted to the subject. There, in his article, "Hegel's Organizational Account of Biological Functions", Edgar Maraguat provides a helpful functionalist definition of a living organism as it may be applied to Hegelian systematicity:

Organizational accounts... are typically accounts of biological functions, built upon a certain concept of organism or organized system. They attribute biological functions to the organs (or members, parts) of organisms... In as much as the ordinary performance of organs allows the organism to which they belong to stay alive, organs are said to have a function. Their function is, precisely, to contribute in a particular way to the self-maintenance of that (living) system. Organisms are conceived, from this stance, as complex systems, with differentiated parts, that keep themselves existing within an environment.⁴

⁴.Edgar Maraguat, "Hegel's Organizational Account of Biological Functions" *Hegel Bulletin*, 41.3 (2020), pp. 407-425. (doi:10.1017/hgl.2020.17).

Maraguat presents Hegel's biology as espousing this organizational view, and thus as overcoming the present-day dilemma in the philosophy of biology between purposive/etiological and functionalist accounts. In this article, I cannot enter into the rich debates on Hegelian biology per se. Rather, I am examining one discreet and generally neglected element of organic functionality, and then applying it to the *organic* conception of the system itself.

To be clear, my intention is not to maintain that Hegel conceives of his system as actually *being* an animal organism. I want to examine features of organicity that Hegel clearly attributes to his own philosophical system, through his discussion of the individual animal organism. Doing so, brings to light aspects of Scientific systematicity that have gone unnoticed. Crucially, as we will see, the animal whose biological organicity is of primary interest to Hegel is the human being, the animal endowed with subjectivity, consciousness and reason but which remains vitally tied to its organic functions.

Specifically, I want to look at that aspect of the animal organism that is generally, but not entirely, ignored: excretion.⁵ While those advancing the idea of systematic organicity are quite happy to imagine speculative Science as open to the upstream content of "immediacy", in its various forms, whether as raw, undigested nature or as the "content of the positive sciences", the question of "downstream" systematic effluent is avoided, either because it is judged distasteful or because it is simply too difficult to relate the idealistic heights of Hegelian Science to something as base as feces. Regardless of the reasons for such "systematic" neglect, Hegel's organics, in the *Philosophy of Nature* do contain substantial pages, often in the Remarks and Additions, not only on the animal digestive process but on its excremental results. It therefore seems to me that we should consider such

⁵ Maraguat does mention the urinary system and its organic filtration function, but without approaching the significance of the excreted product itself, nor does he refer to feces.

⁶ Letter-report to von Raumer, W4 423.

essential organic end products as relevant to the organic conception of the system of philosophical Science. The question is ultimately, if we accept the organic nature of Hegelian Science, then should we not ask, "What does the system leave behind?" or more bluntly, "What does the system excrete?" In order to answer these questions, we must "hold our nose (W2 541)" and look closely (there is no delicate way of expressing this) at how Hegel conceives animal digestion and its fecal outcome.

If discussions on digestion and excretion were confined to the *Philosophy of Nature*, they would be of limited or discrete interest to Hegel scholars. However, these elements resonate to the highest speculative reaches of Hegel's Science. Indeed, the digestive/excretory function of the "Absolute" itself is acknowledged in the culminating chapter of the *Encyclopedia Logic* ([EL] 213 Remark) where the life of the Idea confronts "inorganic nature" through a process of "assimilation" and "reproduction" (EL 218), a process described in the paragraph's Addition in the digestive terms of bilious "irritability" and "reproduction". I write "digestive" because, as we will see, it is as a pre-sexual instance of "formal" reproduction that animal excretion appears in the *Philosophy of Nature*, as distasteful (or Freudian?) as we might find such a notion.

The digestive elements of "irritability and reproduction", shared by individual animal organisms and the life of the Idea, involve aspects of self-objectification and self-unification (*Zusammenschliessen*) that Hegel presents in terms of excremental superfluity and individual purposiveness.

Here is how I will proceed:

⁷ The "Functions of the Organism" consist of "sensibility", "irritability" and "reproduction" (EN 353), the same elements that enliven the "Life" of the absolute Idea in EL 218.

- 1. I will look at how contemporary commentators have understood Hegel's take on animal digestion and excretion, with reference to biological accounts from his time, notably, J. J. Berzelius's work on the chemistry of animal feces, which thoroughly informs Hegel's account.
- 2. I will examine Hegel's texts, from the *Philosophy of Nature*, to show how digestion and excretion involve the binary moments of particularity within the organically conceived Hegelian syllogism: a solvent, bilious element and non-organic otherness, as well as how, through excretion, these particular moments are posited as superfluous.
- 3. The discussion of digestive particularity and its excretory outcome involve selforganizing elements of subjective individuality and purposiveness.
- 4. I will examine how the biological elements of organic superfluity, subjective individuality and purposiveness that arise through the discussion of animal digestion/excretion can be applied to the organic conception of Science. If we accept the ongoing "life" of Hegel's organic system (of the Idea), then we are invited to reflect upon precisely what might constitute its philosophical excrement, what the system has left and indeed leaves behind. Finally, the elements of superfluity, individuality and purposiveness that flow from our discussion of organic excrement demonstrate the limits of the animal trope as it applies to the system of Hegelian Science. Briefly, while Science, as the living course of the Idea, certainly incorporates digestive elements common to animality generally, it is ultimately the *human* animal that may best serve as the Idea's organic trope.

1. Other Work on Animal Digestion/Excretion in Hegel

A few timorous Hegel commentators have followed to its excremental conclusion the animal digestive process that Hegel presents in the *Philosophy of Nature*, and I will refer to their findings

below. What is missing from these rare accounts is the further step that I want to take. Having established what the living, animal (self-moving) organism actually excretes, how does the biological end product apply to the organically conceived Scientific system itself?

One exception to the general reluctance to consider systematic excrement is Slavoj Žižek who, in his exuberantly scatological "Hegel and the Object, Or, the Idea's Constipation", reads the Idea's "sich Entschliessen", at the culmination of the *Logics*, as a healthy act of ideal defecation. In order to maintain this, Žižek presents the system according to the "third" syllogistic configuration, Spirit-Logic-Nature, where the "act of releasing the other [i.e. Nature] is thoroughly *immanent* to the dialectical process, its conclusive moment, the sign of the conclusion of a dialectical circle". While the idea is provocative, it is highly problematic since what is "let go" at the end of the *Logics* qua Nature is not released as something expulsed *outside* the system, as we will see is the case with animal feces, but rather the predetermined natural object of the subsequent *Philosophy of Nature*. While, as we will discuss, there is indubitably something "natural" about the system's excremental remainder, what is "dis-closed" or "de-syllogized" (*entgeschlossen*) by the Idea at the end of the *Logics* can hardly be likened to the extra-systematic expulsion of excrement as it is discussed by Hegel. Žižek's reading does not refer to the digestive-excremental process as it occurs in the "Animal Organism" section of the *Philosophy of Nature*, which is crucial to understanding both the constitution and the significance that Hegel attributes to animal feces.

In order to understand the organic significance of animal excrement, we must refer to the Hegelian dialectics of digestion whereby it is produced. There are several important commentaries

⁸ Gramma, Journal of Theory and Criticism - https://doi.org/10.26262/gramma.v14i0.6510) p. 24.

⁹ A friend doing her medical residency in the urology department of a prominent Parisian hospital told me that the inspirational mantra of those in that particular service was quite simply, "Pisser ou mourir!" More anachronistically, one might liken the proposed examination to the important work carried out by the Groom of the Stool, in monarchical times, diagnosing the health of the kingly organism. When I refer to "excrement", it is feces that I have in mind, and which Hegel is concerned with.

on animal digestive activity, notably by Mark C.E. Peterson and, more recently, by Douglas Finn, both of whom I will consult further down. However, I would like to begin by referring to an article by Jane Dryden, who clearly introduces the dialectical stakes involved in organic digestion:

The description of digestion in the *Philosophy of Nature* attunes us to our bodies' continual renegotiation with the world. Our relationship with food is not merely one of taking in nutrients—the process of assimilation is a complex interplay of identity and difference in which parts of the body appear external to itself and parts of the external world appear part of oneself. It is an interrelation of differentiated parts that can easily go awry, as gut pain and gut disorders attest. Our gut serves for us as a kind of ambiguous other, one which is sometimes experienced with hostility.¹⁰

Dryden emphasizes an aspect that is particularly significant in Hegel's dialectics of digestion: the experienced difference between our "selves" and the internal, organic processes by which we confront and assimilate natural otherness qua food. In digestion, we indeed encounter an otherness within ourselves, an otherness that is ambiguous since it is the very condition for our organic life, and yet it is not really "us". As in any dialectic, there is difference and even opposition, regardless of the extent of the accomplished reconciliation. The same is true in the dialectics of digestion.

Both Mark C. E. Peterson and Douglas Finn provide faithful, enlightening descriptions of Hegel's theory of organic digestion by placing the process within larger frames of reference. My reservations involving their interpretations concern the specifics of the oppositional difference that the writers deal with. Peterson completes his exegesis by rightly placing the digestive process within the logical structure of the Hegelian syllogism, where the form of the Universal (qua animal instinct) and the Particularity of the digestive process itself produce excrement as

¹⁰ Jane Dryden "Digestion, Habit, and Being at Home: Hegel and the Gut as Ambiguous Other", *PhænEx*, 11: 2 (fall/winter 2016) pp. 1-22

well as the reconciling moment of **subjective** Singularity, fulfilling its role of "formal reproduction," to use Hegel's terms. For Peterson,

Formal reproduction is assimilation's moment of singularity. In it, the animal continues to create its own subjectivity - through its interaction with an other to which it finds itself opposed - while at the same time implicitly distinguishing itself from this same process.¹¹

Specifics of the excretory result are not discussed.

Douglas Finn rightly emphasizes the self-disgust¹² that Hegel associates with animal excretion, whereby what is excreted is the very animality of the digestive processes, **while insisting** upon the "transcendent" result as one of happy subjective enrichment, again downplaying the specificity of what is actually left behind.

The animal, as the unified organizational activity of life, overpowers not only the external objects it confronts, but also the processes wherein it engages and assimilates those objects. The animal cannot be reduced to any one of its processes. In its disgust at its own struggle with what was essentially untrue, its relation to external things as external, the animal transcends that process and 'knows' itself as a universal power greater than its externally oriented activity, as subject, being-for-self.¹³

The interpretation that I will propose of Hegel's discussion of animal excrement is closer to that of Simon Richter, whose inconturnable article on the subject emphasizes the unreconciled, extra-organic aspect of excretion. Richter quotes Hegel from the lengthy Addition to EN 365:

"The immediate result of this is simply that when the animal comes to itself and recognizes itself as this power [of transformation], it is angry with itself for getting involved with external powers and it now turns against itself and this false opinion; but in doing so it throws off its outward-turned activity and returns into itself" (M403, W9 490).

¹¹ Mark C. E. Peterson, "Animals Eating Empiricists: Assimilation and Subjectivity in Hegel's Philosophy of Nature". *The Owl of Minerva*. 23: 1 (1991) p. 62. Hegel's reference to "formal" reproduction is in EN 365: "The process outwards is thus transformed into the first, formal [*formellen*] process of simple reproduction from its own self, into the uniting of itself with itself."

¹² "The organism in thus separating itself from itself is disgusted with itself [*erkelt er sich selbst an*]" (EN 365 Add., M405, W9 492).

¹³ Douglas Finn, "Spiritual Consumption: Eating and the Christian Eucharist in Hegel", *The Owl of Minerva*, 47:1–2 (2015–16) p. 130. DOI: 10.5840/owl2016121418.

Richter adds:

What Hegel is describing in delicate and dialectical terms is the meaning of excretion. Once again, the animal is divided against itself and, by excretion, by "rid[ding] itself of this lack of self-confidence" (ibid.), comes to a sense of itself unmarred by lack and dependency." And further, again citing Hegel's words: "Excrement has no other significance than this, that the organism, recognizing its error, gets rid of its entanglement with outside things, and this is confirmed by the chemical composition of the excrement (M405, W9 492)".¹⁴

Richter helpfully guides us through the analysis of the chemical composition of feces, in light of Hegel's explicite references to the empirical science of his time, through the work of the renowned Swedish chemist J. J. Berzelius, as well as that of other important participants, for example, Spallanzani and Treviranus. Richter adds references to the thinking of the time that informs Hegel's dialectical grasp of the digestive process and the distinctions or oppositions that are involved there: between mechanical and chemical digestive actions, between immediate and mediate assimilation, between chyme and chyle, between lymph and bile etc. I also find Richter's analysis particularly insightful because of its unapologetically anachronistic reference to Freud. Indeed, it seems clear that any reference to the *spiritual* aspects of excrement, which we are undertaking through our tour of Hegelian digestion and its outcome, can hardly ignore a coherent psychological theory that interprets the relation between consciousness and excrement in such a novel and fundamental fashion. More specifically, what Richter acknowledges, through his reference to the Viennese psychoanalyst, is the fact that excrement, in the *Philosophy of Nature*, is a product that participates in the narrative of *self-production*¹⁵. I will return to the important issue of reproduction below.

¹⁴ Simon Richter, "Hegel and the Dialectics of Digestion", *Nineteenth Century Prose*, 25: 1 (1998), p. 11. The Free Library. "Hegel and the Dialectics of Digestion", retrieved Aug 02, 2021 from https://www.thefreelibrary.com/Hegel+and+the+dialectics+of+digestion.-a0188966787. Richter refers to the page numbers in A. V. Miller's translation of *Hegel's Philosophy of Nature* (Oxford: Oxford University Press, 1970), which I present as preceded my "M". I have added the page references from *Werke* 9 [W9].

¹⁵ See also David Farrell Krell, "Genitality/Excrementality from Hegel to Crazy Jane", *Boundary* 2, 12:2 (1984) issue "On Feminine Writing", pp. 113-141.

As a product of animal digestion, excrement is indeed "singular", as Peterson notes. However, rather than representing the Singular reconciliation of the Universal and the Particular, the singularity of the excremental object itself is thoroughly natural and thus has "no other significance", as Richter quoted above, than that to be found in its "chemical composition". Let us take Hegel at his word and begin with the significant end: the chemical composition of the excreted object, **feces**.

2. Particularity of Poop: Superfluity, Individuality and Purposiveness

As Jane O'Hara-May points out in her article, "Measuring Man's Needs" the qualitative analysis of human feces was, in Hegel's time, rather innovative. Previously, the approach had been generally quantitative, through studies motivated by institutional, economic factors: how much food did a soldier, sailor, inmate require in order to survive and carry out their duties? Measuring the quantity of excreted material was an important benchmark in these studies. Against this current, Berzelius was a pioneer in the qualitative approach, the chemical analysis of feces in order to understand the processes involved in digestion and assimilation. One can only suppose that, here again, the practical applications had institutional and economic reach: what must be eaten to ensure a person's survival, growth, strength etc., for Berzelius's research was primarily focused on human digestion and excretion. This is significant since, in Hegel, we are ultimately interested in the human animal, that is, in the development of the animal's subjective relation to its digestive processes and their result, as we see in his reference to children's feces in the remark to EN 365 (M 396), and to Berzelius's experiments on "human feces" in the Addition. The anthropological specificity is particularly meaningful, for our purposes, because we want to be able to apply the organic aspect of excretion to the

¹⁶ Jane O'Hara-May, "Measuring Man's Needs." *Journal of the History of Biology* 4:2 (1971), pp. 249-73. Accessed May 27, 2021. http://www.jstor.org/stable/4330561

Hegelian system itself, which, like the human animal, is meant to be an organic system endowed with consciousness qua *Geist*.

Hegel's repeated references to the work of Berzelius clearly show that Hegel is actually discussing human feces here, and not, initially, something more speculative. Hence he states that "human excrement contains undecomposed bile, albumen, biliary gum, and two peculiar substances, one that looked like glue..." In more detail, "the human body evacuates through the rectum, bile, albumen, two peculiar animal substances, biliary matter, sodium carbonate, sodium chloride and sodium phosphate, phosphate of magnesia, and phosphate of lime. (EN 365 add., M405, W9 492)."17 The important conclusion, for Hegel, is that "all of these materials are not merely heterogeneous, inassimilable matter" but, above all, they are elements found in the organism itself. Indeed, "many of the substances [found in feces] also enter into the composition of the hair, others into that of the muscles and brain" (ibid.). Consequently, following the empirical research of Berzelius, it is wrong to conclude that the excretory result of digestion is simply surplus ingested but unassimilated material or the fact that "a larger quantity of matter is assimilated than the organs to be nourished by it are able to appropriate" (ibid). Again referring to Berzelius, Hegel remarks that "closer inspection reveals disparities between the constituents of food, the assimilated material and the substances excreted [which] render this assumption untenable" (ibid.). The upshot, for Hegel, is that what the animal organism excretes, "the bile, pancreatic juice, etc. is nothing else but the organism's own process which it gets rid of in material shape." It is this conclusion that will allow Hegel to view animal excretion as syllogistically superfluous, a "form of abstract,

¹⁷ Hegel's account is faithful to Berzelius' actual findings. See W. Marcet, "Chemistry, Physiology and Pathology of Human Excrement", The Medical Times and Gazette volume 38, July 1858, p. 53, accessed August, 14, 2021 through:

 $[\]frac{https://books.google.ca/books?id=UTFbAAAAcAAJ\&pg=PA53\&lpg=PA53\&dq=berzelius+medical+times+and+gazette\&source=bl\&ots=KNwzdkOAFj\&sig=ACfU3U1hiHW4eHYKxQwJvLqM2ALgMN3Oxw&hl=en&sa=X\&ved=2ahUKEwjt1=amwbDyAhXTF1kFHQaYAB0Q6AF6BAgOEAM#v=onepage&q=berzelius%20medical%20times%20and%20gazette&f=false$

formal repulsion (M404)" where what is excreted is above all the organism's own mediating digestive process, thus reproducing (formally) the individual animal's subjective purposiveness.

Let us look more closely at this process, as reflected in its excremental result and specifically in its "principal ingredients", which are "substances originating from gastric juices"¹⁸. Understanding how Hegel views this organic process is essential to apprehending the true nature of organic and thus systematic excretion. Further, if what the organism excretes is **principally the elements** of its own animal process, then our examination of excretion should lead us to understand how the whole, **purposive** "organism" of Science stands in relation to its own *particular* processes.

In Hegel, it is always helpful to know where we are in the syllogistic unfolding of the narrative. This is especially important within the economy of the *Encyclopedia*, where the syllogistic structures are more pronounced than in the *Phenomenology of Spirit*. In the EN, the paragraphs dealing with digestion and excretion are found in the section on the Animal Organism (EN 350-375). Within that tripartite section, we find ourselves in the second, mediating sub-section, entitled Assimilation. The first sub-section is Shape [*Gestalit*]); the third section is on the genus process. Looking closer, within the three sub-moments of Assimilation where we find ourselves, digestion takes place again in a middle, mediating sub-section, entitled the Practical Relation, which follows the Theoretical Relationship and anticipates the Constructive Instinct. Consequently, the section on digestion and excretion occurs in the most "middle", internal moment of Hegel's presentation of the animal organism, in the middle of the middle. In more conceptual terms, we find ourselves in the particular moment of the particular moment, if we take the general, syllogistic form of the concept's dialectical movement as passing from the Universal, to the Particular, to the Singular.

¹⁸ Hegel recognizes that animal excrement also contains "fibrous residue of the ingested food (ibid. M 405)." However, this material, as we will see, is only philosophically significant in that it represents the "non-organic" Other.

The Hegelian moment of particularity is generally characterized by opposition between different binary configurations that present themselves as mutually exclusive: something has a specific particularity because it is *not* something else. Of course, the dialectical truth (outcome) is that in order to be what it particularly *is*, something must be *both* what it is and what it is *not*. That is, true self-identity must involve difference. This is why the fundamental dialectic of identity and difference, in Hegel, takes place in the middle, "particular", moment of the *Logics*, in the second book, on Essence. Of course, the *accomplishment* of essential truth is carried out in the third, reconciling moment of the *Logics*: in the Doctrine of the Concept.

For now, I want to emphasize the *particular* nature of digestion as a binary, oppositional process within the animal organism, along with a bilious, dissolvent element that overcomes static opposition, putting it into movement. Grasping particularity as informed by both opposition and solvency will help us analyze the significance of the excreted product in relation to the organic system, which is what we are after. Let us begin with the particular oppositions at play in digestion. First and foremost, we find the opposition between the organic and the "non-organic".

By "non-organic ([*Unorganisch*] EN 365 Add.", Hegel does not mean "inorganic" or mineral but rather, that which the organism "confronts" and "assimilates (cf. EL 219 Add.)", that is, consumes as food. Indeed, both the vegetable and animal material that the living animal consumes are "in truth organic structures". However, in terms of the digestive process of assimilation carried out by the living, animal organism, they are of "non-organic" nature because they are determined as food "for this animal" (EN 365 Add., M398, W9 484). The non-organic is determined as something having "no enduring existence of its own". It is a "nullity as soon as it comes into contact with a living being (ibid)" that eats it. The transformation involved in digestive assimilation is simply the "revelation of this relationship (ibid.)". The fundamental opposition involved in assimilation and digestion is thus between organic nature and its "non-organic" object, and the "state of tension" that

this relation involves (EN 365 Add., M397, W9 483). Furthermore, the "alimentary process" is essentially the "melting of the non-organic into organic fluidity (ibid)". In other words, at the most fundamental level of digestive opposition, between the organic and the non-organic, the goal is the fluidification and breakdown of that opposition.

Consequently, the mediation that characterizes the particularity of the digestive process involves the fluidification of the fixed, established opposition between organic and its Other. Significantly, the terms of the opposition (organic vs non-organic) do not in themselves have the resources of negativity necessary for its overcoming and fluidification. The second element of particularity is necessary: solvent negativity, which is provided, in digestion, by bile. Bile (*Galle*) is thus "animal fire (EN 364, M395, W9 480)" and the liquid "anger" or "irritability (cf. EL 218 Add.)" required for the overcoming of the fundamental opposition between organic and non-organic, which is brought about in the digestive process.

Other, **subsidiary** internal oppositions arise within the particularity of the digestive process itself. This is because the external relation to the non-organic and the "entanglement with outside things (EN 365 Add., M405)" has been brought inside, internalized in the mediating process of digestion, a process whose result is then produced as excrement. Once again, what is excreted is the particularity of the process itself. In the syllogistic terms that Hegel employs,

the syllogism of the organism is, therefore, not the syllogism of external teleology, for it [i.e. the organism] does not stop at directing its activity and form [i.e. negativity] against the outer object but makes this very process... into an object [of excrement] (EN 365 Remark, M 396-7).

Digestive excretion is thus presented in terms of "the second premise of the universal syllogism of purposive activity", where the "outward process" brings about the animal's "uniting of itself with itself" (ibid.), which we will discuss below as its individual purposiveness. Here, Hegel refers significantly to the *Encyclopedia Logic* (EL 209), a paragraph where he deals with "subjective purpose"

as the power over [mediating] processes". Syllogistically, this involves the internalization of the "first premise" (EL 208), where the subjective attitude to the object was an "outward-directed activity", for example, in taking possession of food. Importantly, the incorporation or internalization of the outward-directed activity becomes, the "second premise", i.e. the particular moment of the syllogism, which brings about, in EL 209, the opposition between the two earlier articulations of natural purposiveness from the section on teleology: mechanism and chemism. Returning to the EN, the internal distinction between the mechanical and the chemical now appears as another *particular* opposition within the digestive process. I want to look at how this new opposition, within the particular moments of organic assimilation, is shown to again not have the resources of negativity necessary for its own overcoming and how its reliance on the solvent element of bile becomes a principal element of excretion.

Before proceeding, I would like to remark briefly on how the articulations of thought (des Denkens) or the concept (des Begriffs), as grounded in the Logics, stand in relation to the particular processes evoked in the Philosophy of Nature's discussion of digestion. Here, I thoroughly subscribe to Richter's view that the relation is metonymic rather than metaphorical¹⁹. What is meant by this is that, according to Hegel, the life of the organism, i.e. what constitutes its "purposive activity" (EN 365 Remark, M397)²⁰, is the actual movement of the concept, which might be conceived as the "soul" of the living thing, its unconscious "subjectivity (EN 365)", the breath that animates it (animus) as a living whole. Anyone with a better explanation of what animates organic life, of why the mere sum of different parts does not, in itself, constitute a living, purposive, individual animal organism or why and how, in death, life leaves that physical embodiment, is welcome to supply one. For our purposes, we can simply affirm that the metonymy between the philosophies of nature and

¹⁹ S. Richter, "Hegel and the Dialectics of Digestion", throughout.

²⁰ "Zwecktätigkeit (W9 482)". The notion of life as purposive activity obviously brings Kant to mind, a reference discussed by Hegel in EN 360 Remark, along with a reference to Aristotle.

thought runs both ways; dialectical thought informs organic processes, which, in turn, express the agency of thought. Consequently, a discussion of natural organics can and should inform the study of systematic organicity, a study that I am undertaking here. Once again, I am not maintaining that, for Hegel, Science is an animal. I am exploring to what extent the (human) animal and Science are conceptually organic. Whether or how this metonymy is apparent in other particular aspects of the system, e.g. in the organic state, I will leave aside. Let us return to our discussion of digestion's internal, particular oppositions and their bilious overcoming, now, by looking at the opposition between mechanism and chemism. Examining this opposition will allow us to present the crucial notion of immediate assimilation, which, in turn, will help us see how the particular processes of animal digestion may be conceived as superfluous while giving rise to subjective purposiveness.

As Richter **helpfully** notes, in the late 18th and early 19th Centuries, theories of animal digestion and assimilation were generally divided between two main ideas: the mechanical notion that nourishment was extracted from food through physical, gastric processes of squeezing, pressing, grinding etc., over against the chemical theories, which explained digestion as the chemical dissolution of food, rendering it organically assimilable. Again demonstrating how his philosophy of nature is really a philosophy of the empirical or positive sciences of nature, Hegel takes each approach into account. He refers, in this context, to the work of Lazzaro Spellanzani, whose experiments were meant to find out "whether digestion is effected by solvent juices or by trituration performed by the stomach muscles or by both (M401)". The Hegelian response is that neither unilateral approach per se can explain digestion. By conceiving of digestion in these oppositional terms (mechanical or chemical), one can never capture its truth.

... all chemical and mechanical explanations founder... Neither chemistry nor mechanics can follow empirically the alteration of food to the point where it is changed into blood, no matter what methods they employ (M398, W9 484).

Regarding the controversy between the mechanical and chemical approaches to digestion, Hegel seems to favor the former explanation, but on the condition that it be understood as enacting the *immediate* assimilation that expresses the fundamental truth of the digestive process in animal organisms. Briefly, in the mechanical digestive action, "the violent pressing and pushing of the walls of the stomach" that Spellanzani had noted, enact proximate contact between the non-organic and the organic, making possible the "triumph over food which has entered the environment (*Dunstkreis*) of the living animal (M404, W9 491)". The question is how this feature of mechanical immediacy fits into the narrative of digestive particularity that I am putting forward.

First, while one might suppose that Hegel would favor the chemical explanation over digestive assimilation, since it is closer to contemporary, "true" notions on the subject, this is not the case. First, Hegel's refusal of the chemical explanation is because his notion of chemistry is not molecular but rather, we might say, alchemistic, fundamentally informed by the interplay between acidic and alkaline substances (cf. Schelling). Accordingly, the interaction of different chemical compounds always arrives at states of equilibrium or neutrality: the more acidic substance interacting with the more basic or alkaline substance, producing a third, relatively inert result. Thus, if "the relationship [between the organic and the non-organic] would only be chemical... the effect would be nothing more than a neutralization, where nothing more than, 'a thick slime [would be] formed", states Hegel quoting Treviranus' *Biologie* (M402, W9 488).

In Hegel's view, the truth of digestion can only be got at through the speculative recognition of the presupposed and culminating identity between the organic and the non-organic Other, where the former has triumphed over the latter. Only when the truth of this speculative unity is recognized does the mediating process of higher organisms come to make sense. Thus, the immediate relationship involved in digestion is simply the fundamental recognition of the ultimate identity between the organic and the non-organic, the fact that "what is particular and external has

no enduring existence of its own, but is a nullity as soon as it comes into contact with a living being; and this [digestive] transformation is merely the revelation of this relationship (EN 365 Add., M398, W9 484)." Rather than presenting this speculative notion of transformation as a theoretical a priori given, Hegel refers to the biology of immediate digestive assimilation as arising from the mechanical nature of digestion.

The immediate assimilative relationship between the organic and the non-organic, where the latter is "transformed directly and at a stroke (M399) is thus "fundamental (ibid)", a "direct melting of the non-organic into the organic (M397)", which takes place throughout the animal realm. This essential relation can also be understood in terms of substance and accident. In that sense, the nonorganic is no more than an accidental "shape which it immediately surrenders (ibid.)". Biologically, this immediate assimilative relation between the organic and the non-organic Other can be found in "lower animals" like "worms and zoophytes (M399)", as well as in "hydra brachiopoda and vorticella (ibid)". In all these cases, assimilation takes place directly, through physical contact, where what "has hardly been swallowed is changed, transformed into a homogeneous mass (ibid)". These primitive organisms are devoid of mediating digestive organs, and one "cannot differentiate between esophagus, stomach and intestines (ibid)". Importantly, in terms of our investigation into the significance of excretion, what is excreted in these primitive organisms devoid of mediating digestive processes is indistinguishable from what is ingested: "the polyp opens its mouth again and evacuates part of the ingested food along the same way in which it entered the hydra's stomach (ibid)". In other words, immediate assimilation is devoid of particularity. To the extent that "immediate assimilation (M400)" is a feature of digestion generally, as the presupposed truth of the determinate relation between the organic and its Other, we can say that it is universally present in living things. However, whereas primitive animal forms excrete nothing other than the **nugatory** result of immediate assimilation, higher animal forms like humans excrete the particular results of the

digestive process itself, which may appear as superfluous with regards to the speculative truth of digestion: the "triumph (M404)" of the organic over the non-organic, as witnessed in immediate assimilation. This "triumph" gives onto the purposive individuality of the living animal, an important finding that I will explicate below, and apply to the organic system of Science.

For Hegel, the speculative truth of immediate assimilation means that it underlies digestion generally, even universally. Consequently, even the particular features of more complex animal organisms rely on **some degree of** immediate assimilation through the mechanical workings of their surfaces, where, for example, "the stomach and intestinal canal are themselves nothing else but the outer skin, only reversed and developed and shaped into a peculiar form (EN 365 Add., M400)". The importance of immediate or direct assimilation explains why Hegel details at length cases where thirsty sailors have apparently absorbed water directly through their skin, minus the salt; where opium "rubbed in the shoulder" has been assimilated into the organism. Hegel again cites

Treviranus, whose experiments apparently demonstrated that digestion, qua direct assimilation, can take place in animals outside their stomachs, for example, that "bones, flesh and other animal parts [introduced] under the skin of live animals", were found to be "completely decomposed (M401)". In all of these cases, the essential action of digestive assimilation takes place: the transformation of the non-organic into "animal lymph", the "universal element of animality (M402)".

Given the fundamental, indeed universal importance of immediate assimilation throughout the digestive process and within the animal organism generally, one might indeed wonder whether all the mediating, particular structures of digestion, in higher animal organisms, are not entirely superfluous. It is precisely this superfluity that is expressed in and through animal excretion. However, the introduction of "separate stages" and the "intermediation of several organs" is absolutely essential for the strength, movement and "actuality" of the complex animal organism

itself, which must test itself against non-organic otherness, not in "one stroke (M399)" but through the mediating structures of its own digestive processes.

This complex arrangement of digestion through the intermediation of several organs is, for the non-organic, indeed superfluous, but it is not so for the organism which progresses through these moments within itself for its own sake in order to be movement and consequently actuality (ibid.).

Hegel goes as far, again in the lengthy Addition to EN 365, to associate the vigor of digestive overcoming, "progressing through these [mediating, digestive] moments for its own sake", to the vitality of spirit, "just as the strength of spirit is measured only by the extent of the opposition it has overcome (M398)", an outcome that presents itself as the animal's individual purposiveness²¹.

Before returning to our examination of the particular lineaments at play in the oppositional mediations of the digestive process, it is important to recall that according to Hegel's reading of animal digestion, what is excreted is "significantly" the particular digestive elements involved in the process of the animal itself. Only in this sense do we grasp why excretion is presented as the "first, formal (EN 365)" reproductive level of the animal organism. That is why, in the Remark to EN 365, Hegel likens the "superfluity [Überfluss]" of the "characteristic product" of animal digestion (i.e. feces) to the production of seeds in the plant. The crucial difference is this: while it is the whole plant itself that is demonstrated as superfluous in its purposive production of seeds, for the organically organized animal, it is the mediating processes alone that are demonstrated as superfluous through the production of feces. In any case, the superfluity of excrement is not, as we saw above, based on the animal having eaten more than it could digest but rather, on the animal's own digestive encounter with the non-organic Other. Let us return to the

²¹ With reference to the digestive agency of the Idea, Hegel states, "The result of this process is not, as in the case of the chemical process, a neutral product [...] instead, the living being proves itself to be what overgrasps its other, which cannot resist its power (EL219 Add.)".

lineaments of the particular "*Momente* (M399)" of the mediating animal digestive process, which will form the substance of excretion and allow us to grasp the truth of its superfluity.

Although Hegel's explanation of animal digestion is far from simple, in spite of his assurance that it is "not very complicated (M403, W9 490)", there are two principal elements that appear throughout: on one hand, an element that is variously presented as "sluggish", "inertia", "neutral", "being-in-itself", and on the other hand: "inflammable", "anger", "active", "attacking", "destructive", "being-for-itself". The first relatively passive element is associated, although ambiguously, with chyme (the product of gastric digestion), as well as with pancreatic juice, the spleen, the liver and the venous system. The second, active element is above all associated with bile. Indeed, "chemical analysis of the bile yields nothing more specific than that its tendency is to inflame (M403)". The bile's inflammatory character even acts on the "passive" organs normally associated with its production, e.g. the spleen, which is initially a "being-in-itself" and "sluggish", but "ignited (befeuert, ibid.)" through its production of bile. Similarly, pancreatic juice, when associated with bile, "attacks" the chyme. Bile even serves to help bring "the inertia of the venous system to a focus in opposition to the lungs (ibid)", as attested to by the fact that shame and anger both bring about changes in blood flows, e.g. "blushing of the face and bosom (ibid.)".

Against the universal certainty of immediate assimilation, which underlies digestion generally, particularized, mediated digestion necessarily appears as a superfluous error, as a "false opinion (M 403)". Consequently, "The main point is that the organism, although exercising a mediating, distinctive activity, none the less remains in its universality... (ibid)." And further on, "Because the animal is involved in a struggle with the outer world, its relation to the latter is untrue, since this outer world has already been transformed, in principle (an sich) by the animal lymph (ibid.)" Most decisively, "The animal, in turning against its food, fails to recognize its own self [in it] (ibid.)." Of course, as readers of the *Phenomenology*, we know from the Introduction that error is not something

to be feared but rather to be embraced as constitutive of the Truth, and the same logic applies in the "lowly" function of animal digestion. Consequently, we must understand the organism's digestive struggle with its non-organic Other as a constitutive process of **purposive** animal individuality itself. Therefore, what the animal is really struggling with is not an outer thing but the animal reality of its own digestive process. "What the organism has to conquer is therefore its own process, this entanglement with the outer thing (M403-4)."

In order to "return into itself", as a universal self-relating purposiveness, the individualized animal must "repudiate and reject that means" or that "mediation which consists in involving itself with the non-organic (M404)." It is in this rejection and repudiation of its own digestive process, of its own digestive particularity as **seemingly superfluous** where we discover the reproductive aspect of animal excretion, which involves the "positing of itself as immediately self-identical", that is, as the affirmation of its animal wholeness and self-related, living individuality (I = I). The living animal is thus "reproducing itself in this self-preservation (M404)." Briefly, in excreting as superfluous "this [erroneous] entanglement with the outer thing", the individual animal affirms and reproduces itself, albeit in a way that is entirely "formal" or subjective.

The subjective "oneness (EL 217)" or individuality that arises from digestive struggle is not to be confused with what is actually excreted. Although the actual feces can be seen as a reproductive positing of the organism, akin to the seeds of a plant, it is not the truth of formal reproduction. Rather, through the excretion of its particular struggle with nonorganic objective otherness, the living animal (re)produces itself as purposive organic life. Consequently, perhaps the best expression of formal, animal reproduction is the Fichtean formula, I=I, which I used in the last paragraph. Indeed, Hegel often borrows the formula to express unmediated, exclusive, and thus formal subjectivity. As well, using the Fichtean

formula to express organic purposiveness highlights the limits of the animal trope when applied to the Hegelian system as a whole, an issue that I will return to below.

The internal entanglement and opposition with the outer non-organic thing is thus an essential element of the particularity that complex animal digestion involves. As such, it falls syllogistically into the mediating moment between universality and singularity, as "the second premise of the universal syllogism of purposive activity [aka life]", as we saw above, in the Remark to EN 365. What is more difficult to apprehend, and hitherto unnoticed, as far as I can see, is how, as a moment of particularity, the digestive process must involve not one but two distinct moments. Briefly, it is impossible to grasp Hegel's presentation of animal digestion and assimilation without acknowledging the participation of both the oppositional aspects of this *particular* process as well as the bilious action that dissolves the oppositions. In fact, it is the fiery, fluidifying nature of bile that animates the digestive process, "the active destruction, this turning in on itself of the organism (M403)", that characterizes digestion as a mediating process, as distinct from the vital universality of immediate assimilation. That is why, "as soon as animals acquire a developed [i.e. mediated] nature and do not merely have an immediate digestion or remain simply at the lymphatic stage, they have both liver and bile (ibid.)." Bile is the essential solvent element of digestion, ensuring the "organic relation of differences" that are essential to systematic organicity generally.

In other words, the elements of digestion involve the active coordination between solvent "animal water" and bilious "fire" (EN 364, M395) over against "heterogeneous, inassimilable matter (M405, W9 492)"²². These elements, as discovered by Berzelius, form the

²² Chemically, what is excreted can be analyzed as "the same ingredients of which the animal organs consist (M405)", for example, besides bile and albumen, "sodium carbonate, sodium chloride, and sodium phosphate, phosphate of magnesia, and phosphate of lime... (ibid)".

substance of animal excretion, as the excreted means of digestion or the "repudiation and rejection of that means (M404)".

Animal excrement consists of the expulsed remains of digestive particularity: the otherness of non-organic material but more significantly, the trace of solvent negativity (watery albumen and fiery bile). This is the "anger" that characterizes the digestive process, over against its "one-sided" opposition "toward the object (EN 365 Remark, M397, W9 483)", the "fact that the animal turns in anger against what is external (EN 365 Add., M403, W9 490)". However, because bilious anger is expressed within the animal itself and constitutes its own process, what was digestive anger against the non-organic is, in truth, anger that the animal has turned against itself. In fact, the animal "is angry with itself for getting involved with external potencies and it now turns against itself and its false opinion (ibid)." Ridding itself of this "superfluous" false opinion, its "involvement (Verwickeltsein) with the outer thing (M404)" is "repudiated and rejected (ibid.)" as animal excrement. However, the act of excretion, as the negation of a negation or as anger against anger, is necessarily understood as a positing, one which takes the form of a "double determination (M404)": on one hand, excretion is the organism's exclusionary "positing of itself as immediately self-identical" (I=I) but also, excretion represents the organism's "reproducing itself" through this "preservation of itself [Erhaltung seiner], ibid.) (I=I). Briefly, it is the animal's self-production or purposiveness, its "oness", that is the speculative truth of the excremental rejection of its entanglement with otherness. The moments of particularity appear as superfluous to the self-affirmation of the organism in its enduring, purposive individuality, "the formal process of simple reproduction of its own self, into the uniting of itself with itself [in das Zusammenschliessen seiner mit sich] (EN 365)". To grasp how animal excretion stands with regards to the animal organism and to systematic organicity generally, I will now turn to the aspects of individuality and purposiveness that arise through the reproductive aspect associated with excretion.

3. Animal Individuality and Purposiveness

Individuality. In the Addition to EN 365, Hegel refers repeatedly to the animal organism as an individual. First, in its bilious behavior to the non-organic individual object (zu Individuellem, W 9 491, M404), "it has proven itself to be as an animal individual (als animalisches Individuum, ibid.)". Thus, the animal has now become, through the carried out process of digestion and its excremental conclusion, "in a real way, for itself, i.e. individual (ibid.)". While one might argue that the Encyclopedia's Additions should not provide the basis for precise textual analysis, the insistence here on individuality (Individuum, Individuelle, individuell) makes it unlikely that those transcribing Hegel's lectures, constituting Michelet's Zusätze, could have missed Hegel's point: digestion and its reproductive excrement constitute the organism as an animal individual. This is significant given Hegel's take on individuality generally, which must be distinguished from what he means by singularity (e.g. das Einzeln), a distinction that is not always made in the translations and commentaries. In general, Hegel uses the latter term when referring to the syllogistic destiny of the singular, in its inevitable collapse into universality when it does not have the privilege of being "saved" by particularity. In that case, the finite (natural) singular thing is taken up into the generalizing particularity of genus or species, allowing the singular thing to participate, in a humble way, in the Singularity of the fulfilled concept (the Singular universal "filled" with particular content). The unmediated singular per se can do nothing but vanish into the indeterminate universal, as we witness in the *Phenomenology*'s chapter on Sense-certainty, where singular sensations collapse into the empty indeterminacy of the "here" and the "now". On the other hand, Individualität, in Hegel, presents the "singular" insofar as it resists its conceptual destiny, holding onto its "foritselfness", which it seeks to anchor by assigning itself particular properties. Continuing the reference to the *Phenomenology*, we can say that the object of perception, with its properties, is

"individual", as opposed to the singularity of raw sense data. In the Addition to EN 365, Hegel refers to the "animal individual" as having posited itself (sich gezetzt) as "real being-for-self (Fürsichsein) (M 404, W9 491)".

Although Hegel describes the animal individual here as possessing subjectivity, we should not get too excited by the introduction of this term, as if Hegel were describing the essential genesis point of *human* consciousness as arising from digestion. The level of subjectivity involved in digestion and excretion is strictly animal and only as such is it applicable to the human, that is, to the extent that human beings are always also individual animals. Animal subjectivity does indeed manifest itself, in digestion, through the overcoming of its non-organic Other, within itself, as a "self-relation" that involves self "diremption and division" (M 404). However, the essential outcome here is the constitution of subjectivity as an *animal* individual, which only happens through the animal's "repelling of itself from itself (EN 365 Add., M404, W9 491)". This action is excretion: "The differentiation does not take place only within the organism itself; on the contrary, the nature of the organism is to produce itself as something external to it", i.e. as excrement, the necessary moment of self-differencing within formal "reproduction (EN 365)." ²⁴

As I mentioned above, individuality, for Hegel, generally involves exclusivity, the exclusion of what is "not-I", leaving **the formal I=I**. In the present context, the animal organism, in order to constitute and, above all, maintain and conserve itself ("in dieser Erhaltung seiner", W 9, p. 491, M 404)

²³ Douglas Finn writes, "that excretion is the animal's repulsion of the animal's own process of digestion from itself and a return of the animal into itself as a nascent subject." Or again, "the animal transcends that process and 'knows' itself as a universal power greater than its externally oriented activity, as subject, being-for-self." I would simply add "individual" before "subject" in these sentences. *The Owl of Minerva* 47:1–2 (2015–16) p. 130.

²⁴ Regarding the genesis of specifically human subjectivity, we have to refer to the "Anthropology" section of the *Philosophy of Subjective Spirit* (ESS), and to a discussion of human reproduction. See ES §405, "Initially, feeling individuality is certainly a monadic individual, but it is so immediately, not yet as it is itself as an into-reflected subject…" And in the Remark: "In its immediate existence this is the relationship of the child in its mother's womb." *Hegel's Philosophy of Subjective Spirit*, vol. 2, edited, translated and notes by M.J. Petry (Dordricht: D. Reidel, 1979) p. 221. Perhaps we might say that the subjectivity of the animal individual persists in the human animal as a form of unconscious mind.

as a self-relating *individuality*, must expel its internal differentiation, its "entanglement (*Verwicklung*)" with otherness in the form of "superfluous" excrement. **Through the expulsion of its entanglement with otherness, what is formally reproduced is the** *self-produced* **(formal) reality of individual wholeness that characterizes animal life. For our investigation, we are left with the following questions, which I will return to below, along with the question of systematic superfluity: does the system of Science, qua organic, indeed present itself as an individual, and not only as a syllogistically accomplished Singular (universal)? And if so, what form of systematic excrement might perform and even guarantee such self-reproductive, self-maintaining, exclusive individuality²⁵?**

Purposiveness. The third organic element that arises through the acknowledgment of the excretory function of the individual animal organism is purposiveness. Of course, the question of "purposiveness" cannot help but evoke its elaboration in Kant's third *Critique*, in his discussion of that regulative idea as ideally active within nature, underlying both its holistic beauty and its scientific comprehensibility. As I mentioned above, Karen Ng's recent book strikes me as exemplary in its investigation of the notion of life, in Hegel, as tangential to the Kantian notion of purposiveness, and indeed Hegel himself recognizes the Kantian notion as simply subjective idealism's approach to what is, in fact, the agency of the Concept. Here, I am concerned with how organic purposiveness arises through animal excretion, and further, how the biological concept may be applied to the system of Science as an organic whole.

At the end of the substantial Addition to EN 365 that I have been referring to throughout, Hegel states, "In truth, the activity of the organism is purposive (zweckmässige, W9 493, M406)." This "truth" is arrived at because, as is usual in Hegel, its certitude has been there from the start. What is

²⁵ For now, I will forgo the pleasure of reading Hegel's thoughts on animal individuality into a Hegelian critique of liberal individualism generally.

rejected or expulsed in animal life, relative to the pre-conceived and realized end or purpose (Zweck), is therefore the *means* to that end: the "repudiating and rejecting [of the] means" of the digestive process, as "superfluous" with regards to the general certainty of immediate assimilation "in itself", which we visited above. That is why Hegel, somewhat surprisingly, talks about "Reason" in the Remark to EN 365. The "satisfaction" that the animal experiences in excreting the elements involved in its digestive means to an end "conforms to Reason" because, as the *Phenomenology* has taught us, Reason is the "certainty of [individual] consciousness of being all reality (MPh 233, W3 179)²⁶". Here, the certainty is that of immediate **digestive** assimilation: "the immediate action of life as the power over its non-organic object (EN 363 Add, M 394)". This power over the non-organic Other "presupposes" that this Other is "in itself identical with it", a certainty appearing as "ideality and being-for-self (Fürsichsein)". In syllogistic terms, which Hegel employs in the Remark to EN 365, the expulsion of the trace elements of particularity (solvent bile and the stuff that it was opposed to) as excrement, leaves behind the pure ideality of Universality and Singularity, in the form of subjective animal individuality. It is this "purposive activity", in digestion and excretion, that realizes its end or "purpose [Zwecks] (EN 365 Remark, W 9 483, M397)" in the "union [Zusammenschliessen] of the organism with itself. (ibid.)" The culminating self-uniting that constitutes the purposiveness attained through digestion and its outcome is one of individual ideality. It is a Schluss (conclusion, syllogism) de-void of its own particularity, which the animal organism has expulsed, voided as the superfluous entanglement with non-organic otherness.

The purposiveness attained through animal excretion is presented by Hegel as a self-affirmation or "self-confidence [Zwersicht] (M405, W9 492)" on the part of the organism, which has not only triumphed over the outer non-organic object but, more importantly, has triumphed over its own digestive entanglement with that object. Purposiveness, in this light, is certainly an affirmation

²⁶ MPh = A.V. Miller's translation of the Phenomenology of Spirit, followed by the paragraph number.

of life but only if we take this affirmation as the "satisfaction" of Reason, that is, of its truth: ideality as the achieved identity between the organic and the non-organic, "the subjective [...] identity of its concept and its reality" (EN 365 Remark, M 397, W9 483)". Such a truth results from the animal organism's actual overcoming of its "one-sided [oppositional] subjectivity" and "anger towards the object (ibid.)", an anger now expulsed as excreted bile. However, one must not expect too much from the digestive "Schluss" or syllogism. It only attains the formal "Zusammenschliessen" devoid of mediating particularity, which it has expelled as "a false opinion ((M403, W9 490)", rather than as a constitutive error. That is what I believe Hegel means when he writes, "The syllogism of the organism is, therefore, not the syllogism of external teleology (EN 365 Remark, M 396)." As opposed to this "universal syllogism of purposive activity (ibid)", which takes the form of U-P-S, where the particular moment constitutes the essential content of the whole, the behavior of digestion is only "expounded in the second premise", that is, in the moments of particularity, which, when excreted, present the organism solely as a "uniting of itself with itself [Zusammenschliessen]", which I have presented according to the Fichtean formula, I=I.

Nonetheless, in excreting its involvement with non-organic otherness as a means to an end, the animal organism affirms itself as that end qua pure ideality, which is the essence of its purposiveness. If, through digestion, the organism "takes and wins nothing but chyle (M397)", it is because chyle is the same as "animal lymph" and blood, and the biological essence of each is to circulate. Briefly, we may surmise that the result of mediated digestion is circulatory fluidity within the organism. The power that drives the inner circulatory movement essential to the animal organism, that which animates it and constitutes its anima, is the purposiveness of pure ideality, the power of the idea, which posits the excreted digestive process as superfluous to its **immediate truth** or self-certainty.

However, we can also say that the end of the digestive process, as ideality, as the selfconfident self-affirmation of the organism, is the immediate feeling of its individual life as a truth that is more than the sum of its internal, animal processes, which it has excreted as superfluous. From this point of view, the upshot of the process, as a pure Zusammenschliessen, is therefore characterized by a feeling of "satiation, the self-feeling which feels completeness in place of the previous lack" (EN 365 Add., M406, W9 493). Douglas Finn's reading of purposiveness (although he does not refer to it as such) as "the unified organizational activity of life" which refuses to "be reduced to any one of its processes", captures the general idea of the feeling of organic satisfaction that Hegel describes, as arising from the process of excretion. In excretion, purposiveness is thus presented as a feeling of self-confidence, one resulting from the expulsion of its self-doubt, the false opinion that arose through the organism's entanglement with the non-organic. In excretion (defecation), the animal is affirming: "That's not me! I am more than that! I am more than the functioning of my digestive organs!" However, as pure ideality, exclusive of particular process, the feeling of self-confidence, of jubilant, self-organizational power or vitality must also be one of emptiness, of renewed hunger. While this is not apparent to the satisfied animal, as philosophers of nature we know that the truth of the animal's feeling of completeness is really an immediate form of self-certainty, which, as natural feeling can be nothing other than fleeting, for hunger is, like excretion, a fundamental element of life: "Only what is living feels a lack," as Hegel succinctly puts it, in the Remark to EN 359 (M385).

4. Animal Organicity and Science

Recall that my intention is to explore the limits of Hegel's own notion of animal organicity as it is heuristically applied to his system of Science, an application that he himself invites us to make, for example, by describing that system as "organisch" (Encyclopedia,

Philosophy of Spirit 379 Add., W10 15), as well as in presenting the life of the Idea in organic terms in the EL, which I quoted at the outset. My investigations into Hegel's presentation of the excremental dimension of animal organicity has revealed crucial aspects of superfluity, individuality and purposiveness. I would like to now briefly apply these elements to the organic systematicity of Science, shedding new light on it. Nonetheless, as we will see, the excremental elements also reveal the limits of conceiving Hegel's systematic project solely according to the trope of animal organicity.

First, regarding superfluity, as we have seen, what the animal excretes as superfluous are elements of its own animality qua the particular, mediating processes of digestion. Is it possible to read this notion of superfluity into the system of Science, where the mediating process of particularity per se is found to be "de trop" and expulsed?

Such systematic excretion must contain the two fundamental elements of particularity that we have discovered, together but no longer in a dynamic, interactive relation. They are elements to be analyzed, as Berzelius did, in the fecal material itself: solvent bile and non-organic material (i.e. material to which the organism has stood opposed). I believe we can establish that, from the point of view of the system of Science, what is excreted is essentially linked to the understanding (*Verstand*) as a type of abstract thinking that stands apart from and opposed to its object. In this sense, *das Verstand* indeed represents false opinion and may be judged repulsive²⁷ to the scientific organism. My affirmation is supported by the last lines of Hegel's Addition to EN 365:

The *understanding* pretends to know more than speculative philosophy and loftily looks down on it; but it remains confined within the sphere of finite mediation [i.e. particularity], and vitality as such is beyond its grasp (my emphasis, M406).

²⁷ « Das abstrakte Abstossen seiner von sich selbst... ist die Exkeretion (sic. W9 492) ».

Of course, we know that the *Verstand* is absolutely essential to the organism of Science. The understanding's reflections provide the mediating, particular content of Science, the locus and process of systemic "digestion", whereby Science proves itself to be "inhaltsvoll". However, the *Verstand*, as a process does operate according to the binary logic of particularity, involving both the subjective (bilious) negativity of reflective thought, along with its "one-sided (W9 483)" approach to its object as Other. Further, we can also affirm that the *Verstand*'s action is digestive, breaking elements down, analyzing them and producing abstract judgments that cause us to "hold our nose" when they "come out".

All men are mortal; Caius is a man; therefore, he is mortal". I at least have never come up with anything as boring. It must be produced in our gut, without our consciousness. Certainly, many things are produced in our gut, for example the production of urine, and still worse, but then when that comes out, we plug our nose. The same goes for such an argument.²⁸

In fact, Hegel's detailed presentation of the animal digestive system, with its references to the empirical sciences of the day, is a perfect example of the understanding at work within Science, along with its (small c) concepts or judgments. However, the *Verstand* itself tends to remain fixed in its own oppositions, for example in the "external relationships [that are alternately] mechanical and chemical in nature (M406)", which we discussed above. Thus, taken outside the purposive, systematic context, the understanding and its work appear as repulsive, "disgusting" and superfluous. Perhaps, at this point, we can **venture** that what appears as superfluous and repulsive to the organic system of Science is its own necessary reliance on the understanding and its concepts and, more explicitly, on the

²⁸ Hegel, *Werke* 2 541. The same link between the judgements of the understanding and excrement is made in the *Phenomenology*: "The consciousness of the infinite judgement that remains at the level of representation (*Vorstellung*) behaves as pissing (MPh 346, W3 262)".

²⁹ Recall that, "The organism in thus separating itself from itself is disgusted with itself [*erkelt er sich selbst an*]" (§365 add., M405, W9 492).

common language grammatical forms of **predication** in which the meaningful mediation of its "digestive" process takes place³⁰. Briefly, what the system of Science expulses and finds repulsive is may well be its own "entanglement" **in the representational language and judgment forms** of the understanding upon which it relies for the particular content that enlivens its syllogistic life.³¹

Let us move on to the notion of individuality as it comes to light in the context of animal excretion and consider how it might appropriately apply to the organic system of Science. As we saw above, in its digestive comportment toward "the individual thing", the animal "has proven itself to be an animal individual (M 404)". This individuality is subjective or "for-itself" because "the organism in constituting itself a subjectivity is immediately a repelling of itself from itself (ibid.)". Briefly, the animal has "in a real way... become an individual" through the action of expelling the **constituting otherness** of *itself*. Individuality is thus formed in the "self-relation (ibid.)" that has excluded its own internal difference. In this way, "the organism produces itself as something different from itself (ibid.)", which is the essence of animal reproduction. However, as "the form of abstract, formal repulsion(M404)", what excretion produces is subjective individuality itself, devoid of mediating characteristics (I=I).

Although "abstract", excretion is nonetheless a fundamental moment of animal reproduction per se, underlying the subsequent stages of the constructive instinct and the

³⁰ If I had more time and space, it would be pertinent to refer here, in a detailed way, to the "speculative sentence" paragraphs of the Preface to the *Phenomenology*. There Hegel writes, "The philosophical proposition, since it is a proposition, leads one to believe that the usual subject-predicate relation obtains... But the philosophical content destroys this attitude and this opinion". And most importantly, for our discussion on the excremental character of the "usual" judgments of the understanding: "The one method interferes with the other, and only a philosophical exposition that rigidly *excludes* the usual way of relating the parts of a proposition could achieve the goal of [speculative] plasticity (my emphasis, MPh 64, W3 60)."

³¹ In the Preface to the *Phenomenology*, Hegel refers to such entanglement as a "Vermischung der speculativen und der räsonierenden Weise" (MPh 64, W3 60).

genus process. Regardless of how distasteful we might find this idea, the comingling of the excretory and the reproductive is physiologically presented in the fact that "in the animal organization, the organs of excretion and the genitals, the highest and lowest parts, are intimately connected (ibid.)", or where "...speech and kissing, on one hand, and eating, drinking and spitting, on the other, are all done with the mouth (ibid.)." Similarly, as "formal", excremental reproduction remains an exercise in *self*-production, as we have seen. This conclusion is important when we turn to the Scientific dimensions of organic excrement.

It is clear that Hegel's idea of animal excretion as a form of reproduction, when applied to the organicity of the system, presents that system as an individuality, one which is for-itself and hence subjective. The philosophical system, thus presented, is not merely a singular, nor even a universal Singular, according to the ontological elenchus of the "universal syllogism of purposive activity (EN 365 Remark, M 397, W 482)"; it is an *Individualität*, and as such should be seen as an organic, self-preserving identity that maintains and affirms itself through the expulsion of inner differentiation. However, assigning the characteristic of selfpreserving or maintaining to Science does not immediately imply that the system is selfconscious in actively seeking its own preservation, as the human animal might be said to do. While the fully accomplished *Encyclopedic* system may indeed be self-aware or self-conscious, at the "animal" level of Science, that is, as an excreting, self-moving organism, selfpreservation might be construed as instinctual, pre-reflexive and immediate. The Scientific individuality arising from systematic excretion may be conceived as self-preserving simply because that is what it means to be an individual animal organism. From this perspective, we might simply remark that the fact that the Hegelian philosophical system has maintained and preserved itself for almost two centuries is sufficient proof of its organic individuality.

Further, if the amount of scholarly activity in Hegel studies testifies to the system's vitality, then we may certainly judge the Scientific "animal" to be alive and self-maintaining.

The ongoing actuality of Hegel raises an important consideration: if we take the organic aspect of his system seriously, and recognize that, as an organic individual, it has maintained itself over time and is thus alive and active today, with its digestive system fully functioning (i.e. within all the dialectically treated particular content of Logic, Nature and Spirit), then we might ask ourselves: what might be recognizable as present-day excreted material? While it may be tempting, particularly to those who have no taste for Hegel, to see all of us who write on Hegel as excrement produced by the organic system, the Hegelian analysis of fecal matter has shown us that this is not necessarily the case.³² Animal excrement, as we have seen, is essentially made up of bile and non-organic material, a binary configuration that we have likened to Hegel's grasp of the Verstand. Given this, the criteria for contemporary membership in the systematic excretion club are simple: conceive of mind as a subjective, individual, reflective exercise biliously aimed at understanding, i.e. at solving, analyzing, explaining etc. a self-subsistent material (non-ideal) reality over against which it stands. Such basic requirements might therefore include thinkers in the neo-Kantian tradition, in logical positivism, in realist empiricist traditions, and perhaps in analytic philosophy generally. Above all, what the system excretes is any form of thought that does not recognize the prefigured, ideal complicity between the "organic" and the "non-organic". While I cannot develop the idea further here, excreted figures of thought look a lot like

³² Are we parasites? Perhaps. More likely, zookeepers, veterinarians, practitioners of animal husbandry?

forms of natural consciousness as Hegel presents it at the outset of his *Phenomenology of Spirit*!

Finally, let us look at the purposive aspect that we discovered above, in our examination of Hegel's presentation of animal excretion. There, purposiveness appeared as pure ideality, as an immediate Zusammenschliessen, a self-confident self-affirmation resulting from the excretion of the mediating digestive process as "superfluous". In the animal organism, the feeling of such purposive ideality qua vitality and satiation nevertheless opens onto an inevitable resurgence of hungry lack, and a rapacity that is tantamount to organic life itself. To be an animal organism is to assimilate the non-organic, to excrete, to feel satisfaction and to be hungry for more. If we conceive of the organicity of the Hegelian system in this way, then its self-maintaining individuality and its purposiveness should be expressed as the vital self-affirmation of its own ideality, and perhaps of idealism generally. Further, the same ideality might now be conceived not just as an openness to new content, an idea of open systematicity that often accompanies the use of the organic trope in Hegel studies, but as a systematic *hunger* for content, derived from the very affirmation of its ideal vitality and the "triumph" over its entanglement with digestive otherness. Briefly, the idea of systematic excretion presents us with the idea of an organic philosophical system that is selfmaintaining through an actual hunger for new content.

The purposive element of self-affirmation and hunger is easily observable in the constantly expanding areas of Hegel studies, where the philosopher's thought has been applied to virtually all areas of contemporary ethics, natural science, logic, law, education, history, art, religion, biology, including animal excrement! The organic approach to Hegel implies that it is the purposiveness of the individual system itself that demands such content, such food for thought.

One cannot escape the feeling that there is something monstrous about such a philosophical animal, satiated, self-affirming, triumphant and yet constantly hungry for new content, excreting forms of thought that it finds repulsive³³. And this monstrous aspect is perhaps especially the case for forms of thought and culture that object or refuse being conceived of as "non-organic", and resist assimilation into the organic system. Rather than avoid or shy away from this issue, which arises through our discussion of organic systematicity, it must be fully recognized as an unfortunate element of the organic trope, one which has nonetheless come to light through our discussion of systematic excrement. However intriguing, necessary and certainly enriching we may find such critical considerations into the monstrous nature of an organic philosophical system, I will leave them suspended for now.

The excreted forms that "are repulsive" to the system are nonetheless meant to bring about a form of organic reproduction. Rather than seeing this as an unreconciled contradiction or irony, Hegel invites us to acknowledge the essential ambiguity of reproduction itself: the fact that it must involve "products" that are both ours and not ours, both "us" and "not us". Anyone with children understands this without further explanation. The reproductive aspect of excretion is the final element that needs to be approached when the organic trope is applied to Science. On the level of systematic Science, how might we understand excrement as an ambiguous form of reproduction?

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³³ Monstrous: as that which is hybrid, both animal and something else, and shows itself (*montrare*). In the recent film *Life*, astronauts inadvertently "hatch" an alien lifeform on their spaceship. Fascinated by this instance of extraterrestrial life, the humans seek to nurture it. However, as an animal lifeform, the "monster" is monstrously hungry, growing in size and appetite until it gobbles up all the astronauts and, one supposes, the world from which they come. In conceiving their animal organism, however, the screenwriters neglected to consider the fundamental element of excretion, as is the case with Hegel specialists who apply the organic trope to their philosopher's system.

It should be stressed that I am not following through Hegel's discussion of reproduction, in its later stages: the constructive instinct and finally, reproduction through the sexual relation, productive of the genus. While it may be tempting to apply these reproductive features to the scientific organism, for now, I must leave it to the reader to imagine what "nests" the system of Science might construct and, above all, how it might meet and mate with other organisms of thought! Here, I simply want to apply to Scientific reproduction what we have learned about animal excrement. If what is excreted consists of forms of Verstand (bilious, abstract thought over against a self-less reality), then how can this result be seen as Hegelian Science's reproduction of itself, particularly when the excreted material is presented as polemically opposed to (and repulsive to) the organic system? Perhaps the answer here might involve taking such expulsed forms of thought as nonetheless attributable to the system, and that, for the very reason that they have often come about in opposition to the metaphysical, systematic demands of Science. More succinctly, the organic system of philosophy will naturally produce forms of thought that are inimical to the claims of Hegel's organic system of absolute idealism³⁴ but which are nonetheless engendered by that system. Can we not therefore say that these reactionary forms stand as excreted (re)productions, ambiguously begotten by the system of Hegelian Science itself? Do they not represent, in other terms, as Hegel presciently wrote at the end of the Preface to the *Phenomenology*, "the feet of those, already at the door, who will carry you out (W3 67)"?

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³⁴ This claim is supported by the fact that at least three decades of contemporary Hegel studies, e.g. from Kaufman's *Re-interpretation* (1977), through Stewart's *Myths and Legends* (1996), to Redding's *Analytic Philosophy and the Return of Hegelian Thought* (2007) have been largely devoted to rehabilitating Hegel against contemporary "excremental" philosophies.

Conceiving the organicity of Hegelian Science in light of the animal organism's formal reproduction as individual purposiveness (I=I) seems to condemn Science to endlessly juxtapose itself to the other philosophical systems that it both excludes and posits. In other words, the individuality of Science seems to contradict the integrative universality that it claims. Hegel addresses this problem in the Introduction to the *Phenomenology* (MPh 76, W3 71), where individual philosophies of the understanding present themselves as an "empty appearance of knowing". The problem, of course, is that "Science, just because it comes on the scene, is itself an [individual] appearance (ibid)".

The response to this apparent contradiction is only to be found by moving beyond purely animal organicity and recognizing that the Absolute Idea, which completes the system of Hegelian Science, only comes on the scene when the "Life (EL 216)" of the Idea has been supplemented with "Cognition (EL 223)". Only then may we speak of Science as espousing the animal form that Hegel is finally interested in: that of the rational, conscious human being, for consciousness involves the dynamic, reciprocal relation with otherness that goes beyond that of digestive assimilation.

Our investigation into Hegel's conception of the excremental activity of the animal organism has shown that it does not contradict his systematic grasp of Science. Rather, recognizing the animal production of excrement shows how the system is meant to be individual and purposive. However, to round out and complete the organic conception of the Idea in its Scientific configuration, we must acknowledge the limits of the purely animal trope. The crucial elements of human cognition have yet to be demonstrated. Only then, has "this life [become] the

absolute Idea (EL 235)", the "One Totality", an organic configuration that is individual, purposive and, above all, capable of self-knowledge.