

**Raw Materials. Half Creatures and Complete Nature in Shelley's Frankenstein and Homunculus in Goethe's Faust II**

**INTERACTIVE ARTICLE COVER**

**About the Journal**

<b>Journal DOI</b>	<a href="https://dx.doi.org/10.21659/rupkatha">https://dx.doi.org/10.21659/rupkatha</a>
<b>Journal Home</b>	<a href="http://www.rupkatha.com">www.rupkatha.com</a>
<b>Indexed by</b>	<a href="#">Scopus</a> <a href="#">Web of Science: Emerging Sources Citation Index (ESCI)</a> <a href="#">DOAJ</a>
<b>Journal Metrics</b>	CiteScore 2020: 0.2   SJR 2020: 0.162   SNIP 2020: 0.193   JCI 2020: 0.50

**About the Issue**

<b>Issue</b>	<b>Volume 14, Number 3, 2022</b>
<b>Editor</b>	<a href="#">Tirtha Prasad Mukhopadhyay</a>
<b>Affiliation</b>	Universidad de Guanajuato
<b>Issue DOI</b>	<a href="https://doi.org/10.21659/rupkatha.v14n3">https://doi.org/10.21659/rupkatha.v14n3</a>
<b>TOC</b>	<a href="https://rupkatha.com/v14n3.php">https://rupkatha.com/v14n3.php</a>

**About the Article**

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<b>Author ID</b>	None	
<b>Funding</b>	<b>No funding received. Published free of any charge.</b>	
<b>Article DOI</b>	<a href="https://doi.org/10.21659/rupkatha.v14n3.09">https://doi.org/10.21659/rupkatha.v14n3.09</a>	<b>Pages: 1-15</b>
<b>Abstract</b>	<a href="https://rupkatha.com/v14n309">https://rupkatha.com/v14n309</a>	
<b>Full-text PDF</b>	<a href="https://rupkatha.com/V14/n3/v14n309.pdf">https://rupkatha.com/V14/n3/v14n309.pdf</a>	
<b>Article History</b>	<b>First Published: 07 October 2022</b>	
<b>Article Impact</b>	<a href="#">Check Dynamic Impact</a>	
<b>Copyright</b>	<a href="#">Aesthetics Media Services</a>	
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# Raw Materials. Half Creatures and Complete Nature in Shelley's *Frankenstein* and Homunculus in Goethe's *Faust II*

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## Abstract

Why did Mary Shelley's famous Creature meet its ends in the eternal ice of the Arctic Sea? What made it possible for Goethe's Homunculus to finally break free in the Classic Walpurgis Night? Both remote places fulfill the destinies of two of the most famous laboratory-made artificial human beings in Western literature, the Creature of Frankenstein, and the "little man", Homunculus. They are born as *half-creatures*. Shelley's Monster as pure body, Homunculus as pure spirit, locked up in a phial. Their lives on earth circle around one purpose: to create themselves as complete human beings, by achieving what they miss: a soul for Shelley's Creature, a body for Goethe's Homunculus. This article aims to present a systematic purification and comparison of the creations, lives, and ends of the Monster and Homunculus. My thesis is that each of them literally *embodies* two opposite and contemporary views of nature, identified in their own time as respectively materialistic and vitalistic positions. By comparing these life spans it is possible to shed light on Shelley's and Goethe's literary investment in the debate.

**Keywords:** Frankenstein, Homunculus, Goethe, Mary Shelley, materialistic and vitalistic, worldview

Two entirely different worlds are conceptualized in Mary Shelley's novel *Frankenstein, or the Modern Prometheus* (1818), and in the second act of Johann Wolfgang von Goethe's play *Faust II* (1832). Shelley set her ending in then still unseen icy wastes of the Arctic north, while Goethe described the creation of the world in the Classic Walpurgis Night – an allegorical place beyond space and time. Both these places can be considered as literal *utopias*, as places *ou topos*, places of no-where. They seem to be created for one purpose only: to fulfill the destiny of artificial human beings, the famous Creature of Frankenstein, and the less famous "little man", Homunculus.

As I will argue in this article, these worlds were fundamental parts of larger schemes, where one key element is physical matter, *raw material*, and another is *creation*. Both creatures were created in laboratories; both fulfill their destinies at the world's end. Their stories embody two different world views, and two opposite versions of the quintessential romantic problem: what is the origin of life? In Shelley's novel, the question is posed: *what is the secret of life?* The longing of Faust, famously expressed in *Faust I*, can also be recognized as the main theme in the second act of *Faust II*: to discover *was die Welt/ Im innersten zusammenhält* (Goethe, 2003, 382-383).<sup>i</sup>

The creative acts in these two stories can be seen as conceptualizations of nature: both the Creature and Homunculus are made of organic matter, made by means of science and without divine assistance. Both stories benefit from being treated as conceptual investigations, exploring the imaginative potential of the promises science seemed to be making at the time: galvanism, electricity, magnetism – chemistry, alchemy, evolution. Literary texts can offer broader conceptual investigations than those of science itself, as they perform imaginary experiments and

explorations. This is what both Shelley and Goethe do, by staging, using and expanding contemporary discourses of knowledge, combining them with the myths of Prometheus and Faust.

The experiments in the laboratory are only partly successful. Both the Creature and Homunculus appear as *half-creatures*, and opposites: the Creature is a pure body, "born" without a soul; Homunculus is a pure soul, without a material body, locked up in a bottle. In the center of their narratives are their urge and longing to *fulfill themselves*, and become complete as real human beings. They do so by meeting their destiny in specially designed worlds.

The conceptualizations of the two worlds are developed in close parallel with the stories of the creation of the human. As both the novel and the play are plotting around man-made human beings, creation and creativity per se are also put into play, connected to the longing for knowledge, and connected to the underlying question of the nature of the human.

Both texts were written in a pre-Darwinian time, within the contemporary debate on a materialistic versus a vitalistic worldview. By Shelley's contemporaries, *Frankenstein* was accused of promoting a materialistic and ungodly worldview, and the creation of Homunculus is a powerful defence of vitalism.

### **The creation of Frankenstein's Creature - the end of the world and the secret of life**

It was on a dreary night of November that I beheld the accomplishment of my toils. With an anxiety that almost amounted to agony, I collected the instruments of life around me, that I might infuse a spark of being into the lifeless thing that lay at my feet. (Shelley, 1994, p. 38).

In *Frankenstein's* famous creation scene, the distinction between the raw material and the spark of life is surprisingly clear: the *raw material* is lifeless; the spark of being is infused by the scientist. The raw material Frankenstein selects for his "human being in perfection" is as beautiful and lifeless as Arctic nature. The body parts were selected for their beauty, like in the myth of Zeuxis: "... his hair of a lustrous black, and flowing; his teeth of a pearly whiteness..." (Shelley, 1994, p. 39). They were snatched from graveyards and picked from charnel houses, each piece cut from different, anonymous dead bodies, with no trace of their former personae. The creation starts with a bodily *terra nullius* – a piece of land, or nature, that nobody could claim.

Shelley could indeed have chosen Frankenstein to animate a corpse, but then the plot would have had a totally different premise: to reanimate a corpse would imply the possibility to bring a formerly living person back to life. That would thus imply investigating a totally different matter. At the very moment of animation, the beauty of the Creature disappears. The mere sight of the moving mass of dead body parts hits the creator as *breathless horror* and total collapse. Death was beautiful, but life is filled with horror. Two variations on the same theme meet in the moment of animation: the scientific instrumental approach towards nature and the gothic focus on death. Frankenstein flees in terror, leaving the lonely creature behind to discover what sort of creature he is. The Creature is pure body, mentally a *tabula rasa* and noble savage, disposed of for good and beauty – but he is transferred into pure evil as he repeatedly experiences the denial of human companionship, and finally Frankenstein's refusal to make him a bride. The creator and the creature form a symbiotic *double* of hatred and revenge, chasing each other to the end of the world for destruction and death.

## The spark of life

How did Frankenstein animate the lifeless body? Mary Shelley had substantial knowledge of both contemporary and public science, and informed readers would recognize her allusion to Humphrey Davy, Erasmus Darwin and Luigi Galvani, to electricity and galvanism, etc. (Vasbinder 1976, Mellor 1988, Butler 1996, Marshall 1995, Knellwolf & Godall 2008). In *Commentary on the Effects of Electricity on Muscular Motion* (1791), Galvani argued for the relationship between electricity and animation by presenting the hereto-neglected vital spirit in animal tissue, the "animal electricity". It was soon known as "galvanism", and adapted in different public experiments, and most sensationally when Giovanni Aldini animated the corpse of Georg Foster in 1803. Through Percy Shelley, Mary was also familiar with the theories of Dr. Adam Walker, who, according to Anne Mellor, identified electricity as the spark of life itself (Mellor, 1998, p. 103). "The instruments of life" can be envisaged as including a huge galvanic or Volta battery (Butler, 1994, p. xxx).

Marilyn Butler has drawn attention to how the author, her circle, and thus the novel supported the so-called radical new sciences (Butler, 1996). Persons close to the *Shelley circle* argued loudly for the radical materialistic views, and Shelley's novel was immediately after publishing connected to the new sciences and accused of blasphemy. The new sciences represented a materialistic view of nature in the ongoing debate on the nature of matter itself; and the nature of the "spark of life". What did matter consist of? How was it put to work? Could nature be regarded as pure matter, and thus lifeless – or, on the contrary, did matter contain some vitalistic force? Was this spark of life something other than matter, or was it an inseparable part of nature? At the core of this debate lay the question of the nature of the vitalist force: was it different from matter, a metaphysical phenomenon, something beyond nature, like – or unlike - God? The issue went beyond science and involved contemporary politics, the establishment, and the very social order, with its fear of instability and revolution, and eventually, the reality of God.

## Creation

Initially, Frankenstein discovered and learned to isolate the spark of life by studying the putrefaction of raw material:

I paused, examining and analysing all the minutiae of causation, as exemplified in the change from life to death, and death to life, until from the midst of this darkness a sudden light broke in upon me – a light so brilliant and wondrous, yet so simple... (Shelley, 1994, p. 34)

In this quote, the «spark of life» gets a double meaning: Frankenstein discovers the secret of life by reversing putrefaction, as he himself is struck by the spark of creativity and artistic genius – like a bright light in the darkness, coming from outside. In the 1831 version, Shelley has Frankenstein describing this as an experience of "madness" (Shelley, 1992, p. 27).

The idea of the spark of life lived on outside scientific discourse. Mary Shelley's contribution to its popularity was substantial. She mentioned Prometheus only in her title line but obviously opens the possibility for Frankenstein to be "a modern Prometheus". Frankenstein's "spark of life" refers to creativity and creation in the broadest sense.

The myth of the creative and defiant Prometheus is one of the popular symbols in romantic art, poetry, and literature. In Germany, Goethe and Schiller connected Prometheus to the individual artist and the creativity of the genius. In England, the infatuation had stronger political connotations. Here, Prometheus became the rebel who defied the gods and loved humankind. His liberating potential of the figure echoed the ideals of the French Revolution, thus concerning not only the single genius, but the entire humankind (Dougherty, 2006, p. 101-102). Lord Byron wrote his *Prometheus* in the summer of 1816; Percy Shelley's *Prometheus Unbound* was published in 1818.

Mary Shelley presented an entirely new perspective: A strong and inevitable connection between creativity and destruction, between the application of new technology and science and their inevitable consequences. In her version, destruction is an indispensable part of creation, creativity, and the artistic process. This duality is reflected in the relationship between Frankenstein and his Monster, the creator, and the creature – eventually staged in the Arctic landscape. Anne Mellor has drawn attention to how *Frankenstein* can be seen as a feminist critique of science: the strong hubris in the scientist's desire to intervene in nature, and the pursuit of nature's secrets. Even more important is Shelley's use of the Arctic landscape as an emblem of the mysterious forces of nature. The pursuit of life is connected to death, and death to the seemingly lifeless matter of the Arctic nature.

### **The land of eternal ice**

Shelley begins and ends her novel in the Arctic Sea of ice. The two famous core stories of *Frankenstein* and the Creature are framed by a third narrative, the polar captain Walton's voyage to the north. Walton is the storyteller, who in letters to his sister first recounts the tale of Dr. Frankenstein, then the tale of the Creature, before he finally leads the reader back to the Arctic.

The third narrative was written between 1816 and 1818, while the newspapers were eagerly reporting on the British Navy's polar preparations (Riffenburgh, 1994). The Arctic, its nature and the poles increasingly became popular themes in literature and in art – from Coleridge's *The Ancient Mariner* (1797) to Ellen Anne Pordon's *The Arctic Explorers* (1818) (Ryall, Schimanski & Wærp, 2010). In the early 1790s, Robert Barker had successfully exhibited giant painted panoramas of the Arctic north in Leicester Square (Potter, 2007). In 1824, Caspar David Friedrich presented the iconic *Das Eismeer* in 1824, showing the wreck of HMS Griper, a ship from the Parry expedition to the North Pole.

During the last decades, several critics have investigated the Romantic fascination with the Arctic north. Jen Hill has pointed out that the Arctic was like a blank sheet, a place made for representation (Hill, 2008). In her description of early nineteenth-century visual interpretations of the Arctic, she emphasizes the endless stretches of *whiteness*. Russel Potter makes a point of the *silence* (Potter, 2007). During the eighteenth century, the conceptualizing of the Arctic turned towards what Chancey Loomis has labeled "the Arctic sublime" (Loomis, 1997). The Arctic was beyond physical reach for most people – and thus paradoxically at the same time also available for everyone. The Arctic became a particular place open for metaphysical as well as artistic and scientific speculation.

At the same time, natural landscape in general, and the Arctic scenery in particular, were places that appealed strongly to the romantic preoccupation with the underlying. Around 1820, a distinctive British romantic tradition arose that combined literature, science, and exploration. Magnetism was an important topic in science and polar expeditions, but also a consistent and ambiguous metaphor in the literature on the Arctic. Such metaphors could tie science, expeditions, natural forces, and mindscapes of literary experimentation, linking them explicitly to the Arctic. But no one explored the Arctic sublime more efficiently than Mary Shelley. More than anyone, she connected the metaphor of magnetism to the more general discussion on life and death, the Arctic landscape closely associated with lifelessness.

In *Frankenstein*, Walton stubbornly heads north. He overhears the increasing desperation of the crew and ignores the ice slowly freezing them in – as he cultivates his image of the Polar Regions as pure beauty and delight. In his letters to his sister, he holds on to his utopian expectations: "...sailing over a calm sea, we may be wafted to a land surpassing in wonders and in beauty every region hitherto discovered on the habitable globe." (Shelley, 1994, p. 5). As a true explorer, Walton wants to test the theory of open sea, perhaps also to find the fabled Northwest Passage and the magnetic North pole. However, the latter ambition goes beyond discovery for the sake of navigation. Searching the Arctic landscape, he wants nothing less than solving the old riddle of magnetism, going back to Thales and the subject of a manifold of conflicting scientific theories in an age of discovery and expeditions:

What may not be expected in a country of eternal light? I may there discover the wondrous power which attracts the needle; and may regulate a thousand celestial observations, that require only this voyage to render their seeming eccentricities consistent forever (Shelley, 1994, p. 5-6).

As Peter Kitson has noted, it is not clear which theories of earth magnetism Walton support: it could be the central magnetic core in the earth, as proposed by Halley (1682) and later by Erasmus Darwin, or perhaps the solar origin of the magnetic force, as suggested by Adam Walker (Kitson, 2006). More important in this context might be philosophical statements like those of William Gilbert in his highly influential work on electric and magnetic phenomena, *De Magnete* (1600), where he localized the magnetic power to the inner sphere of the globe and suggested that it was nothing less than the very soul of the Earth (Dusek, 1991, p. 141, Enebakk, 2014). Gilbert compared the polarity of the magnet to the polarity of the Earth and found that if aligning a perfectly spherical magnetic iron bar with the Earth's poles, it would spin on its axis, just like the Earth. In this way, magnetism appeared as the unmoved or prime mover, thus challenging both the notion of God and the traditional cosmologist view that the Earth was fixed at the center of the universe.

For Shelley's readers, the metaphorical sets of meanings would probably be obvious. The powers attracting the magnetic needle were obvious parallels to the "spark of life" discovered by Frankenstein, to the double face of creativity, and to the *hubris* of the discoverers of nature.

Both Frankenstein and Walton searched for the origin of life in the interiors of nature: the smallest part of the body, and the center of the earth. That leaves us with the raw material. What kind of nature is Shelley investigating?

## Coming home

In *Frankenstein*, Shelley emphasizes the importance of the visual again and again. Walton is blinded by the beauty of the frozen sea, but the mere sight of the animated mass of dead body parts immediately evokes senseless horror. This leaves the Creature in prohibitive isolation, never getting access to the human community or completeness as a human being. In the Arctic, however, the Creature is finally coming home to a powerful gothic expression of nature, and to the Arctic sublime: Created by lifeless nature, he returns to the lifeless, ice. By connecting the laboratory creation with the end in the Arctic, and the "spirit of life" with the raw material, Shelley draws a picture of nature as pessimistic as creation and creativity. Dead matter could never be given life, even if the spirit of life could be discovered and used: the nature of this spirit was, in the end, as lifeless as matter itself.

A motto from Milton's *Paradise Lost* (1667) is printed on the title side of *Frankenstein*:

Did I regret thee, Maker, from my clay  
To mould me man? Did I solicit thee  
From darkness to promote me?

The quote points to two different forms of existence: the artificial, animated by the creator, and the original, a prenatal condition, a non-material existence that is neither dead nor alive, but pure "darkness". Shelley suggests a completely materialistic and godforsaken nature and world as she ends her tale beautifully, with a description of how the creature "was soon borne away by the waves, and lost in darkness and distance" (Shelley, 1994, p. 191).

## Creation II: The spirit in the phial

An odd exchange takes place as bells of doom are ringing and Mephistopheles enters the alchemical laboratory of Wagner, the former servant of Faust, at the very moment of creation:

Mephisto: My welcome! It is kindly meant.

Wagner (apprehensively): Ah, welcome to the hour's good star. [...]

Wagner (more softly): a man is being made (Goethe, 1994, 6831-6835).<sup>ii</sup>

*Why does the guest bid the host welcome?* This peculiarity draws immediate attention to one of the dramatic nerves in this creation story: Who is the real creator of the manikin in the bottle: the scientist or the devil? What sort of science is involved: chemistry or alchemy? And finally, what sort of creation is going on here?

Goethe wrote the Faust-story his entire life. He worked on *Urfaust* in 1772-75, published *Faust. Ein Fragment* in 1790 and *Faust* in 1808 – but he was never satisfied with the story. The second part of the drama, *Faust II*, was published after Goethe's death, in 1832. The creation of Homunculus in *Faust II*, second act – the "passage of Homunculus" – can also be seen as a bridge between the two parts of the entire drama of Faust: Goethe's famous interpretation of the myth of the man who sold his soul to the devil, in exchange for one moment of perfection ('*verveile*

*doch*). What is at stake becomes clear by Goethe's opening of the drama, the prologue in Heaven: the soul of Faust is a bet between the Lord and Mephisto.

In Act II, the audience is invited to witness the hidden, yet manifest laws of nature by following the entire creation of Homunculus in two stages, from micro-cosmos to macro-cosmos, from the creation in the laboratory to the final shaping of the half-creature in the Classic Walpurgis night. As in Shelley's story of creation, the character of the raw material is closely related to the "spark of life". Where Shelley's creation story investigated a materialist view of nature, *Faust II* investigates the opposite, a vitalistic worldview, where the spirit of life may be inherent in nature. The story of the creation of Homunculus is also an outlining of a tension between two contemporary and opposite views concerning the processes in nature: the ideas of slow development versus sudden change.

### ***Raw material: alchemy versus chemistry***

The description of Wagner's raw material is sparse. The phial contains not, as Mephisto sarcastically suggests, a "loving pair", but a carefully mixed blend of "hundreds of ingredients", slowly heated over fire:

It shines! Now one may properly start hoping,  
That if, 'mid hundreds of ingredients groping,  
By mixing – for on mixture things depend -  
The stuff of humankind we keep composing,  
In a retort enclosing,  
And cohobating well the blend,  
The quiet toil will prosper in the end (Goethe, 1994, 6848-6854).<sup>iii</sup>

Wagner's creation has been seen as an allusion to Paracelsus' recipe of homunculi in *Of the nature of things* from 1537 (Gray, 1952). Initially, according to Goethe's secretary Eckermann, Goethe had not planned to write *Faust II*, but to publish his detailed outline for the second part of the drama in *Dichtung und Wahrheit* (Eckermann, 1986, p. 184).

In this outline, and like the "manikin" of Paracelsus, Goethe's "chemisch mensch" - was supposed to escape the phial immediately at the moment of creation, and to appear in flesh and blood. At this time, Goethe struggled with his age – he was almost 80 years old – and the lack of a "bridge" that could connect what he called the "pathetic end of Part One" to a new part (Goethe, 2003). In the published version of *Faust II*, however, the "chemisch mensch" remains trapped in the bottle until the great finale at the Walpurgis Night: "For natural growth the world's too small a place, / But art must be enclosed in its own space" (Goethe, 1994, 6881, 6884).<sup>iv</sup> This creature has no body, but is created as pure spirit, equipped with self-consciousness and a universal world calendar. He is also renamed by the alchemic term Homunculus.



### Raw material

According to Albrecht Schöne, one event was decisive when the aging Goethe decided to write *Faust II*: the news about Friedrich Wöhler's epoch-making urea synthesis (Schöne, 2003, p. 507). In a letter to Jönz Jacob Berzelius, dated 28th of Februar 1828, Wöhler described how he had succeeded in producing artificial urea "without requiring kidneys", by recovering a "crystallized substance" from ammonium cyanate. It could be that this artificial formation of urea was an example of inorganic matter being transformed into an organic substance. Berzelius, the highest authority in the field of chemistry, supported the prevalent opinion that this was impossible. To his former student, he replied ironically that his experiment might lead to the creation of a child in the laboratory (Schöne, 2011).

Wöhler's hypothesis was a challenge to an entire cosmology and suggested the possibility of creating life *from nothing*. His crystallization refuted the idea of "the great chain of being" and the vitalistic worldview.

Schöne sees Wagner as an ultra-modern biochemist, but the hybrid language of the creation scene brings together chemistry and alchemy. The concept of *crystallisation* was central in the new chemistry of Wöhler, but also in alchemical experiments. And the "right blending" can refer to the new chemistry, but also to alchemical experiments, where the exact blending, heating, and timing was of uttermost importance (Holmyard 1990, Moran 2005, Newman 2005). Alchemy and chemistry, however, are not two equal sciences posed against each other, but two world views. The different perspectives on creation decide the character of the raw material and the nature of the distinction between organic versus inorganic matter.

In the published second act, the creature is captured, and the connection to alchemy is obvious. The "chemisch mensch" from Goethe's notes is given an explicitly alchemical "name", Homunculus, described as a hermaphrodite and a virgin's son – all clear references to alchemic descriptions of the transformation of matter. As Ronald Gray has pointed out, Goethe describes Homunculus in terms of the Philosopher's Stone from the very outset:

The deep alembic now has passed,  
And like a living coal at last  
A fine carbuncular fire is glowing  
Into the dark its brilliance throwing/  
An incandescent white shines through!" (Gray, 1952, p. 213).<sup>v</sup>

Alchemy did not distinguish between organic and inorganic matter and rested on the understanding of life as inherent in all matter. Matter was always-already in change and transformation through the long-lasting processes of putrefaction and death before the return to *prima materia* and eventually towards higher and more ideal forms. The learned alchemist possessed privileged insight into the secrets of nature and the necessary knowledge of astronomy, and he knew how to speed up the processes of change.

If Homunculus is created by means of alchemy, this means that the raw material *in itself* contains the spirit of life. If the creation is based on the new chemistry, the matter in the phial is

as lifeless as the body parts stretched out at Frankenstein's dissection table. The "spark of life" has a name: Mephisto, the devil himself, who presented himself in *Faust I* "... part of the part that was the whole at first/ Part of the dark which bore itself the light" (Goethe, 1994, 1349-1350).

In this idea of creation, alchemy and chemistry are to be understood as different world views rather than equal, but opposite sciences. They represent slow development and "sudden change, opposites that concerned Goethe intensely in his scientific texts. According to Peter D. Smith, the poet viewed the "universe as a dynamic, organic whole" (Smith, 2001, p. 199).

As they meet for the creation, Mephisto welcomes Wagner, and Wagner welcomes Mephisto. Homunculus greets Wagner as his "father" and Mephisto as his "cousin". As act II starts, the entire drama is in crisis. Mephisto has brought Faust with him, but Faust sleeps in a room nearby: Faust is paralyzed, and in alchemistic terms, sleep is equal to death. Faust's sleep thus threatens the bet for his soul between Mephisto and the Lord. This might be the lacking "bridge" of Goethe: Homunculus is created as a substitute, a double, for Faust until he is spiritually reborn and able to approach Helen of Troy.

According to David Luke, Goethe revealed in conversations with Eckermann that Homunculus could be understood as "pure entelechy", a Leibnizian monad, as the pure spirit of life. As Luke points out, Goethe immediately established a connection to the Faustian ambition: "Since I exist, I must find things to do." (Luke, 1994, p. xxxff). The luminous Homunculus shows the way through darkness, leaving Wagner behind and bringing Mephisto and the still sleeping Faust to the Classical Walpurgis Night – also called the "Sturm und Drang of the classical world" (Gearey, 1992). Here, they separate, each to fulfill their own tasks: Faust is awake, searching for Helen of Troy, Mephisto to learn about pre-Christian age, Homunculus to break the glass.

### **Towards Southeast! Classical Walpurgis Night**

Your favorite quarter, Satan, lies northwest of here,

But we must sail southeast on this occasion. (Goethe, 1994, 6950-6951)<sup>vi</sup>

Shelley's novel was for reading, Goethe's piece was written as a play, meant for the stage. The shift of scenery as the audience follows Mephisto, Faust, and Homunculus, changes the context and the epistemological frame of the drama from the pagan, medieval North to the classical age in the South. The puzzling geographic description (*southeast* and *northwest*) of these places exceeds both the more global mapping as well as the established historical allusions: Goethe alludes to the geocentric worldview, to the accuracy of astronomical knowledge, and to the globe in relation to the Celestial sphere, connecting macro- and microcosmos, like Wagner in the creation scene, when he hails the calculated starry moment. The localization of "southeast", just below the horizon when the sun and the new day rise, alludes to the eternal cycles of nature and to the unknown and unpredictable near future. Homunculus thus leads the way to the Classical Walpurgis Night, the ever-hidden place on the globe where nature and the new day emerge.

The analogy of the Walpurgis Night in *Faust I* is in the classic pagan age. This ghostly celebration, dated to the annual anniversary of the decisive battle between Caesar and Pompey in 48 BC, after which the provincialization of the Greek world became complete. It is also the occasion

of the annual water festival, a display of pure *chaos*, where the cosmological raw material is in the state of the alchemistic *prima materia*.

The earthly destination is Thessaly, at the banks of the river Peneios, seen by the ancients as the land of magic *par excellence*. It is inhabited by ancient witches and other characters from the classical myth, like sphinxes, griffs and sirens, all unfamiliar to the Christian Devil, who only knows the Romantic ghosts. Here, too, are the natural philosophers Thales and Anaxagoras. All necessary expertise is gathered to help the trio fulfill their different tasks, and for the audience to realize *was die Welt im innersten zusammenhält*.

In this allegorical and richly symbolic setting, Goethe continues to explore his investigation of creation. The tension between slow development and sudden change was established in the laboratory scene, now, the scenery opens for the Classical Walpurgisnight, and the same dichotomy is set in motion in a wider field of investigation. The story of creation now involves the origins of European culture, the geological creation of the world, and the destiny of Homunculus, Faust and Mephisto. The bet with the Lord over the soul of Faust is still on.

### **Slow development and sudden change**

The sirens of the sea are the first ones to comment on the sudden raging waves, the flashes of lightning the roaring of thunder, and the earthquake. They flee in horror as the sphinxes remain unaffected: *Seismos* begins to create the world anew, rising from the bowels of the earth, his shoulders forming a huge mountain.

Homunculus, still wanting to break the glass and be physically born, to become embodied, reveals to Mephisto that he is on the track, searching:

For two natural philosophers: I heard them talking /  
And they kept saying 'Nature, nature'! They /  
shall be the guides I cling to on my way; /  
They surely know the secrets of the earth, /  
and in the end, no doubt, I'll learn /

From them which way I should be wise to turn. (Goethe, 1994, 7837-7841).<sup>vii</sup>

Homunculus approaches Thales and Anaxagoras as they discuss the earthquake from opposite positions: which was the first element, fire, or water? Anaxagoras: "I say this rock by fire was created!" – Whereas Thales insists "in moisture all that lives originated". The scene is generally seen as a comment on the contemporary so-called neptunism/plutonism debate on the age, origin, and development of the Earth – a geological and scientific alternative to the Biblical version on the history of the world (Luke, 1994, p. xxxvi, Gearey, 1992, pp. 99). Anaxagoras takes the position of the plutonists, or volcanists: rocks were formed in fire. This was as originally suggested by Anton Moro (1687–1750) with reference to his studies of volcanic islands, and James Hutton later put forward a theory extending over infinite time in which rocks were worn away by weathering and erosion, then re-formed and uplifted by heat and pressure. Thales, on the other hand, takes the

position of neptunists like Abraham G. Werner, who proposed that rocks were formed from the crystallisation of minerals in the early oceans, slowly and gradually, in the water. The neptunists argued that basalt was not a volcanic rock, and that volcanoes were recent and modern features, rather than ancient.

Anaxagoras approaches Luna for support, and her immediate answer comes in the form of a huge, burning meteor that destroys the mountain of Seismos. All this convinces Homunculus to seek the watery element for full creation. The half-creature is equipped with an immanent Faustian longing for *action*: "Since I exist, I must find things to do" (Goethe, 1994, 6888)<sup>viii</sup>, but he is bound to follow the slow process of nature to reach his highest goal. In his advice, Thales links Homunculus both to the Faustian endeavor and to the evolutionary processes of nature:

Yield to your laudable temptation:  
 Seek the beginnings of creation!  
 Be poised to act, don't hesitate!  
 Move on by eternal norms /  
 through many thousand thousand forms,  
 and reach at last the human state." (Goethe, 1994, 8321-8327)<sup>ix</sup>

After several highly comical acts of tricking and negotiations, Proteus, the shy god of change, agrees to help Homunculus: he transforms himself into a dolphin, and Homunculus rides to the beautiful goddess of the sea, Galatea in her chariot-shell. David Luke has observed that the figure of Proteus signifies the connection between Goethe the poet and Goethe the scientist. In 1829, Goethe recalled how he had realized more than 40 years earlier that there had to be an "Urpflanze", an unifying principle for all plant morphology, and compared this principle to Proteus: "[...] the true Proteus lies hidden, able to conceal and reveal himself in all possible shapes". (Goethe quoted in Luke, 1994, p. xxxvi). Goethe's theory was repudiated, but the idea of one unifying element for all forms of development and growth remained important to him, and manifests itself in the creature of Homunculus, in his transcendence and movement.

Although controversial, Goethe's scientific views and ideas were highly appreciated by scientists such as Rudolf Virchow, Charles Darwin and Herman von Helmholtz (Smith, 2001, p. 194). As Albrecht Schöne points out, Charles Darwin mentions Goethe as "an extreme partisan of similar views" in the sixth edition of *The Origin of Species* (Schöne, 2003, p. 532).

Homunculus lets his glass break in a *grande finale*. Sea characters from the entire classical mythology are gathered to celebrate the "special guest" of pure spirit – Homunculus, who throws himself into Galatea in a movement that is both fatal and deeply erotic. Thales observes and comments on the moment: "I sense his loud anguish, the throb of his woe,/ He will shatter his glass on her glistening throne,/ Now he flashes, he gleams, now he spills and is gone" (Goethe, 1994, 8470-8473).<sup>x</sup> Everything is bright, the sirens and the choir chant of longing, eternal beauty and Eros.

### ***Was die welt im innersten zusammenhält***

Both *Frankenstein's* Creature and Homunculus disappear at sea. The Creature is led out of the story alone, in a lifeless world of eternal ice; Homunculus is unified with the sea goddess in the Aegean Sea, accompanied by hails, song, and divine celebration. The scene ends with a chorus where everyone hails the four elements, the life and Eros – a scene not unlike the eternal feminine at the end of *Faust I*. But Homunculus' faith is as ambiguous as Faust's when he embraces the moment. The artificial creature cannot exist as a human being – but as a life principle, he finds his place in the great chain of being that one day may make him human.

Homunculus is both the incarnation of the Faustian longing and the pre-evolutionary vital principle. More a principle than a personified subject, he is a "clone" not only of Faust, but of the vitality of life. The tale of Homunculus expands the potential of the Faust myth as Goethe turns it into a narrative of the evolution of life.

Goethe brings together the creation of an artificial human being and the creation of the world. The potentially destructive power of Mephisto – this time contributing to the appearance and revelation of the spirit of life – is as necessary as the Faustian longing. The desire for action, creation and life is neither good nor evil, it just exists, inseparably connected to the pure entelechy, the driving force of nature.

The artificial half-creatures of *Frankenstein* and *Faust II* are both completed in specific places: The Creature withdraws to the long darkness and distance of the North, in the Arctic Sublime; Homunculus enters the world in the Southeast. Mary Shelley's creature is completed at the end of the world, Goethe's Homunculus where it begins. The two stories of creation explore opposite views of the world, one materialistic, another vitalistic. I have suggested that a key to these views is the raw material of the creatures. Shelley describes the end of the world and nature as lifeless as the frozen ice. In her novel, nature's distinction between life and death is absolute. Transgressing the boundaries between them is disastrous and doomed to fail: dead matter cannot be animated, even though the secret of life is discovered. As for the creative powers of the creator, the Promethean spark is as destructive as its creative powers – for both the creator and his creature.

Homunculus was made of "viel hundert stoffen", embedding the vitalistic force as a component inseparable from physical matter, the raw material, either as alchemy or as the added spark of life. As the glass breaks, he disappears where he belongs, in the *Methamorphosengang* of the world.<sup>xi</sup>

### **Declaration of Conflict of Interests**

The author(s) declared no potential conflicts of interest.

### **Funding**

No funding has been received for the publication of this article. It is published free of any charge.

## Notes

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- <sup>i</sup> "So I perceive the inmost force/That bonds the very universe." (Goethe, 2001, 382-383).
- <sup>ii</sup> Goethe, 2003, 6831-6835: Mephistopheles *eintreden*): Willkommen! Es ist gut gemeint! / Wagner *ängstlich*): Willkommen! Zu dem Stern der Stunde. / (*leise*) Doch haltet Wort und Atem fest im Munde, / Ein herrlich Werk ist gleich zu Stand gebracht. / (Mephisto, *leiser*) Was gibt es denn? / Wagner (*leiser*): Es wird hier ein Mensch gemacht.
- <sup>iii</sup> Goethe, 2003, 6848-6854: "Es leuchtet! seht! – Nun lasst sich wirklich hoffen, /Dass, wenn wir aus viel hundert Stoffen, /Durch Mischung, denn auf Mischung kommt es an, /Der Menschenstoff gemächlich komponieren, / In einen Kolben verlutieren, / Und ihn gehörig kohobieren,/ So ist das Werk im Stillen abgetan."
- <sup>iv</sup> Goethe, 2003, 6881, 6884: "Das ist die Eigenschaft der Dinge//Was künstlich ist, verlangt geschloßnen Raum."
- <sup>v</sup> Goethe, 2003, 6840-6844): Schon in der innersten Phiole/Erglüht es wie lebendige Kohle,/Ja wie der herrlichste Karfunkel, /Verstrahlend Blitze durch das Dunkel.
- <sup>vi</sup> Goethe, 2003, 6950-6951): "Nordwestlich, Satan, ist dein Lustrevier, / Südöstlich dismal aber segeln wir."
- <sup>vii</sup> Goethe, 2003, 7837-7841: "Ich horchte zu, es hiess: Natur! Natur! /Von diesen will ich mich nicht trennen, / sie müssen doch das irdische Wesen Kennen; / Und ich erfahre wohl am Ende / Wohin ich mich am allerklügsten wende."
- <sup>viii</sup> Goethe, 2003, 6888: "Ich möchte mir sogleich zur Arbeit schürzen".
- <sup>ix</sup> Goethe, 2003, 8321-8327: "Gib nach dem löblichen Verlangen/ Von vorn die Schöpfung anzufangen,/ Zu raschem Wirken sei bereit! / Da regst du dich nach ewigen Normen, / Durch tausend abertausend Formen, / Und bis zum Menschen hast du Zeit".
- <sup>x</sup> Goethe, 2003, 8470-8473: "Mir ahnet das Ächzen beängsteten Dröhnens; / Er wird sich zerschellen am glänzenden Thron; /Jetzt flammt es, nun blitzt es, ergiesset sich schon".
- <sup>xi</sup> This article is partly derived from my Ph.D thesis, Berg: *Ny teknologi, gamle forestillinger. Kloning og kunstige mennesker i Shelley's Frankenstein, Goethe's Faust II og Huxley's Brave New World*. University of Oslo, 2010.

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