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From Mechanics to Imagination: Goethe's *Faust* and Hoffmann's *The Sandman* as a Romantic Response to the Enlightenment

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**A research report submitted to the Faculty of Humanities,
University of the Witwatersrand, Johannesburg,
in partial fulfilment of the requirements for the degree of
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Abstract

The research report utilises the way in which artificial life-forms are portrayed by two writers of the German Romantic as a tool to examine the dialectical relationship between the worldviews of the Enlightenment and the Romantic. Working from the hypothesis that the latter's affective attitudes were largely a reaction to the former's rationality, the research examines the work of E.T.A. Hoffmann and Johann Wolfgang Goethe. In Hoffmann's novella *The Sandman,* the main character, Nathaniel, falls in love with a too-perfect young woman; when he later discovers that she is an automaton, he goes mad. In his renowned work *Faust,* Goethe's character, Dr Wagner, creates Homunculus – an artificial mannikin made of light and confined to a glass phial. The incorporeal Homunculus goes in search of completion. The research examines *L'Homme machine* by Julien Offray de la Mettrie (1747) as a text exemplifying the materialist and mechanist attitudes of the Enlightenment. Hartmut and Gernot Böhme's (1983) concept of *Das Andere der Vernunft* and Horkheimer and Adorno's (1973) critique, *The Dialectic of Enlightenment,* are examined as a theoretical framework for the study. The analysis shows that Hoffmann used his clockwork doll to expose the inadequacy of the kind of materialism which La Mettrie had espoused, and Goethe utilised Homunculus to examine the relationship between body and spirit. The Romantics believed that the rationalism and reductive materialism of the Enlightenment did not explain the world adequately. Enlightenment divided body and spirit, the rational and the extra-rational, but both are necessary for a whole, fulfilled, balanced human being.

Declaration

I declare that this research report is my own unaided work. It is submitted for the degree of Master of Arts in German Studies at the University of the Witwatersrand, Johannesburg. It has not been submitted before for any other degree or examination in any other university.

_____ _____day of_____2013

(Karin Pampallis)

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Chapter 1
Introduction

The rapid accumulation and organisation of information about the world and its inhabitants during the seventeenth and eighteenth centuries led the men[1] of the Age of Enlightenment to believe that knowledge was everything. The intellect, reason, was considered to be the highest attribute of humanity, "des Menschen allerhöchste Kraft", in the words of Mephistopheles (*Faust I*, 1852).[2] Knowledge lighted the world – hence both the English "Enlightenment" and the German "Aufklärung*"* (Becker-Cantarino, 2005: 7). "Verstand" and "Vernunft" were the defining characteristics of the age, and Immanuel Kant was considered by many to be the voice which defined the nature of the Enlightenment[3] (Goldman, 1973; Böhme and Böhme, 1983; *Aufklärung*, 1984).

This virtual deification of reason had certain corollaries. For instance, mind became more important than body, denying the complex interaction of mind, body and soul

[1] I say "men" advisedly, although I am not insensitive to gender-based debates in the world of grammarians and feminists. I use the word because women were not in the forefront of science and philosophy in the eighteenth century. A very small number did write, and a few more became well-known and influential through their salons, where they hosted the men who were making the discoveries and writing the books.

[2] All quotations from Goethe's *Faust I* are taken from the 1971 Reclam edition, and cite line numbers rather than pages.

[3]Particularly in his three Critiques and his essay *Beantwortung der Frage: Was ist Aufklärung?*

which had previously been held to comprise the human being. This was expressed early on in the Cartesian separation of body and spirit, and in the development, first in France and later elsewhere, of materialism: everything had a physical (rather than a spiritual) basis, and the body was just another mechanism (Wellman, 1992).

A related corollary is the suppression of that which is not-reason – the human body's feelings and desires, the unconscious, imagination. A line was drawn, in large part by Kant and his followers, between reason and the Other of reason, a notion which is explored by Hartmut and Gernot Böhme in their book, *Das Andere der Vernunft*. If reason lived in the light of the physical, material world, then the Other of reason inhabited the dark spheres of the human mind:

> Das Andere der Vernunft: von der Vernunft her gesehen ist es das Irrationale, ontologisch das Irreale, moralisch das Unschickliche, logisch das Alogische. Das Andere der Vernunft, das ist inhaltlich die Natur, der menschliche Leib, die Phantasie, das Begehren, die Gefühle – oder besser: all dieses, insoweit es sich die Vernunft nicht hat aneignen können (Böhme and Böhme, 1983: 13).

It was this aspect – the Other of reason – that fascinated the writers of the German Romantic period.[4] They did not jettison rationalism entirely, but they tended to be much more subjective and inward-looking. They believed that, although the extra-rational had been repressed as superstitious nonsense, it could not be denied. The very act of creating a boundary between what was rational and what was not gave a certain power to that which was placed beyond the pale; in other words, the Other

[4]The term "Romantic" is generally used to describe several related literary movements that occurred at roughly the same time in a number of countries. However, the term is not used identically in all those countries. For example, the English Romantic, the French Romantic, the Italian Romantic, the Russian Romantic and so on had somewhat different characteristics than the German Romantic (Hoffmeister, 1978). In this research report the word "Romantic" will refer to the German Romantic unless otherwise specified.

fought to re-emerge (Horkheimer and Adorno, 1973). The Romantics saw Enlightenment rationalism as restricting humanity to a cerebral and materialist reality. They believed that this was an entirely inadequate way of representing and interacting with the world. Sensibility and imagination, they thought, represented a necessary counter-balance to the cold intellectualism of the previous epoch. They tended to explore what was inside people – how they felt and thought, and the forces which impacted on those processes. In furtherance of this, they utilised elements such as fantasy and psychology in their writing. The framework for my discussion of the interplay between the two epochs is presented in more detail in Chapter 2.

This research report examines the dialectical relationship between Enlightenment rationalism and the Romantic extra-rational by analysing certain aspects of the works of two writers who were active during the Romantic period, E.T.A. Hoffmann and Johann Wolfgang Goethe. In Hoffmann's case, his portrayal of the automaton Olympia in the novella *The Sandman* is the focus of the analysis, while in Goethe's case, the Homunculus figure in the complex drama *Faust* is the focal point. My intention is to explore the manner in which Hoffmann and Goethe portrayed these two characters – Olympia as the creation of Coppola (a mechanician in the mould of the early Enlightenment) and Homunculus as the creation of Doctor Wagner (a professor who reflects the Enlightenment love of knowledge). Part of that exploration includes an examination of the portrayal of artificial life-forms in general, and an analysis of the portrayals of Olympia and Homunculus in particular; it also includes an examination of various aspects of the science of the Enlightenment, particularly the materialism that developed during that epoch. The

latter aspect is discussed in terms of the writings of the French physician and "philosophe",[5] Julien Offray de la Mettrie; I also briefly examine theories regarding the origin of the earth, especially those referred to as Neptunism and Vulcanism which were involved in the so-called "Basaltstreit" in early nineteenth century Germany, and which Goethe utilised to point out the value of evolutionary over revolutionary change. Furthermore, Goethe used Homunculus, the clever mannikin made of light, to comment on the importance of body as well as mind to form a complete human being – something which had been lost in the Enlightenment's focus on intellectualism.

E.T.A. Hoffmann is a natural choice for this analysis, since he is widely recognised as a prominent writer of the late German Romantic. He wrote many stories exploring what Romantic writers often called the "Nachtseite" – the night side, the darker side of reality that enlightened rationalism had attempted to cast out. The Romantics were much engaged with imagination, and the resultant rediscovery of mythology and enchantment. Hoffmann, like a number of his contemporaries, used *Märchen* motifs in his work. For our purposes, the most obvious is the Sandman motif in the eponymous novella, but also characters such as the Coppelius/Coppola doppelgänger, and Clara, the woman who knows what she wants but has no imagination. The novella also critiques the materialist clockwork mechanisms that

[5] The "philosophes" were eighteenth-century French intellectuals, thinkers in a variety of fields. They did not always agree on details, but they were united in their belief in the importance of reason. They believed that "the mission of man, which gives meaning to his life, lies in the effort to acquire the widest possible range of autonomous and critical knowledge in order to apply it technologically in nature and, through moral and political action, to society" (Goldmann, 1973: 2).

were so popular in the classic Enlightenment, and that can be seen as symbolic of the materialist viewpoint. In short, *The Sandman* deals with the Other of reason – fantasy, the uncanny, the extra-rational.

In addition to utilising the framework provided by Böhme and Böhme's (1983) *Das Andere der Vernunft* and Horkheimer and Adorno's (1973) *Dialectic of Enlightenment* (see Chapter 2), this research report examines how Hoffmann used narrative devices to achieve the effects that he did. Aspects such as the identity of the narrator, perspective and various aspects of reality are discussed. In this respect, *Theorie des Erzählens* by Franz Stanzel (1982) will be valuable. Textual analysis shows how Hoffmann used the fantastic genre and the uncanny to produce his desired effects in *The Sandman.* With regard to the fantastic and the uncanny, a key text is Tzvetan Todorov's (1975) *The Fantastic: A Structural Approach to a Literary Genre,* which examines the genre of the fantastic from a structuralist perspective.

Johann Wolfgang Goethe's inclusion is perhaps not so obvious since his long working life spanned several literary epochs, and he is known to have derided the Romantic, even referring to it as *das Kranke* (Hoffmeister, 1978: 33). However, not only was *Faust* published during the Romantic period,[6] critics have acknowledged that Goethe's later work, particularly *Wilhelm Meisters Lehrjahre,* strongly influenced Romantic writers and contained a number of Romantic elements (Hoffmeister, 1978; Craig, 1983). Furthermore, Goethe did not approve of the

[6]*Faust I* was published in 1808 and *Faust II* in 1833, shortly after Goethe's death the previous year. Some might claim that *Faust I* was written chiefly during the Sturm und Drang and Classic periods, but Goethe's genius, and the drama, developed over a period of sixty years, and both bear elements of more than one literary epoch, including many Romantic elements (Rothmann, 2009: 122).

predominant rationalist methods of scientific inquiry, "because they reduced the phenomena of nature to a system of abstractions within which their true being vanished, yielding nothing to man except empty intellectual power over a spiritually vacuous world" (Heller, 1966: 30). He strove to unite "the life of poetry *and* the poetry of life" (Heller, 1971: 32, italics in the original) – which, no matter how Goethe chose to characterise himself, is a very Romantic way of thinking, with a clear relationship to Schlegel's *Universalpoesie.* I contend in this research report that Goethe utilised the search by Homunculus-the-spirit for a corporeal body in order to criticise the scientist who could do no more than give Homunculus an intellectual existence, but not the body which would make him whole. In the end, it is Eros which sets Homunculus on the path to complete humanity. The analysis involves an examination of some mythological allusions in the Homunculus episode, including Goethe's borrowing from classical Greek mythology and literature to make his points about the contemporary world.

Against the backdrop of the existing oeuvre of work on the Enlightenment and the Romantic periods, I will examine in some detail the characters that Hoffmann and Goethe portrayed – Olympia representing pure material and Homunculus pure spirit (Chapters 3 and 4 respectively). It is my contention that the Romantics questioned the ability of Enlightenment rationalism alone to account for the subjective side of human nature, and that Hoffmann and Goethe used these two characters to show this. It is my hope that this fresh comparison will contribute to an understanding of the relationship between the worldviews of two fascinating literary epochs.

Chapter 2
"Über die Grenzen der Vernunft": The Dialectical Relationship between Enlightenment Reason and the Romantic Extra-rational

> Über die Grenzen der Vernunft hinaus ist Orientierung nicht mehr möglich... (Böhme and Böhme, 1983: 14).

2.1 Introduction

In this chapter, I will lay the foundation for an examination of Hoffmann's *The Sandman* and Goethe's Homunculus episode in *Faust* by looking more closely at the dialectical relationship between Enlightenment rationalism and the Romantic extra-rational. I begin by giving a brief overview of the Enlightenment and its major characteristics, focusing on the burgeoning importance of rationalism and the emergence of materialism as a key thread exemplifying the victory of empiricism and intellectualism (section 2.2). I then move on to discuss the notion of artificial life-forms, particularly as an extension of Enlightenment materialism, as well as how their portrayal relates to the analysis I wish to pursue (section 2.3). The next section (2.4) deals with the Romantic period, with particular emphasis on the extra-rational – the Other of reason, as propounded by Böhme and Böhme (1983) – and the re-emergence of the imagination as an important element for writers of the period.

2.2 The Age of Enlightenment

The eighteenth century is generally held to be synonymous with the Age of Enlightenment, with most authors indicating that the period began shortly after the turn of the century and ended with the French Revolution (Hampson, 1968: 12, 43; Becker-Cantarino, 2005: 7). There was no homogeneity in the eighteenth century, in the sense that one topic dominated intellectual conversation or that there was progress in only one field. There were rapid changes in areas as diverse as religion, philosophy, politics, education, social sciences and physical sciences. Becker-Cantarino (2005: 9-10) sums the period up nicely when she lists what she considers to be the key developments of the epoch:

> the reliance on reason; the importance and development of education; the role of scholarship, science, and investigation; the process of secularization, the diminishing authority of the Church and of religious writings, anti-clericalism, the fight against superstition.

Despite these numerous areas of change, there was a large degree of homogeneity in the way that people thought about their world. *Reason* was the unifying thread (Hamson, 1968: 10; Becker-Cantarino, 2005: 1; Holub, 2005: 286). My purpose in this section is not to repeat the work of the many excellent scholars who have written about the Enlightenment. Rather, my intention is to provide an overview of some of the main characteristics of the period insofar as they relate to my enquiry about how the Romantic period challenged its predecessor.

There was a general belief that knowledge was useful, that its collection should be as comprehensive as possible, and that it should be readily available to everyone

(Goldmann, 1973: 1; Hampson, 1968: 86).[7] In line with this view, one could say that the key words of the age were empiricism and rationalism. These words relate particularly well to a modern view of experimental science, an approach which had its roots in the Enlightenment. As part of the analysis of both *The Sandman* and the Homunculus figure in *Faust*, I intend to examine how Hoffmann and Goethe incorporated commentaries on aspects of the science of the Enlightenment in their work, in order to critique that epoch. Because of this, it is appropriate to give a brief overview at this point of some of those elements.

By the beginning of the eighteenth century, science had moved away from theologically approved beliefs – for example, that the earth was the centre of creation (Dingle, 1952: 127), or the Cartesian belief that "science, theology and metaphysics were inseparable ways of looking at a unified human experience" (Hampson, 1968: 75). In Newtonian science, which succeeded the theologically based approaches, the experiment was the starting point, and knowledge, based on natural laws that were in turn based on reason, was there for the finding. The "Faustian urge of the age [was] to know all things in heaven and on earth" (Schatzberg, 1973: 332).

Particularly important to the discussion in this research report is the notion of materialism. Philosophers like René Descartes were dualists. That is, they believed there were two types of substances – physical matter and spiritual essence, the latter manifesting as the soul and as cognition (Hammermeister, 2005: 36). When

[7] This was not always how people had thought about knowledge. An early German exponent of the free availability of knowledge was Christian Thomasius, jurist and philosopher. In 1687 he gave the first university lecture in German instead of the usual Latin, establishing a precedent for making knowledge widely available rather than restricting it to a privileged few (Hammermeister, 2005: 34).

Descartes described animals as "bêtes machine",[8] he meant that animals could have no souls, since only human beings had God-given, immortal souls; animals were therefore merely mechanisms (Thomson, 1996: xi). Materialists, on the other hand, believed that there was only one kind of matter and that the soul, if it did exist, was merely a manifestation of physical matter (Thomson, 1996: xi-xii). Paul von Holbach,[9] Claude Helvetius, Etienne de Condillac and Julien de la Mettrie, as well as many others in the eighteenth century, were materialists.

In this research report, I have chosen to focus on Julien Offray de la Mettrie (1709–1751), a medical doctor and "philosophe" who was one of the most famous – or perhaps one should say infamous – materialists of his day. La Mettrie was the object of a certain amount of opprobrium because he made no attempt to soften his materialist stance. Unlike many of his contemporaries, who may have believed that religion had nothing to offer but refrained from saying so openly, he did not cloak his beliefs by using coded references or clandestinely circulating his work (Wellman, 1992: 168-171; Thomson, 1996: xix). He proudly proclaimed that he was a Spinozist,[10] and espoused a materialism in which "one could deny the existence of any sort of soul, material or otherwise, and affirm simply that thought and the other mental processes are the result of a particular organisation of matter in the brain" (Thomson, 1996: xiii):

[8] Machine animals.

[9] Sometimes referred to as d'Holbach or Holbach instead of von Holbach.

[10] Spinozism at that time was a combination of atheism and materialism (Thomson, 1996: xiii).

> I shall not dwell any longer on all the little minor springs which everyone knows.[11] But there is another more subtle and wonderful one, which drives them all. It is the source of all our feelings, all our pleasures, all our passions and all our thoughts; for the brain possesses muscles for thinking as the legs do for walking. I mean that instigating and impetuous principle which Hippocrates calls ἑνορμων (the soul). This principle exists and has its seat in the brain at the origin of the nerves, by means of which it exerts its control over all the rest of the body. This explains everything that can be explained... (La Mettrie, 1996 [1747]: 28).

La Mettrie totally rejected Cartesian dualism, and, in a number of publications,[12] openly discussed the corollaries of materialism as they related to religion, morality and ethics (Vartanian, 1960: 50). His books presented his philosophy of nature, and were intended to "provide an empirical base for materialism and to examine the physical world in materialistic terms" (Wellman, 1992: 169). In *L'Homme machine*, La Mettrie analysed the Cartesian thesis regarding animals, and concluded that man was merely a well-constructed automaton (and consequently had no immortal soul):

> What more is needed ... in order to prove that man is only an animal or a construction made of springs which all wind each other up without us being able to tell at which point on the human circle nature began? ... Consequently the soul is only a principle of motion or a tangible material part of the brain that we can, without fear of error, consider as a mainspring of the whole machine... (La Mettrie, 1996 [1747]: 30-31).

Essentially, La Mettrie believed that man was not unique in nature, and that he could not be divided into a physical portion (the body) and a spiritual portion (the soul).

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[11] La Mettrie has in the previous paragraph discussed various involuntary bodily responses, such as pupils contracting in bright light and skin pores closing in cold weather; he refers to these responses as "mechanical" actions.

[12] La Mettrie wrote a number of books exploring his ideas, among them *L'Histoire naturelle de l'âme,* [*Natural History of the Soul*, 1745, and later published in his collected works as *Treatise on the Soul*]*; L'Homme machine,* [*Man a Machine*, 1747]; *Système d'Épicure,* [*System of Epicurus*, 1750]; and *Discours sur le bonheur* [*Discourse on Happiness*, 1748, referred to in some collections as *Anti-Seneca*].

Everything about the human being was physiological, mechanical. In other words, everything had a physical basis – not only functions like respiration and digestion and muscular movement, but also thought processes:

> La Mettrie breaks with the whole of theological and metaphysical tradition by his proposal to restate the general problem of mind as a problem of physics – that is, to regard man as a mechanical entity in which psychic events are regularly produced by organic causes. ... Once science was held capable of understanding things, ideally, only in terms of more or less exactly measurable quantities and motions, there remained hardly any choice ... [but] to assume finally that man, like the cosmos, was a machine (Vartanian: 1960: 13).

The materialists contributed to the intellectual stance that everything, even human beings, could be understood in an empirical manner. This fed into the appropriation of human beings into the intellectual world and their displacement from a more balanced conception of their role in the natural world (see section 2.4). This notion of man as a mechanism also contributed in large part to the popularity of automata in the eighteenth century, and it is this which I address in the next section.

2.3 Artificial Life

Automata and other artificially created life-forms are important for this research report. Clockwork mechanisms can be seen as a physical expression of the eighteenth century's fascination with materialism as expressed by La Mettrie and others. After all, if all living things are merely mechanisms, and man is studying and learning to understand these mechanisms, then why should he not be able to make them? If he can make a mechanical duck, why should he not make a mechanical man?[13]

[13] This refers to Vaucanson's automata; see below.

Hoffmann's Olympia may be seen as an example of this type of hubris. The alchemically created Homunculus, on the other hand, may be seen as exemplifying the separation of the human body from enlightened nature that is discussed by Böhme and Böhme (1983). This section briefly discusses the history, nature and importance of artificial life-forms.

Changing attitudes to religion and science during and after the Enlightenment resulted in changing attitudes towards life and the creation of life. Previously only God (or the gods) could create life. The rationalism of the Enlightenment resulted in an increasingly mechanistic view of life, weakening (for many) the hold of religious interpretations. Even for those who still believed in God, the intricacies of nature could easily be seen as a manifestation of God as designer of the universe (Goldmann, 1973: 32-33).[14] Such changing attitudes opened the door to attempts (at least in literature) by humans to create life, or apparently living creatures.

Human-like creations have long existed in myth and literature. One of the earliest is Pandora, created for Zeus by Hephaestus, whose curiosity loosed many evils into the world (Drux, 1988: xii).[15] Then there is the myth of the sculptor Pygmalion who lovingly carved his perfect woman, Galatea, but she only came to life after the gods granted his prayers (Hyman, 2011: 1). The medieval alchemists also attempted to

[14] We still see this attitude today in Creationist circles, whose adherents seek to reconcile religion and science by speaking of God as a great watchmaker, and positing their Argument from Design.

[15] "Daß die Böse durch eine Frau über die Menschen kommt, ist ein Archetypos aus Schöpfungsmythen patriarchalischer Kulturen" (Drux, 1988: xii). Drux goes on to discuss the desire by men – who always seem to be the "Menschenreproduzenten" – to control women, especially because of the latter's ability to produce life themselves.

create life, generally following the "recipes" of Paracelsus (Drux, 1988: 15-17), as will be seen in the discussion of Goethe's *Faust* in Chapter 4. The mechanics of the Enlightenment produced lifelike but not living figures, which came to be called androids[16] or automata (Drux, 1988: x).

Before and during the Enlightenment, many people were fascinated by automata, which were first driven by hydraulics (such as the 256-figure Forge of Vulcan at Heilbrunn) and later by clockwork mechanisms (such as the jacquemarts on the clock tower of St Mark's in Venice) (Bedini, 1999). Most of them had no economic value (unlike later factory robots) but rather were regarded as interesting curiosities (Hyman, 2011: 7). Wealthy patrons supported inventors such as Hans Bullmann of Nuremberg, a sixteenth-century creator of lifelike androids that played musical instruments, and the Frenchman Jacques Vaucanson, who produced two clockwork flautists and a duck that (purportedly) ate and defecated (Bedini, 1999). These creations were understood as wonderful mechanical masterpieces, created by master mechanicians.

In the late eighteenth century, however, the attitude towards automata began to change.[17] During the Romantic there was a resurgence of interest in the "natural, the organic, and the instinctual" (Kang, 2011: 209-10). The automaton came to be

[16] From *andrós,* the genitive form of the Greek *anér,* meaning "man" or "person".

[17] Note that, in Germany at least, this change in attitude had little to do with the Industrial Revolution and the resulting displacement (or perceived enslavement) of human workers by machines. Large-scale industrialisation on the Continent only took place after the Romantic period, although the Germans were certainly aware of industrial developments elsewhere (Kang, 2011: 199).

associated with the supernatural, and the automaton-maker was often viewed as an evil magician rather than a benevolent scientist (Kang, 2011: 198, 214). This development will appear again in Chapter 3, when I discuss Hoffmann's Olympia figure. Although the Homunculus figure in Goethe's *Faust* is not a clockwork mechanism, it is a life-form ostensibly created by a human being. In this sense, it can also be examined as a response to certain Enlightenment notions – in this case, the separation of mind and body. Furthermore, the creator of Homunculus can be examined as the archetype of the Enlightenment scientist who constantly yearned for more and more knowledge. This discussion will take place in Chapter 4.

Having explained key aspects of Enlightenment thought, and some of the trends that arose from them, including the popularity of automata, I now move on to introduce the Romantic period and its reaction to the previous epoch.

2.4 The Romantic Period

Similarly to the Enlightenment, there is no real uniformity in the way that the Romantic is dated. However, most commonly it is regarded as taking place from the French Revolution to the mid-1830s (Hoffmeister, 1978; Rothmann, 2009). Both of the texts chosen for this research report were published during the Romantic period – *The Sandman* was published in 1816 and *Faust II* in 1833.

Two German literary periods were contiguous with the Romantic.[18] These are the "Sturm und Drang" (1764–1784) and the Classic (1785–1806).[19] Their history and characteristics are well-known, so I will not discuss them here except to note that both the Sturm und Drang's tempestuous emotionalism – "Gefühl ist alles!" (Pascal, 1959: 40-41) – and the Classic's search for balance and harmony influenced the worldview of the Romantic (Hampson, 1968: 158; Rothmann, 2009: 106, 118-19). Where the Enlightenment could be characterised as intellectual, rational and empirical, the Romantic could be said to be subjective, emotional and mystical. However, one must take care not to think only in terms of extremes, simply of rationalism versus emotion. The Romantic, for the most part, did not deal in absolutes. Rationalism was granted its place, but the Romantics felt strongly that intellect was not enough, that something more was needed in order to understand humanity and the world in which it found itself. What was rejected was not reason, but rather the uses to which it had been put – the superficial utilitarianism[20] it promoted, and the mechanistic and materialist philosophy which it had engendered. This tension will be explored further in Chapter 3.

Concepts like imagination, intuition and sensation were much more important to the Romantics than the deified reason promoted by Enlightenment writers:

> In general, the Romantics were convinced that life had dimensions that could not be comprehended by scientific analysis and that instinct

[18] As did the Enlightenment (see section 2.2 above), the Romantic encompassed much more than literature. The Romantics, especially the early Romantics, strove to incorporate all aspects of life. See also footnote 21.

[19] The Classic is generally held to have ended in 1806, with the death of Friedrich Schiller; however, some critics hold that it only ended with Goethe's death in 1832.

[20] "Zweck- und Nützlichkeitsdenken".

> was a better guide to the deeper truths than reason. In contrast to the philosophes' insistence on modernity and their orientation to the future, they venerated the origins of things and were fascinated by history and such keys to its secrets as the folksong and the fairy tale (Craig, 1983: 191).

I do not intend to discuss here the origins of Romantic philosophy as it was propounded by writers of the early Romantic[21] such as Schelling, Fichte, Novalis and the Schlegel brothers, who expounded on the question of man's place in nature, the relationship between the individual and society,[22] the essence of the natural world and so on, important as these are to the period. However, I do want to point out that the "dimensions that could not be comprehended by scientific analysis" mentioned in the above quotation were of great interest to many Romantic writers, especially those of the middle and later Romantic. It is these writers who delved into the realms of the inner self and what existed there. Imagination is a particularly important aspect of this exploration. In her study, *Imagination in German Romanticism*, Jeanne Riou (2004) explores how Romantic writers used imagination to critique Enlightenment rationalism. She believes that imagination was used as "an agent of synthesis, a way of challenging the reductions of modern science without reversing its insights" (Riou, 2004: 9). She also makes the point that mythology was seen by some

[21] The German Romantic is usually divided into three stages: the early Romantic (Frühromantik), the middle Romantic (or Hochromantik) and the late Romantic (Spätromantik). The early Romantic is characterised *inter alia* by an attempt to create a synthesis of philosophy, art and nature, which Friedrich Schlegel theorised in his 1798 book, *Progressive Universalpoesie*; the mid and late Romantic tended to focus more on aspects which are referred to in this research report as the extra-rational (Gray, 2009: 11-12; Rothmann, 2009: 148-50).

[22] This thread became a particularly important one to some writers, both literary critics and students of society. The growth of the bourgeoisie, industrialisation and the development of a national identity, and their impact on the development of Germany, is one example. Depending on the writer's own position, either the Romantic's anti-enlightenment arguments or anti-intellectual tendencies were blamed for the subsequent devastating development of totalitarianism in the twentieth century (Goldmann, 1973; Horkheimer and Adorno, 1973; Dülmen, 1992; Heiser, 2008).

Romantic writers as "a vital component of the productive imagination" (Riou, 2004: 27). This relates to the discussion of "Märchen", below.

The Romantic was more analytical in its reaction to pure rationalism than the Sturm und Drang had been, and introduced new elements such as fantasy and psychology (Hoffmeister, 1978: 33). In the early Romantic Fichte had promoted the idea of the *Ich-Prinzip* – the notion that the individual-in-oneself was more important than the individual-in-society. This theme was taken up by various writers of the Romantic period, perhaps not in the way that Fichte had intended, to legitimise "the subjective, arbitrary will, free imagination and fancy" (Taylor, 1970: 106). This emphasis on the subjective and the imagination, the belief that "there is often no clear dividing-line between dream and reality" appealed to the Romantic mind (Tymms, 1955: 4).

The interest of the middle and late Romantic writers in dreams can be attributed largely to August Wilhelm Schlegel. Writing in 1802 about the negative effect that "tyrannisierender Verstand" had on public life, he developed the conceit of reason as harsh, invasive sunlight pervading every aspect of an individual's public persona, and the night as a veil that wrapped around the harsh sunlight and thus enabled a new view into other possibilities; the night was the time of dreams:

> Das ... trifft den Kern der romantischen Weltanschauung, weil es den Ausweg zeigt aus einer mechanistisch-statischen Ordnung zu einer noch zu schaffenden möglichen. Es weist zudem auf wichtige Themen hin, nämlich die Umwertung der Nacht, auf die Welt des Traumes und der Phantasie (Hoffmeister, 1978: 139).

In 1808, Gotthilf Heinrich von Schubert published *Ansichten von der*

Nachtseite der Wissenschaft. Building on Schelling's *Naturphilosophie*, he explored the history of nature and of science, especially those that had latterly been "assigned to the realm of belief in miracles" (quoted in Bell, 2005: 170-71), clearly a reference to the ousting of certain beliefs by the rationalism of the Enlightenment. Schubert proposes that a "dialectical opposition of spirit and body underlies the realms of nature" (Bell, 2005: 171). He clearly distinguishes between a conscious and an unconscious world, and develops these ideas further in his later work, *Die Symbolik des Traumes*, published in 1814. Hoffmann was familiar with Schubert's work, as he was with that of Schelling and other contemporary writers about psychology and psychopathology (Bell, 2005: 193-96).

Along with this focus on dreams goes the interest of Romantic writers in folktales, or "Märchen". Horkheimer and Adorno (1973: 3) postulate that the rationalism of the Enlightenment stripped society of its traditional mythology, substituting "knowledge for fancy" – a process to which they refer as "disenchantment".[23] Romantic writers saw this gap. There was a renewed interest in "Volksmärchen" (traditional folktales), most famously the collections gathered and published by Jacob and Wilhelm Grimm. Others wrote "Kunstmärchen", newly minted tales involving similar motifs as the traditional folktales.

[23] One might wonder, however, to what extent this disenchantment percolated down from the intelligentsia to the workers and peasants.

As anyone who has read fairy tales will know, they are not always full of sunshine and happiness. There is often a darker side to these traditional stories, one which is clearly evident in *The Sandman*, as we shall see in the next chapter. This reflects the darker side that often occurred in Romantic literature, and it can be said to reflect the darker side of reason. *Das Andere der Vernunft*, by Hartmut and Gernot Böhme (1983), reflects a widely held Romantic view that the extra-rational, the emotional and the unconscious were the Other of Enlightenment rationalism. I have already introduced this notion in Chapter 1 of this research report by providing Böhme and Böhme's (1983: 13) definition of the Other of reason as that which rationalism could not appropriate. Clearly, this is not merely the opposite of reason, but rather the other side of the coin.

> In einer Welt aus Tatsachen werden Bedeutungen zum Aberglauben,[24] Träume zu irrelevanten Phantasien, leibliche Regungen zu Grillen. Dieses Andere, das die Vernunft nicht umschließt, verkommt zu einem diffusen, unheimlichen und bedrohlichen Bereich. Über die Grenzen der Vernunft hinaus ist Orientierung nicht mehr möglich.... In dieser Dialektik von Aneignung und Verdrängung vollzog sich die neuzeitliche Definition von Wirklichkeit (Böhme and Böhme, 1983: 14).

It is this other reality which Hoffmann explores in *The Sandman*, when he examines the forces influencing Nathaniel's mind, and it is these forces which play a role in Goethe's discussion of nature and Homunculus's search for a body and thus for completion (see Chapters 3 and 4).

As the basis of their exploration of the concept of the Other of reason, the Böhmes

[24] Lucien Goldmann (1973: 9 ff.) sees Goethe's *Faust* as an exploration of the interplay of Enlightenment rationalism and superstition.

analyse the philosophy of Immanuel Kant. In his three great *Critiques*[25] Kant not only described what reason was and what it could do, but he also described its limitations. He argued, for instance, that experience is subjective until and unless it is processed by pure reason, thus shaping reality (Gray, 2009: 11). Man can only be rational if he cultivates a certain relationship with the outer world: "Je vernünftiger, desto mehr Mensch" (Böhme and Böhme, 1983: 10). However, Kant also realised that, while man could assemble knowledge and thence logically deduce rational scientific and moral laws, the correctness and validity of those laws were restricted by the limitations of our perceptions; we could never completely understand either the world around us or the world within us (Guyer, 2006: 2-3). In fact, Kant recognised that both "imagination and understanding" were necessary to organise the information provided by our sense faculties (Kitcher, 2006: 185). However, this very imagination, so necessary to make sense of the external world, was also potentially dangerous:

> Wenn man die Einbildungskraft nur ein wenig anregt, ist man schon zu objektiver Erkenntnis nicht mehr fähig; ... wenn man das Genie nicht strengen Regeln unterwirft, produziert man einen Narren. Und schließlich, wenn die Einbildungskraft die Anschauung mit ihren Bildern überschwemmt, wird man verrückt.... (Böhme and Böhme, 1983: 236).

Therefore, imagination had to be tightly controlled: „So redet denn Kant auch in seiner Pädagogik von einer Kultivierung der Einbildungskraft, die darauf abzuzielen

[25] In *Critique of Pure Reason* (*Kritik der reinen Vernunft*) Kant wrote about noumena (things as they really exist) and phenomena (things as they are perceived); in short, he developed a theory of perception, and of the relationship between reason and experience. The *Critique of Practical Reason* (*Kritik der praktischen Vernunft*), in which he coined the term "categorical imperative", dealt with morality. In this book, he stated that reason was "the inner voice of noumenal man" (Hampson, 1968: 198). The *Critique of the Power of Judgement* (*Kritik der Urteilskraft*) dealt largely with aesthetics.

habe, sie nur zum Vorteile des Verstandes zu gebrauchen“ (Böhme and Böhme, 1983: 236-37). That portion of it which could not be controlled and utilised to further “Verstand” had to be denied and separated from rational reality. Nevertheless, Kant was aware that creating a boundary between that which was reality (the rational) and that which was not real (the extra-rational) created an increasing tension between the two: “Doch je mehr das Wirkliche als das Beherrschbare gesichert war, desto bedrohlicher wurde, was sich der Beherrschung entzog“ (Böhme and Böhme, 1983: 14). This laid the basis for the Romantic notion that the extra-rational refused to be banished.

The Böhmes thus analyse rationalism from the “Nachtseite”, the repressed, dark (and threatening) side of human existence, which many of the Romantics portrayed in their tales, and which Hoffmann explores in *The Sandman*. Also relevant for this research report is the separation of the physical body from the rational mind, which is a theme in Goethe’s Homunculus episode.

One may conclude this section by quoting L.A. Willoughby’s summary of the Romantic:

> Romanticism was a magnificent attempt to reconcile the demands of the intellect with those of the feelings, reason with the imagination, the outer world with the inner life, reality with the ideal, the past with the present... (Willoughby, 1930: 9).

2.5 Conclusion

This chapter has discussed the chief characteristics of the Enlightenment and the

Romantic periods as they were perceived in Germany. It has examined how certain elements of the latter period arose out of and became a response to the former. I have also examined the notions of Enlightenment science, automata and imagination, and introduced some themes which are relevant to the two literary works on which this research report focuses.

The next chapter will begin to discuss how some of these elements worked themselves out in the literature of the Romantic by examining E.T.A. Hoffmann's novella, *The Sandman.*

Chapter 3
The Mechanical Woman:
Hoffmann's Olympia as a Response to the Enlightenment

> We like to live in daylight, but half the world is always dark; and fantasy, like poetry, speaks the language of the night (Le Guin, 1989: 5).

3.1 Introduction

As was indicated in the previous chapter, the writers of the German Romantic period decried the overweening rationalism, empiricism and intellectualism of the Enlightenment. They believed that cold reason alone could not adequately explain the way in which human beings lived and reacted with each other and the world around them. There was an increasing emphasis on people as individuals rather than on people as members of society. Romantic writers explored the subjective and the imagination, and brought elements such as fantasy and psychology into their writing (Hoffmeister, 1978).

Materialism was an important outgrowth of the rationalism of the Enlightenment (Wellman, 1992; Thomson, 1996). The attitude expressed by La Mettrie and others – that man was only a machine responding to physical stimuli – was unacceptable to

the Romantics. In this chapter, I will examine Hoffmann's character Olympia, the mechanical woman, as a response to the Enlightenment's pure rationalism and materialism.

Following this introduction, I continue with a brief description of E.T.A. Hoffmann and a synopsis of his novella, *The Sandman* (section 3.2). I then move on to discuss the imagination and the Other of reason as this notion relates to Hoffmann's work (section 3.3), using *inter alia* the works of Jeanne Riou (2004) and Hartmut and Gernot Böhme (1983). In section 3.4 the way in which Hoffmann uses the uncanny aspect of the fantastic genre to highlight the non-rational aspects of the automaton Olympia is examined, including a discussion of the narrative structures he employs in order to achieve the uncanny. A brief discussion follows in section 3.5 on how Hoffmann uses Olympia and Clara to critique Enlightenment attitudes towards women. The chapter concludes with Section 3.6, which summarises how Hoffmann uses Olympia and her mechanist creators to comment on the materialist notions of the Enlightenment.

3.2 E.T.A. Hoffmann and *The Sandman*

Ernst Theodor Amadeus[26] Hoffmann (1776–1822) was one of the important writers of the middle and late Romantic. He was much respected and frequently imitated by Romantic writers in a number of other countries, including France, Russia and the

[26] He was christened Ernst Theodor Wilhelm, but changed his third name to Amadeus in honour of Wolfgang Amadeus Mozart, whose music he admired very much (Tymms, 1955: 351; Rothmann, 2009: 163).

United States of America (Hoffmeister, 1978: 66). Hoffmann was a man of many parts. On the one hand, he had trained as a lawyer and in his civil service career was respected as a legal expert. On the other hand, he loved music, and for much of his adult life worked variously as a composer, conductor, musical director and music critic in addition to his legal duties (Tymms, 1955: 351). He was also a talented writer, mainly of Kunstmärchen and short stories. The influence of his dual nature – as a disciplined lawyer as well as an eccentric writer and musician – was apparent in his writing (Hollingdale, 1982: 7).

Hoffmann was aware of and interested in contemporary developments in the study of the mind and the nascent field of psychology, including Gotthilf von Schubert's writings on dreams and the unconscious world, mentioned in Chapter 2 (Bell, 2005: 193-94; Gray, 2009: 13). He tended to mix "psychologically realistic interpretation" with Märchen motifs such as "uncanny multiple coincidences" which inject a "supernatural weirdness" into his stories (Tymms, 1955: 349). Nowhere is this more true than in *The Sandman,* which was first published in 1816. Following is a brief synopsis.

The novella begins with a series of letters between the main character Nathaniel, his fiancée Clara and his friend Lothario, in which he explains the following: In the university town where Nathaniel is studying, he sees a man who reminds him strongly of a sinister figure from his youth – Advocate Coppelius, an unsavoury

character whom Nathaniel also knew as the Sandman.[27] Coppelius and Nathaniel's father often occupied themselves in the evenings with strange alchemical experiments. One night Nathaniel's curiosity drove him to hide in his father's workroom to watch. He was discovered and was very frightened by Coppelius, who threatened to take his eyes out of his head, and who played with "the mechanism of [Nathaniel's] hands and feet" by seemingly removing them and reattaching them in various ways – a harrowing experience which affected Nathaniel severely (Hoffmann, 1982: 91). Some months later, Nathaniel's father was killed in a failed experiment which he had been conducting with Coppelius. Years later Nathaniel is studying under a certain Professor Spalanzani when he thinks he sees Coppelius, but it turns out to be an Italian barometer-maker and seller of optical instruments, Giuseppe Coppola. It is this visit which prompts Nathaniel's letters to Lothario and Clara. Later, Coppola comes to Nathaniel's rooms and eventually convinces him to buy a small telescope.

The story then shifts from epistolary to third-person mode. Nathaniel tries to put his fears aside, but remains disturbed. He rallies during a visit home, but the oppressive memories never quite leave him. Upon his return to the university town, Nathaniel moves into lodgings across the road from Professor Spalanzani's house. Using the telescope he bought from Coppola, he sees Spalanzani's daughter Olympia, with whom he falls in love. One day, however, he learns that Olympia is a clockwork doll which Spalanzani and Coppola together have built, and which they destroy during an

[27] Nathaniel's mother always insisted that the children go to bed early on evenings when Coppelius came to visit; hence his nickname within the family as the Sandman.

argument. Nathaniel witnesses Olympia's destruction, and it causes him to go mad. He is taken home, where he eventually recovers and prepares for a future with Clara as his wife. One day, on impulse, they climb to the top of a tower in the city centre to enjoy the view. In order to see an unusual distant object more clearly, Nathaniel peers through a telescope, the very one which he had bought from Coppola. In that instant he goes mad again. He tries to throw Clara off the tower, but she is saved by Lothario. Nathaniel himself jumps to his death.

Olympia is a key character in the novella. She is central to the process of Nathaniel's descent into confusion and madness. Her creators are an intellectual university professor (Spalanzani) and a mechanician (Coppola), clearly representatives of Enlightenment rationality, just as Olympia herself is a representation of Enlightenment materialism. The remainder of this chapter will explore how Hoffmann uses this clockwork mechanism to comment on the inadequacy, and perhaps dangers, of the mechanical and materialist approach.

3.3 Imagination versus Reason in *The Sandman*

Horkheimer and Adorno (1973: 3, 35) claim that the Enlightenment strove to drive out superstition and mythology as unworthy of the rational mind; according to their analysis, the success of this project eventually caused imagination to atrophy. They refer to this as "disenchantment". The Romantics, however, Hoffmann among them, rejected this process of disenchantment; they believed strongly in "the centrality of the faculty of imagination" (Brown, 2006: 197). The material world offered by the

Enlightenment was not enough for them. In fact, there was a belief that Enlightenment empiricism resulted in a one-sided perception of the world, and that technological developments could be potentially destructive (Riou, 2004: 9).

The Romantics believed that it was important to explore the older beliefs, the worlds of the folktale and of dreams. For instance, Friedrich Schlegel wrote that mythology and imagination are inextricably intertwined (Riou, 2004: 27). However, the realms that the Romantics explored were not the cosy ones enjoyed beside a comfortable fireside, but rather darker and ambiguous ones rooted in the unconscious and sometimes in madness (Gray, 2009: 13). Hoffmann explored the relationship between the nature of the self and that which is outside the self, including what happened when reason broke down (Riou, 2004: 19-20, 25). In *The Sandman* we see this in Nathaniel's struggle to understand what is happening to him.

This emphasis on imagination led to a resurgence of interest in the beauty and power of folk mythology, and the growing popularity of both Volksmärchen and Kunstmärchen, a trend which has been discussed in Chapter 2. Hoffmann, like a number of his contemporaries, used Märchen motifs in his work (Rothmann, 2009: 157-59), the most obvious in the work under discussion being the eponymous figure of the Sandman. When the Grimm brothers were doing their research, the Sandman was seen as a rather kindly figure, a "freundlicher Kinderschreck" who brought sleep and dreams to children by sprinkling magic sand into their eyes (Diedrichs, 1995: 285-86). Hoffmann, however, took this benevolent fairy-tale character and looked at his dark side. The nursemaid of Nathaniel's little sister told the story of an evil

Sandman, whose sand caused children's eyes to fall out "all bloody"; he took the eyes to feed his children in their nest on the crescent moon (Hoffmann, 1982: 87). This sinister flip-side is quite characteristic of the period; many of the Romantics portrayed this extra-rational and dark "Nachtseite" in their tales, and Hoffmann was no exception (Gray, 2009: 4).

Extra-rational refers, of course, to the darker side of the Romantic which was introduced in Chapter 2 – dreams, superstitions, the emotional, the repressed self (Böhme and Böhme, 1983: 13-14). The Romantic interest in rediscovering and exploring that which was marginalised by Enlightenment rationalism was also reflected in the growing importance of psychology, a theme which Schelling touched on in his *Naturphilosophie* (Bell, 2005: 170). Hoffmann explored this subject in some depth, as I have indicated above, not only reading Schelling and Schubert, but also befriending several doctors who specialised in psychopathology (Bell, 2005: 194).

Although this interest in the extra-rational was a firm feature of the Romantic epoch, it continued long after the Romantic proper was over. It was in fact the basis for much of psychology and psychiatry. Sigmund Freud, for instance, was building on a long tradition of exploring the unconscious when he developed psychoanalysis (Gray, 2009: 29). Freud devoted an essay to the uncanny as it was expressed in *The Sandman,* and this forms part of the discussion in the next section.

3.4 The Fantastic and the Uncanny in *The Sandman*

3.4.1 The fantastic and the uncanny as tools

As indicated in Chapter 2, clockwork mechanisms had been very popular during the classic Enlightenment. They were regarded as interesting mechanical structures, representative of the ordered and rational study of natural principles that defined the eighteenth century. The Romantics, however, had quite another view. Materialism had fallen out of favour, and automata were more likely to be linked to supernatural evil than to natural order (Kang, 2011: 198, 214). Hoffmann used the fantastic and the uncanny to strengthen his use of the automaton Olympia as a critique of the Enlightenment. In this section, I will explore how he achieved this.

Ursula K. Le Guin (1989: 15) states that fantasy is "a view in to the psyche". Colin Manlove (1983: ix) defines it as "a fiction evoking wonder and containing a substantial and irreducible element of supernatural or impossible worlds". Tsvetan Todorov (1975: 33-34) states that fantastic tales deal with events "which are not likely to occur in everyday life"; furthermore, the tale is told in such a way that the reader is unsure whether or not these events can be explained naturally. Hoffmann juxtaposes fantastic events with an everyday world in order to disorient his readers, making them more susceptible to the psychology of his tales.

> Im ‚Sandmann' rückt Hoffmann den Wendepunkt, den Einbruch des Unheimlichen, in eine heimliche vertraute Welt, gleich an den Anfang. ...Die Diskrepanz zwischen banalen Anlaß und tiefgehender Wirkung verweist auf ein erheblich gestörtes Verhältnis von objektivem Geschehen und subjektivem Empfinden (Freund, 1990: 86).

Actually, Todorov (1975: 41-57) regards the fantastic as an "evanescent" genre, closely flanked by two other, closely related and sometimes overlapping genres – the uncanny, or eerily frightening, and the marvellous.[28] In the marvellous type of story, it is clear to the reader that the strange events are not "real" but rather that they are supernatural. In uncanny tales, however, "Events are related which may be readily accounted for by the laws of reason, but which are, in one way or another, incredible, extraordinary, shocking, singular, disturbing or unexpected..." (Todorov, 1975: 46). This is certainly the case in *The Sandman,* in which Nathaniel finds himself immersed – in childhood and adulthood – in a series of very unusual occurrences. One expects that, at the end of an uncanny story, there will be a rational explanation of the strange events that are taking place – but one is not sure what that explanation will be, or indeed if it will appear at all. The way in which the author presents his tale influences the way in which the reader perceives the "uncanniness" of the story. This is discussed in more detail in section 3.4.2 below, which deals with Hoffmann's narratology.

Of course, psychology plays a large role in achieving the uncanny. The "discourse of madness" (Gray, 2009: 14) interested Hoffmann greatly (see above), and plays a significant role in *The Sandman*. For instance, we are never quite sure whether Nathaniel is mad, possessed or a victim of others' manias. A number of psychologists, including Ernst Jentsch and Sigmund Freud, have written about the uncanny, and about how it is used in Hoffmann's novella.

[28] Aside from a brief explanation for the sake of completeness, I shall not deal with the marvellous. Although there is a fine dividing line, those works which discuss *The Sandman's* genre generally regard it as being fantastic or uncanny, not marvellous. The marvellous requires such supernatural devices as ghosts, magic carpets or talking animals.

Ernst Jentsch, a German psychiatrist, was one of the first to speculate about the concept in *On the Psychology of the Uncanny*, written in 1906, nearly a century after Hoffmann wrote *The Sandman*. He defines the uncanny as arising from "intellectual uncertainty":

> Jentsch defines the uncanny as a feeling that is aroused when one encounters an entity or finds oneself in a situation that is unfamiliar or unexpected, making it difficult to make sense of it through one's established worldview. The 'psychic insecurity' caused by such an event translates into emotions ranging from anxiety to terror (Kang, 2011: 22).

Jentsch believed that the clockwork doll, Olympia, was one of the major reasons why *The Sandman* aroused feelings of the uncanny in Nathaniel and in the story's readers. He argued that this was because of Olympia's liminality – she appeared to be a living human being (familiar and expected) but turned out to be a lifeless automaton (unfamiliar and unexpected).

Some thirteen years later, in 1919, Sigmund Freud responded to Jentsch in an essay entitled "The Uncanny", which drew heavily on Hoffmann's novella. Freud disagreed with Jentsch's definition, because not everything unfamiliar or unexpected is perceived as uncanny. This being the case, he searched further for an explanation. He stated that "the uncanny is that class of the frightening which leads back to what is known of old and long familiar" (Freud, 1919: Part I). Far from finding Olympia the reason for the uncanny feelings elicited in *The Sandman*, however, he focused on something else:

> The main theme of the story is, on the contrary, something different, something which gives it its name, and which is always re-introduced at critical moments: it is the theme of the 'Sand-Man' [*sic*] who tears out children's eyes (Freud, 1919: Part I).

We see this repetition of the eye motif throughout the novella.[29] Its first appearance is in the nurse's tale of the Sandman, who steals children's eyes (see section 3.2). Next, there is the meeting between Coppelius and Nathaniel's father, which Nathaniel sees from his hiding place:

> I seemed to see human faces appearing all around, but without eyes – instead of eyes there were hideous black cavities.
>
> 'Eyes, bring eyes!' Coppelius cried in a dull hollow voice (Hoffmann, 1982: 91).

After Nathaniel is discovered, Coppelius threatens to take his eyes but is stopped from doing so by the boy's father. The next appearance of the eye motif occurs when Nathaniel is visiting home and decides to write a love poem to Clara. However, this is a very dark version of a love poem, for in it, as they are about to be married, Coppelius suddenly appears. He touches Clara's eyes, and makes them jump bloodily out of her head. When Nathaniel next looks at Clara, she still has her eyes, but death is looking out of them (Hoffmann, 1982: 105). After Nathaniel returns to his studies, the eye motif recurs when Giuseppe Coppola visits his rooms trying to sell him a barometer. Nathaniel refuses, and Coppola instead offers spectacles, which he calls *occe*.[30] Nathaniel finally buys a small telescope from him (Hoffmann, 1982: 109-10). Note that not only does a telescope bring distant objects nearer to the eye, it is also

[29] In addition to the instances I am about to outline, there is another curious aspect. As Drux (1988: 145, Note 2) points out, the names Coppola and Coppelius both come from the root *coppo* which means eye sockets.

[30] Of course, *occe* are eyes in Italian.

an instrument of Enlightenment science. Eyes are also mentioned several times in relation to Olympia. She has eyes that are "strangely fixed and dead" the first time Nathaniel sees her (Hoffmann, 1982: 110). Later, at Spalanzani's party, Nathaniel believes that she is "gazing across at him with eyes full of desire" (Hoffmann, 1982: 113). Finally, when Nathaniel decides to propose to Olympia, he goes to Spalanzani's house and finds his professor and Coppelius/Coppola[31] arguing about who contributed most to the doll that is Olympia. Coppelius/Coppola argues that it is he who provided the eyes, and finally gains control of the doll. As he is leaving, Nathaniel is able to see her face: it has no eyes. Spalanzani picks up the "blood-flecked eyes" from the floor and throws them at Nathaniel (Hoffmann, 1982: 120).

Freud attributed the feeling of the uncanny to the "castration complex of childhood", equating anxiety about loss of the eyes with fear of loss of genitalia. Some critics argue that this interpretation is too reductionist (Todorov, 1975; 151: Park, 2003: 56; Gray, 2009: 13, 16), and that Freud was actually attempting to analyse the author rather than the tale:

> When psychoanalysts have been concerned with literary works, they have not been content to describe them, on any level whatever. Beginning with Freud, they have always tended to consider literature as one means among others of penetrating the author's psyche. Literature is thus reduced to the rank of a simple symptom, and the author constitutes the real object of the study. Thus, after having described the organization of 'The Sandman', Freud indicates, without transition, what in the author may account for it (Todorov, 1975: 151).

I tend to agree with these critics. Hoffmann's tale is far too complicated to be

[31] Hoffmann uses both names in this passage, adding to the uncertainty about whether or not the two are separate individuals or the same person in different guises. Ellis (1981: 15) argues that this scene proves that Coppelius and Coppola are one person, and that Spalanzani supported the masquerade in order to draw Nathaniel into his "experiment".

considered merely as the psychoanalytical symptom of an author with a castration complex. There are far too many other elements present, elements which reflect the extra-rational that Hoffmann, as a Romantic author, was exploring.

Although the motif of the eyes is an important contributor to the uncanny in *The Sandman,* there is another element which helps to bring the automaton into the realm of the uncanny. It has to do with the seemingly human appearance of a non-human construction:

> As Freud notes, Hoffmann's robot is 'uncanny', unsettlingly neither human nor non-human; a borderline creation of technology that forces the reader to reappraise her own relationship to notions of 'humanity' and 'nature' (Roberts, 2005: 92-3).

Kang (2011: 44) makes a similar point: The more lifelike the automaton, the more uneasy we feel towards it, because it challenges our idea of what is real and what is not.[32] If a non-living object (such as an automaton) acts as if it is alive, we become confused. "The anxiety and terror that result are from the fear of losing the grip on reality..." (Kang, 2011: 23). It thus ceases to be fascinating because it is interesting, and becomes fascinating because it is horrible. This supports Todorov's (1975: 46-47) contention that certain events or manifestations are so unexpected that our response to them moves from disturbance to fear, and sometimes to horror. Hoffmann's inclusion of a living/non-living dilemma – embodied in Olympia – is in keeping with the Naturphilosophie of the Romantic, which "blurred the distinction

[32] Masahiro Mori has studied this in some detail, and has developed the concept of the "uncanny valley" – the negative emotional response towards "almost human" robots; robots which are less human-looking or totally human-looking do not elicit this negative response (Kang, 2011: 49).

between the natures of living things and inert objects..." (Kang, 2011: 195).

3.4.2 The contribution of narratology

The novella's structure is important in the creation of the uncanny, because it influences how readers perceive the situation that is presented to them. Narratology looks at how a story is told – both the narrative strategy that is employed by the author (that is, the type of narrator), and the narrative tactics that he uses (that is, the ways in which the chosen narrator tells the story). In *The Sandman* Hoffmann uses various techniques in a masterly fashion to build and maintain the feeling of the uncanny.

There are basically three kinds of narrative strategy, and they relate in different ways to the tale that is told (Stanzel, 1982: 15-16). In the first-person narrative situation, the narrator is one of the characters of the story; she or he exists in the same world as the other characters. This provides a very personal but perhaps somewhat limited viewpoint, in that the reader is only told what that particular character knows. In the figural narrative situation, the narration is accomplished by what Stanzel calls a reflector (and what is sometimes called a personal narrator elsewhere) – a character in the story through whose eyes we see the other characters and the action. Told in the third person, this situation still uses the perspective of one of the characters, but provides more distance than the first-person narrative. Note that the reader still only knows what the character knows. In the authorial narrative situation, the narrator is completely outside the world of the story, which is again told in the third person.

This type of narrator has a rather more omniscient view of what is going on, although the reader is not necessarily told everything that the narrator knows.[33] The authorial narrator was typical of nineteenth-century novels, and Hoffmann used it to good effect, as we shall see below.

In *The Sandman* Hoffmann utilises more than one point of view, and tends to shift between them. He toys with us by beginning the story in the first person, in the form of three letters. Two are written by Nathaniel to his friend, Lothario, although one goes astray and is received by his fiancée, Clara. The third is written by Clara to Nathaniel. Through these letters we learn the back story – what happened to Nathaniel in his childhood, including his association with Coppelius/Sandman, and, more recently, his experiences in the university town where he now lives and studies, and where he (again) meets Coppelius/Coppola.

Another function of these letters is to introduce the main characters to us, and to show us the difference in their outlooks (Freund, 1990: 85; Brown, 2006: 192). Nathaniel, the main character, has been deeply affected, and perhaps damaged, by the childhood trauma he experienced; Lothario, his best friend, is supportive but level-headed; Clara, his fiancée, is a solid, conservative young woman with her feet, as they say, on the ground. Clara's level-headedness is representative of Enlightenment rationalism, while Nathaniel's sensitivity and preoccupation with his inner feelings (and perhaps his incipient madness) represent the Romantic extra-rational.

[33] Note, however, that the authorial narrator is not the same as the author.

Because they are first-person narratives, the varying perspectives in the letters are by their very nature subjective. They describe what is "real" to the writers of the letters. Of course, we have only the word of the letter-writers that what they say is true and real. Thus, right at the beginning of the narrative, Hoffmann establishes a dichotomy between "what is real?" and "what is unreal?" – the basis for the fantastic and uncanny nature of the tale. The back story contained in the letters leaves us with a choice of two explanations for what has happened. The first is a real-world psychological explanation based on the trauma Nathaniel experienced in his childhood – the nursemaid's story of the wicked Sandman, the father's alchemical experiments with his colleague, and the father's subsequent death in an explosion. From this point of view, Nathaniel's traumatic childhood experiences have caused him to have a very tenuous grip on reality, a grip he eventually loses when he realises that Olympia is an automaton. In this scenario, Nathaniel misdirecting the first letter, so that Clara and not Lothario receives it, can be considered as a cry for help from a deeply disturbed young man (Freund, 1990: 85-86). The second possibility has more to do with the dark side, the "Nachtseite". In this version we are confronted with an evil, possibly Satanic, possibly immortal creature who manifests both as Coppelius and Coppola.[34] The machinations of this character may be responsible for the odd things which happen to Nathaniel. Which is the real explanation? Hoffmann leaves us dangling, and this lack of clarity contributes very strongly to the feeling of the uncanny in the story.

[34] There are several doppelgängers in the novella, including Coppelius and Coppola, Clara and Olympia, and Nathaniel's father and Spalanzani. Although the doppelgänger is an important motif in this and other Hoffmann tales, and although some aspects are dealt with in this research report, alas it is not possible to discuss the motif fully.

After the letters, there is a sudden switch to another narrator altogether, one who is completely outside of the story. At first this new narrator speaks in the first person. He introduces himself as Nathaniel's friend, and for roughly two pages justifies his decision to tell us Nathaniel's story, explaining that he has used the letters as a way to introduce us to the story he wants to tell. What is the purpose of this excursus? After reviewing the literature and dismissing a number of theories, Ellis (1981: 5-9) argues that its main function is to adjust the picture of Clara that was formed during the epistolary beginning of the novella. Those letters, Ellis claims (and as I have noted above), provide a subjective self-portrait of the writers. Clara is seen as a sweet, understanding, level-headed young woman. Her characterisation of Nathaniel's experiences as the product of an over-active imagination carry weight, and would colour the rest of the narrative were it not counter-acted.

> The epistolary narration, then, has both placed severe limitations on what we can know, and predisposed us to one particular view of the events so far – Clara's. ... [The narrator's excursus] draws our attention to these limitations ... and then leads gradually into a different pattern in which certain of the limitations are removed so that we have a vantage point which is distinctly different from that which we were formerly allowed (Ellis, 1981: 6).

Clara's interpretation is no longer the only one which bears weight, and the reader is able to make his or her own deductions about her character[35] and about the meaning of forthcoming events – which may or may not include conclusions about the uncanny and about madness.

[35] Clara's character is discussed further in section 3.5.

The excursus over, the narrator settles down, as it were, and continues to tell the story in the third person, and clearly from a later perspective. This means that one finds the omniscient overtones that one would expect from an authorial narrator.

Within the story told by the new narrator, there are elements of other narrators who give their points of view. For example, Nathaniel's student friend, Siegmund, expresses the generally felt opinion that Olympia is regarded as "rigid and soulless" by Nathaniel's university friends (Hoffmann, 1982: 116). The inclusion of such opinions "may be a tactic on the narrator's part not to show his own hand and thereby to deliberately create ambiguity" (Brown, 2006: 192). As we have seen above, this sort of ambiguity or uncertainty between real and supernatural explanations for events does contribute to the creation of an uncanny feeling (Todorov, 1975: 46; Kang, 2011: 194-95). The longer the revelation of the actual state of affairs is delayed, the more uncanny a story appears to be; sometimes the revelation is never explicitly made, "ending the story with possible explanations rather than a definitive one to further beguile the reader" (Kang, 2011: 207).

We see this clearly as *The Sandman* draws to a close. Having apparently recovered from his madness, Nathaniel and Clara are reunited. They have climbed to the top of the tower in the town hall to see the view. From the top of the tower, Clara sees something odd on the road below; Nathaniel takes out the telescope he bought from Coppola, puts it to his eye and seems to go mad again. It may be that he conflates Clara with Olympia,[36] for he shouts, "Spin, puppet, spin!" and tries to push Clara off

[36]See the next section for a discussion of Hoffmann's portrayal of Clara and Olympia.

the tower (Hoffmann, 1982: 123; Bell, 2005: 207). We still do not know whether events have a physical (psychological) explanation or a metaphysical (supernatural) one. Has Nathaniel's madness suddenly returned, triggered by something we are not aware of? Or has Coppola imbued the telescope with some evil that infected Nathaniel when he put it to his eye? Neither the narrator nor the author tells us the answer. This uncertainty keeps the uncanny atmosphere in place to the very end of the tale.

3.5 Clara and Olympia as Female Stereotypes

In this section I explore various aspects of how Clara and Olympia are portrayed, and how Hoffmann uses them to critique certain aspects of the Enlightenment.

One aspect relates to Clara's intelligent but pedestrian reason (Bell, 2005: 205). Note the clue given in Clara's very name: her "*clarity*" reflects the clear reason of the En*light*enment (Freund, 1990: 85). She has absolutely no imagination, and therefore stands for the rational mind of the eighteenth century. In his first letter to Lothario (which goes to Clara by mistake), Nathaniel is sure that Clara's reaction to his misgivings about Coppelius and Coppola, and about his own state of mind, would be to denounce them as "mere childishness" (Hoffmann, 1982: 86). He is right, for in her return letter to him she says, "Let me say straight out what it is I think: that all the ghastly and terrible things you spoke of took place only within you, and that the real outer world had little part in them" (Hoffmann, 1982: 95). Her chief concern about the alchemical experiments carried out by Coppelius and Nathaniel's father is

that “a lot of money was undoubtedly wasted” (Hoffmann, 1982: 95). She goes on in this vein, basically telling Nathaniel that he has to be strong and cheerful, and not give in to what is undeniably all in his imagination. In Nathaniel’s subsequent letter to Lothario, he is very patronising about Clara’s “profound philosophical letter” and states that Lothario must have coached her in the necessary logic (Hoffmann, 1982: 98). The authorial narrator characterises her as having a “clear sharp understanding” but also a “woman-tender heart” and a “childlike” nature (Hoffmann, 1982: 102); he is somewhat patronising in the same way that Nathaniel was in the second letter to Lothario. Every time we meet Clara – in the letters, during Nathaniel’s visit home after his illness, and at the end of the tale when he returns home to marry his sweetheart – she is the same: the sweet and sensible voice of reason. Even in the epilogue, which takes place some years after Nathaniel’s death, Clara is portrayed as quintessential womanhood:

> ...sitting with an affectionate man hand in hand before the door of a lovely country house and with two lovely children playing at her feet, from which it is to be concluded that Clara found in the end that quiet domestic happiness which was so agreeable to her cheerful disposition... (Hoffmann, 1982: 125).

However, as I indicated in section 3.4.2, the narrator’s excursus modifies this perception of Clara. He makes sure that we understand her as a single-minded woman who moves in a straight trajectory towards her goal – the “affectionate man”, the “country house” and the “two lovely children”. This undeviating course is quite automaton-like, quite programmed (Ellis, 1981: 9), which leads me to the next feature that I wish to discuss.

The second aspect relates to the automaton. There is irony here: although Clara is the real woman and Olympia the mechanism, in Nathaniel's mind these two roles are reversed. During his visit home, Nathaniel writes Clara a very dark love poem. When she rejects it, he calls her a "lifeless accursed automaton" (Hoffmann, 1982: 106). To him, she has no understanding, no imagination, no sense of poetry; she has become just a cold mechanism. Later, on the tower, after he has looked through the telescope and again apparently gone mad, he shouts at her, "Spin, puppet, spin!" (Hoffmann, 1982: 123). His maddened brain now seems to equate her with the clockwork Olympia, who was just a puppet in the hands of her creators. Olympia, on the other hand, although she is a mechanical construct, is treated for most of the novella as a human being. She reflects Nathaniel's feelings for her (Drux, 1988: xiii; Bell, 2005: 206).[37] Her hands are cold until Nathaniel touches them; her lips are cold until Nathaniel kisses them. She pays perfect attention to all he has to say, never fidgeting, unlike Clara who was always busy with some feminine bit of handwork. She never disagrees with Nathaniel, only saying, "Ah! Ah!", which he takes as agreement.

This leads me to the third aspect I wish to discuss – that of Olympia as the perfect woman. Hoffmann uses her to expose the stereotypical behaviour patterns which the women of Nathaniel's class were expected to follow (Drux, 1988: iv; Park, 2003: 57). Olympia's outstanding accomplishments – as a piano player, as a dancer, as an attentive listener – mark her as a caricature (Drux, 1988: xiii). Her very perfection

[37]Some critics have commented on Olympia as a projection of Nathaniel's own narcissism – "In die Frauenbildern zeigen sich die Männerphantasien" (Drux, 1988: xiii). Freud (1919: Part II) relates this narcissism to the doppelgänger phenomenon.

signals her artificiality (Bloom, 2000: 295).[38] However, Olympia was so well designed and programmed that she performed her role perfectly. It was not only Nathaniel who believed that she was human. Although his friend Siegmund thought that something might be wrong, and actually referred to Olympia as a "wax-faced wooden doll" (Hoffmann, 1982: 116), he did so metaphorically and also believed she was a woman. Polite society had been equally fooled, for Olympia had been happily accepted into "respectable tea-circles" (Hoffmann, 1982: 121). Hoffmann's tongue-in-cheek attitude is clear when he writes about the reactions of young men after Spalanzani's deception had been uncovered:

> To be quite convinced they were not in love with a wooden doll, many enamoured young men demanded that their young ladies should sing and dance in a less than perfect manner, that while being read to they should knit, sew, play with their puppy and so on, but above all that they should not merely listen, but sometimes speak, too, and in such a way that what they said gave evidence of some real thinking and feeling behind it (Hoffmann, 1982: 121-22).

Olympia's lack of humanity and soul had eventually become apparent to all. She was uncanny because she so closely resembled a living woman. (This is the "uncanny valley" at work.) She points to the Romantic interest in the boundary between the real and the unreal.

3.6 Conclusion: Olympia vis-à-vis Materialism

The Romantics did not reject reason *per se*, but rather the uses to which it had been put, including materialism, which in their view was superficial and unable to explain

[38]Park (2003: 57) reminds us that the perfect piano-playing Olympia is reminiscent of eighteenth-century musical automata.

the human situation in the world. Hoffmann uses the story of *The Sandman* to explore issues of imagination versus reason. The narrative dances around Nathaniel and his relationship with two women – Olympia, who is not a real human being but a clockwork doll, and Clara, the unimaginative voice of reason. Both relationships were unable to give him what he needed – a secure grip on reality and on his own sanity.

Olympia is a machine, an expression of the materialist world of the Enlightenment, built by intellectuals and scientists. However, although this woman-machine is an entity constructed of clockwork mechanisms, she is also something more. Olympia exerts a kind of power over Nathaniel that he does not readily comprehend. She moves and speaks like a normal human being – in fact, in Nathaniel's opinion she is perfect in all that she does. She excels in womanly accomplishments, but she is empty, unsatisfying, incomplete (Drux, 1988: xiii-xiv). She shows no emotion, has no understanding of other people's emotions. She is a machine personified, but not a true person. She exemplifies the shortcomings and the dangers of Enlightenment rationalism and materialism.

Chapter 4
The Yearnings of a Bodiless Spirit: *Faust's* Homunculus Episode

HOMUNCULUS: Ich schwebe so von Stell zu Stelle
Und möchte gern im besten Sinn entstehn,
Voll Ungeduld mein Glas entzwei zu schlagen
(Faust II, Act 2, Classical Walpurgis Night, 7830–32)

4.1 Introduction

As was suggested in Chapter 2, both Hoffmann's *The Sandman* and Goethe's Homunculus episode in *Faust* respond to various aspects of the science of the Enlightenment. Materialism, arising from experimental biological science, was one major pathway followed by rationalism in the eighteenth century, but Enlightenment scientists also explored many other aspects of their world, including geogony,[39] which will play a role later in this chapter. As they attempted to understand and describe the world empirically, they did their best to banish whatever did not fit into their rational framework. However, the extra-rational struggled to reassert itself, and reappeared during the Romantic in the imaginative products of many writers.

Hoffmann's clockwork doll, Olympia, which was examined in the previous chapter,

[39]An archaic term in geology, referring to theories about the formation of the earth.

may be said to represent one end of a spectrum which ranges from the purely material to pure spirit. In this chapter, I will focus on a synthetic life-form from the other end of that spectrum – the creature of light brought into being by the scientist Wagner in *Faust:* Homunculus – "der reine Intellekt" (Schlaffer, 1981: 124). Goethe was extremely interested in natural philosophy, and spent much of his time in scientific pursuits, but the Homunculus episode is the only portion of *Faust* in which he deals with scientific issues (Fairley, 1953: 84). Goethe loved classical culture as much as he was fascinated by science, and in much of his writing strove to meld the two (Fairley, 1953: 85). Thus the commentary on science is nested within a framework built of mythological characters – ambassadors, as it were, of the extra-rational. Goethe used many characters from northern mythology in *Faust I,* and from southern mythology in *Faust II.* In this chapter, it is my intention to explore the way in which Goethe presents that interplay between the extra-rational and science in the Homunculus episode.

Following this introduction, I provide a synopsis of that portion of *Faust* which provides my study matter (section 4.2), followed by a brief discussion of those aspects of Goethe's life and beliefs that are relevant to this research report (section 4.3). I then move on to an analysis of the portrayal of Homunculus, examining, *inter alia,* Wagner's creation of Homunculus as an aspect of the "Gelehrtentragödie" (section 4.4), the Classical Walpurgis Night as a commentary on portions of Enlightenment science (section 4.5), and how Homunculus relates to the notions of Entelechy and Eros (section 4.6). I will conclude with a summary of the significance of the Homunculus episode in *Faust* (section 4.7).

4.2 The Homunculus Episode: A Synopsis

The second act of *Faust II* begins in the same "engen, gotischen Zimmer" which was Faust's study in the first part of the drama. He lies on a bed in an alcove, unconscious, brought thither by Mephistopheles following his ordeal with the Mothers and his conjuring of the spirits of Helen and Paris. While Faust dreams, Mephistopheles finds Doctor Wagner in his laboratory.[40] Wagner, who was once Faust's assistant, has now risen to become a doctor-magus himself. He is certain that he can use alchemy to create a human being, using a procedure developed by Paracelsus. He is successful (albeit with some help from Mephistopheles), and Homunculus is created within a laboratory retort.

Homunculus is incorporeal, a being of light and energy. From the first, he has significant powers, being able to speak, reason and move from place to place, although he is not able to exist outside his glass phial, which moves with him. He sees Faust sleeping in the alcove, and also sees Faust's dream about the conception of Helen during Leda's intercourse with Zeus in the shape of a swan. He states that he will take Faust to the Classical Walpurgis Night, where he will find what he seeks.[41] He proceeds to fly Mephistopheles, the sleeping Faust and himself to Thessaly, leaving a bewildered Wagner behind.

[40] Although this play was published in the nineteenth century, it is set much earlier, in a time when alchemy was one of the dominant modes of "science". The nature of the laboratory reflects this. However, Goethe was writing at a time when the science of chemistry was growing apace, and the chemical "ingredients" that make Homunculus reflect the new science as much as the old one (Schöne, 2011: 25-27).

[41] As Staiger (1959: 314-15) suggests, Goethe needed a way to get Faust to the Classical Walpurgis Night, and Homunculus is the indispensible means to that end.

After the three travellers land, they go their separate ways, each to seek what he desires: Faust goes in search of Helen; Mephistopheles seeks understanding of the witches and other supernatural creatures of this new land; Homunculus seeks a way to become fully alive. Homunculus finds two philosophers, Thales and Anaxagoras, who are arguing about how the world was formed. He hopes they will tell him how to become a complete human being. After listening to their arguments, Homunculus decides to follow Thales, who takes him to Nereus and eventually to Proteus, the master of metamorphosis. Changing himself into a dolphin, Proteus takes Homunculus out to sea to meet Galatea, the representative of beauty and love – Aphrodite and Eros. Homunculus dashes his phial against her sea-chariot. His flame mixes with the waters of the sea, and he will presumably be born anew at some future time.

4.3 Goethe the Scientist

Although Goethe did not consider himself to be a Romantic,[42] he certainly shared the predominant Romantic opinion that pure rationalism was an inadequate way to view the world, including the natural world (Heller, 1966: 84). He believed that there was an essential hubris in the way that scientists conducted themselves and their experiments, and that it was necessary to study not only how things worked but what they were and meant (Heller, 1971: 8, 16). In his search for a poetic as well as a scientific truth, he attempted to "restore the balance of power between analytical

[42] See Chapter 1.

reason and creative imagination" in his work (Heller, 1971: 20).

Science and experimentation interested Goethe from quite a young age.[43] When he was twenty, the family doctor treated him for an illness with a certain concoction that had been brewed using alchemical principles. The treatment was apparently successful, and the experience left the young Goethe interested in alchemy; he set up a laboratory in his home, and for a time he studied the works of Paracelsus and other alchemists. The knowledge he gained then is put to good use in his description of Doctor Wagner's laboratory and of his experimental techniques. He continued to read various scientific texts off and on over the next few years, including Boerhaave,[44] although not in a systematic manner. It was not until he was in his early thirties that he began to study more seriously, particularly in the fields of mineralogy, anatomy (especially osteology) and botany.[45] His scientific publications were sometimes well-founded (for example, his report on the intermaxillary bone in humans), but were occasionally based on erroneous assumptions (most famously, his *Zur Farbenlehre,* which was based on a misreading of Newton's *Optics*).[46] His scientific work generally was not well received by the scientists of the day, who on the whole regarded him as an amateur dabbler, despite his reputation as a genius in

[43]The information in this section is taken from Lewes (1908), unless otherwise cited. Lewes first published his biography of Goethe in 1855, and an updated version was published in 1908. Although it is an old source, and somewhat of a hagiography, Lewes was meticulous about using the material that was then available. In addition, the book has a certain interest arising from Lewes' interviews with people who had known Goethe.

[44] This was the same Boerhaave under whom La Mettrie had studied in Holland, and who so greatly influenced his iatrochemical and materialistic beliefs.

[45] In part this was because he was now Administrator of the Duchy of Saxe-Weimar. His duties included supervision of forests and of mining operations (Wells, 1978: 4).

[46] Despite the errors in physics, the work has value in terms of colour perception as it relates to painting and art, another area that interested Goethe (Lewes, 1908: 341).

other fields.[47] It is possible that the disdain with which scientists treated Goethe's work contributed to the way in which he portrayed the scientist, Doctor Wagner, but it is clearly not the only factor contributing to Wagner's depiction (see next section).

Incidentally, Goethe was also aware of and interested in Vaucanson's mechanical creations. In 1805 he visited Hofrat Beireis, a physics professor and curiosity collector. There he saw the remnants of two of Vaucanson's automata – the flute player and the duck. They were in sad shape, bedraggled and no longer functioning properly (Drux, 1988: 79).

4.4 Doctor Wagner as a Commentary on the Enlightenment Thirst for Knowledge

In order to lay the groundwork for a consideration of Doctor Wagner, it is necessary to examine Faust as a collector of knowledge. For this we must look to the beginning of *Faust I.* In the scene "Night", Faust sits in despair in his study, surrounded by "his books and instruments, vain appliances of vain inquiry" (Lewes, 1908: 470). He realises that although he has spent his life studying, he is actually no wiser than he was before:

> FAUST: Habe nun, ach! Philosophie,
> Juristerei und Medizin,
> Und leider auch Theologie!
> Durchaus studiert,mit heißem Bemühn.
> Da steh ich nun, ich armer Tor!
> Und bin so klug als wie zuvor.

[47] In the eighteenth and early nineteenth centuries, a fierce but not openly acknowledged struggle was being fought between philosophers and writers on the one hand, who had been the undisputed intellectual superiors for centuries, and the new breed of scientists on the other hand, who were now gaining increased respect (Wells, 1978: 2). Goethe was in an interesting position in this rivalry, as he was both poet and scientist.

...
Und sehe, daß wir nichts wissen können!
Das will mir schier das Herz verbrennen.
...
Dafür ist mir auch alle Freud entrissen....
[Faust I, Night, 354-59; 364-65; 370][48]

Faust, like the Romantics, has come to the conclusion that rationalism and learning are not enough; there must be something more to give meaning to life. His melancholy and dissatisfaction lead him to make his bet with Mephistopheles. Wagner, however, is different. He does not feel such dissatisfaction. He is happy with the stacks of dusty books and the esoteric lore. His ambition was to rise in academia, and he has been successful. He represents the beliefs of the Enlightenment when he says:

WAGNER: Was man an der Natur Geheimnisvolles pries,
Das wagen wir verständig zu probieren,
Und was sie sonst organisieren ließ,
Das lassen wir kristallisieren.
(Faust II, Act 2, Laboratory, 6857–60)[49]

Wagner delights in collecting knowledge, but to the Romantics that knowledge is meaningless in itself (Staiger, 1959: 314; Goldmann, 1973: 9). He knows much but understands little; he is knowledgeable but he is not wise.[50]

Wagner is convinced that he can create a thinking creature using alchemical means.

[48] All quotations from *Faust I* are taken from the 1971 Reclam edition, and cite line numbers rather than pages.

[49] All quotations from *Faust II* are taken from the 2001 Reclam edition, and cite line numbers rather than pages.

[50] Lucien Goldmann (1973: 45) interprets Wagner's comment in *Faust I* – "Zwar weiß ich viel, doch möcht ich alles wissen" (*Faust I, Night, 600*) – as a parody of the Enlightenment Encyclopaedists, who wished to collect and publish all knowledge.

Paracelsus, who coined the term "homunculus",[51] believed that it was possible to create a human being without the agency of sexual union between a man and a woman (Drux: 1988: 15-16). He provided a detailed list of ingredients, but did not provide exact quantities, thus reserving to himself the secret of success. Wagner was intrigued by Paracelsus' proposal that one could do away with the old-fashioned sexual method of reproduction and engage in an up-to-date, scientific method:

> WAGNER: Ein herrlich Werk ist gleich zustand gebracht.
>
> MEPHISTOPHELES: Was gibt es denn?
>
> WAGNER: Es wird ein Mensch gemacht.
>
> MEPHISTOPHELES: Ein Mensch? Und welch verliebtes Paar
> Habt Ihr ins Rauchloch eingeschlossen?
>
> WAGNER: Behüte Gott! Wie sonst das Zeugen Mode war
> Erklären wir für eitel Possen.
> Der zarte Punkt aus dem das Leben sprang,
> Die holde Kraft die aus dem Innern drang
> Und nahm und gab, bestimmt, sich selbst zu zeichnen,
> Erst Nächstes, dann sich Fremdes anzueignen,
> Die ist von ihrer Würde nun entsetzt;
> Wenn sich das Tier noch weiter dran ergötzt,
> So muss der Mensch mit seinen großen Gaben
> Doch künftig höhern, höhern Ursprung haben.
>
> *(Faust II, Act 2, Laboratory, 6833–47)*

Although the mannikin resulting from Paracelsus' recipe was "born" from his laboratory retort after forty weeks (the normal period of human gestation) in the same shape as, but much smaller than, a human man, Wagner's Homunculus came into being immediately, but not in human form; rather he was a "Licht-Zwerg" – a small creature made entirely of light energy and spirit, who can exist only within his glass retort. He is "nur halb zur Welt gekommen" (*Faust II,* 8248). This lack of a body is significant; it reflects Descartes' separation of body and soul and, as

[51] The word is a diminutive of the Latin "homo" and thus means "little man".

discussed in Chapter 2, the Enlightenment's alienation of the body and the concomitant suppression of bodily passions (Böhme and Böhme, 1983: 50-51). The little creature must search for a way to become wholly human, to become both spirit *and* body. Once he has achieved this, he will be set free from his glass prison:

> HOMUNCULUS:Ich schwebe so von Stell zu Stelle
> Und möchte gern im besten Sinn entstehn,
> Voll Ungeduld mein Glas entzwei zu schlagen
> *(Faust II, Act 2, Classical Walpurgis Night, 7830–32)*

That search is the subject of the Homunculus portion of the Classical Walpurgis Night. In the next section, I will examine various aspects of Homunculus' experiences in Thessaly.

4.5 The Classical Walpurgis Night as a Commentary on Enlightenment Science

Both Homunculus and the Classical Walpurgis Night scene in Act 2 have been interpreted in different ways by various literary critics. The scene is rich in mythological imagery and symbolism, which is not surprising given Goethe's penchant for the classical. However, because my focus is on the Romantic response to the Enlightenment scientific outlook, in this section I explore how Goethe utilised various contemporary scientific debates, particularly the debate between Neptunism and Vulcanism, which I shall describe in a moment. The debate between Thales and Anaxagoras, however, should be seen as more than merely parroting the debate between Neptunism and Vulcanism. Anaxagoras can be seen as the "spokesman for a rationalism which is antithetical to the mythological theory of origin proposed by

Thales" (Weisinger, 1972: 237). That he loses the debate to Thales' superior argument denotes that Goethe was critiquing the pure rationalism of the preceding age.

The Neptunism/Vulcanism debate has its origins in the Enlightenment passion for classifying and analysing everything, even rocks. This naturally gave rise to speculation about the origin of the earth. As might be expected, mines were a rich source of material, and mining schools were in the forefront of such analyses (Hall and Hall, 1964: 227). Goethe was familiar with these studies and debates, partly because his duties as Geheimrath of Saxe-Weimar included the position of Director of Mines (Lewes, 1908: 320).

The debate between Neptunism and Vulcanism (also known as Plutonism)[52] had been going on since the seventeenth century. John Woodward (1665–1728), a professor of medicine in London, posited that the biblical Flood had "not only destroyed most of the organic population of the earth, it had also broken up the inorganic surface of the earth and held the constituents of the rocks in suspension" (Stephen Mason, 1962: 396). Eventually this material settled out, with the heaviest rocks and minerals at the bottom and lighter chalk-type rocks nearer the top. This hypothesis was opposed by John Ray (1627–1705), a Cambridge clergyman and naturalist. He believed that "mountains and dry land had been raised above the waters of the ocean by the internal fires of the earth at God's command" (Stephen

[52] These names derive from Roman deities: Neptune (the god of the sea), Vulcan (the god of volcanoes and smoke) and Pluto (the god of the Underworld).

Mason, 1962: 397). Over the years, both theories had a number of adherents, and some thought that the two theories actually complemented each other. However, the controversy became heated in the period 1790–1830, largely because the fiery planetary upheavals proposed by the Vulcanists came to be associated with the political and social upheavals of the time, such as the American and French Revolutions (Schlaffer, 1981: 126).

In Germany, Abraham Werner, a geologist and Director of the Freiburg School of Mines, strongly supported the Neptunist school (Stephen Mason, 1962: 400; Hall and Hall, 1964: 228-29). Goethe, too, tended to support Neptunism, for two reasons. First, he was convinced by his own geological observations that rocks had been formed either through sedimentary deposition or through a slow process of crystallisation of minerals dissolved in water (Wells, 1978: 47-48, 53). Secondly, Neptunism proposed slow, evolutionary change, and that was an approach he favoured:

> Goethe... tendierte aber aus gefühlsmäßiger Überzeugung... zu den Neptunisten, deren evolutionäres Modell in seiner Regelhaftigkeit und Ordnung verständlicher als die revolutionäre Vorstellung, daß aus dem Chaos eines Vulkanausbruchs eine Formgebung möglich sei....Der Vulkanismus war für Goethe das Sinnbild der Zerstörung. ... Das vulkanisch-revolutionäre Modell war ihm in seiner Plötzlichkeit, Unberechenbarkeit und Unordnung zutiefst zuwider (Martens, 1995).

In *Faust,* this debate is incorporated in the persons of Thales, who champions Neptunism, and Anaxagoras, who speaks on behalf of Vulcanism (Fairley, 1953: 81; Buchwall, 1961: 168), as we see in their ongoing argument when Homunculus first meets them:

ANAXAGORAS (zu Thales): Dein starrer Sinn will sich nicht beugen,
Bedarf es Weitres dich zu überzeugen?

THALES: Die Welle beugt sich jedem Winde gern,
Doch hält sie sich von schroffen Felsen fern.

ANAXAGORAS: Durch Feuerdunst ist dieser Fels zuhanden.

THALES: Im Feuchten ist Lebendiges erstanden.

(Faust II, Act 2, Classical Walpurgis Night, 7851–56)

Thales also supports the slow, evolutionary development of life. To this end he says to Homunculus:

THALES:Gib nach dem löblichen Verlangen,
Von vorn die Schöpfung anzufangen,
Zu raschem Wirken sei bereit!
Da regst du dich nah ewigen Normen,
Durch tausend abertausend Formen,
Und bis zum Menschen hast du Zeit.[53]
(Faust II, Act 2, Classical Walpurgis Night, 8321–26)

At the end of Act 2, Homunculus follows Thales' advice. He shatters his glass retort on Galatea's watery throne, and mixes his spiritual flame with the nurturing water. He does this in hope that, after negotiating the "tausend abertausend Formen", he will become whole and be born as a true human being (Fairley, 1953: 82; Eudo Mason, 1967: 321). This reflects the belief of Benoit de Maillet, published in 1748, that "all animal life had originally come from the sea" (Thomson, 1996: xxi). Given his interest in natural history, it is more than likely that Goethe had read de Maillet's work, or at least read about it.

This meeting of spirit-fire with water points to another important aspect, and that is

[53] One often finds echoes of *Faust I* in *Faust II.* Goethe indicates the importance of the sea in terms of the evolution of life when he has the Earth Spirit say in *Faust I*: "Geburt und Grab, / Ein ewiges Meer" (*Faust I, Night, 504–505*) (Jantz, 1969: 37).

Goethe's commentary on the importance of Eros. This concept is discussed in the following section.

4.6 Entelechy and Eros

According to Johann Eckermann, for Goethe Entelechy was that portion of a human being which exists before birth (Weisinger, 1972: 238). As an unborn, disembodied spirit, Homunculus was Entelechy. As his glass prison shatters, there is a union of fire and water, and Homunculus is "born":

> THALES: Er wird sich zerschellen am glänzenden Thron;
> Jetzt flammt es, nun blitzt es, ergießet sich schon.
>
> SIRENEN: Welch feuriges Wunder verklärt uns die Wellen,
> Die gegeneinander sich funkelnd zerschellen?
> So leuchtet's und schwanket und hellet hinan:
> Die Körper sie glühen auf nächtlicher Bahn,
> Und rings ist alles vom Feuer umronnen;
> So herrsche denn Eros der alles begonnen!
>
> *(Faust II, Act 2, Classical Walpurgis Night, 8472–79)*

One might say that this melding of water and fire represents a union of Neptunism and Plutonism (Trunz, 1981: 564-65). However, this passage means much more than that. It also represents the union of spirit and matter to create a new life (Latimer, 1974: 815). Homunculus has seen Galatea, the embodiment of love, and his feelings for her convince him to finally (and literally) take the plunge, as it were, into the life-giving waters of the sea and begin his long journey of "entstehen". In a way, this is a sort of orgasmic climax, which marks the beginning of his future life in the same way that the sexual climax of passion between two people may result in conception and the eventual birth of a human being. When Homunculus breaks his phial against

Galatea's shell, however, and as his spiritual essence flows out of the bottle, that part of his being comes to an end, and he has to wait to be reborn as a material being. As Thales has pointed out, there are no instant solutions: Wagner's quick scientific approach could only give partial life to Homunculus. Long, slow, evolutionary development – "Durch tausend abertausend Formen" (*Faust II*, 8325) – is what will give Homunculus a body as well as a spirit, and thus wholeness – a reunification of the rational and the extra-rational.

The sirens' song alerts us to the importance of Eros:

> [It points to] a mixture of the elements – more particularly, the conjunction of fire and water – as the necessary basis of Eros, 'der alles begonnen'. ... Fire, the spark of life, works on the constant, ever-flowing principle of water to create the manifestations of life, the forms of mutation and generation (Weisinger, 1972: 239).

This erotic climax is a "paean to Eros" (Fairley, 1953: 82). Homunculus is born into the material world (Weisinger, 1972: 238), and is thus set on the path to wholeness. This reflects Goethe's belief that life should be more than merely the sum of accumulated knowledge, that humanity should live in unity with nature. Trunz expresses this well when he says:

> Der 2. Akt gestaltet in wiederholten Variationen die Beziehung von Geist und Leben, das Schöpferische als Bewußtes und Unbewußtes, als Denken und Natur, wobei kosmisches Werden und künstlerisches Werden eine geheime Gemeinsamkeit des Gesetzes haben (Trunz, 1981: 558).

Human beings search for meaning in the world around them, for understanding of their role in that world. It is not only what rationalism deduces that is important, but what human beings perceive to exist in the world around them, and how they interact

with that world. In the words of Ronald Taylor (1970: 160), "the mediators in this search for ideal meaning, both individual and universal, and for self-fulfillment, are the twin deities of love and art". Goethe called it Eros.

4.7 Conclusion: Why Homunculus?

The French and the Germans had differing views about natural philosophy; the former tended to be mechanistic (as was La Mettrie, for example), and the latter tended to be vitalistic. This latter view led to a kind of pantheism – the belief that "all substances, even minerals and chemical compounds, were alive, for they were permeated by a vital force which caused growth and determined the forms which that growth assumed" (Stephen Mason, 1962: 351).[54] This is in keeping with an approach that regards scientific rationalism as an inadequate way of viewing the world. Goethe's view was in fact much more complex than a straight-line empirical approach.

In the Homunculus episode, Goethe presents aspects of his natural philosophy. For example, his evolutionary views are clearly expressed by Thales when he advises Homunculus to move slowly, "durch tausend abertausend Formen" (*Faust II*, 8325), from his present spiritual form to a bodily existence. He also uses Homunculus' discussions with Thales and Anaxagoras to put forward the "Basaltstreit" (Martens, 1995) – the debate on the origins of the world – that was raging in the first decades of the nineteenth century.

[54] This latter was the view of many iatrochemists. Goethe was aware of this view from his reading of Boerhaave, who was a well-known iatrochemist.

Goethe also uses Homunculus to examine the relationship between spirit and matter. While Faust seeks to move away from his rational world towards a more beautiful and spiritual one, Homunculus seeks to move in the opposite direction, from his bright spirit self, his "reine Intellekt", to a corporeal existence (Latimer, 1974: 812). In both types of striving, love (Eros) is important. Essentially, Goethe shows the inadequacy of pure mind, both for Faust (his studies failed him) and for Homunculus (he wants a bodily existence, despite the power he has as a spirit). Speaking of Homunculus, Latimer writes about:

> ... the prodigious inadequacy ... and inevitable longing of the nature-starved mind engendered by a science so abstract and overweeningly proud that it would no longer be the humble interpreter of nature but, indeed, lord over her.... Homunculus, inasmuch as he falls in love and shatters his phial on the Cypriot's [Galatea's] car, sets himself in opposition to his laboratory origins and rejoins that vast hymn to nature... (Latimer, 1974: 820).

Latimer's comment brings us back to the relationship between Enlightenment rationalism and the extra-rational that it sought to subdue. Homunculus-as-spirit is the product of an attitude that is "overweeningly proud" and that wishes to "lord over" nature. He is incapable of sexual love, because his spirit has been separated from body – a key undertaking of Enlightenment rationalism (Böhme and Böhme, 1983: 13). However, Homunculus realises that his is not a true existence. He must regain that which Wagner's science (and rationalism) withheld from him – "[das] Verdrängten und Verdeckten der Vernunft" (Böhme and Böhme, 1983: 101): the body, a relationship with nature, love. Only this will complete him and make him whole.

Chapter 5
Conclusion

In this research report I have examined the dialectical relationship between Enlightenment rationalism and the Romantic extra-rational by analysing certain aspects of the works of two Romantic authors, E.T.A. Hoffmann and Johann Wolfgang Goethe. Specifically, the works under review were Hoffmann's novella *The Sandman* and Goethe's Homunculus episode in *Faust.* My aim was to explore the way in which these authors portrayed two key characters – Olympia and Homunculus – with a view to determining what that rendering said about the authors' views on the Enlightenment.

Intellectualism, rationalism and empiricism defined the Enlightenment. In Germany, and arising from the writings of Immanuel Kant, "Verstand" and "Vernunft" were the keywords describing that period (Gray, 2009: 11). They reflected the strong emphasis on the empirical approach to knowledge which became dominant in the eighteenth century. This approach elevated intellectualism over the more nuanced interaction of mind, body and soul that had previously held sway. In terms of religion, for example, the "philosophes" attempted to define "a new, comprehensive, worldview which would replace God with Nature and Reason" (Becker-Cantarino, 2005: 1). In his famous essay, *Beantwortung der Frage: Was ist Aufklärung?,*

published in the *Berlinische Monatsschrift* in 1784 as part of an on-going discussion on the nature of the Enlightenment, Kant wrote about the power of human reason. He stated that if one has the courage to think for oneself, then divine revelation is no longer necessary; this essentially leaves religion without a role to play (Goldman, 1973: 3).

One of the inevitable outcomes of this new direction came to be known as materialism. The groundwork for materialism was laid by Cartesian dualism, which stated that physical and spiritual essences were different and separate, although both were considered essential (Hammermeister, 2005: 36). The materialists went further, and stated that only the physical was important: everything else was merely a manifestation of that. Men like Julien Offray de la Mettrie claimed that even cognition and the soul (if there was one) were manifestations of the material (Thomson, 1966: xi-xii), and thus man could only be regarded as a machine (Vartanian, 1960: 13). Eighteenth-century society was intrigued by this notion of the world and human beings as complex machines. Artificial life-forms, particularly automata, became very popular and can be seen as a physical expression of this fascination with materialism. Hoffmann's Olympia, a clockwork doll, clearly falls into this category. Goethe's alchemically created Homunculus represents another aspect of the Enlightenment – the separation of mind from body (Böhme and Böhme, 1983).

The writers of the Romantic believed that the Enlightenment was restricting humanity to a cerebral and materialist reality, and that this was an unbalanced and

unhealthy paradigm. Analysing the worldview of the Romantic period, Hartmut and Gernot Böhme (1983) state that Enlightenment thinkers displaced imagination, intuition, desires, feelings and the unconscious, relegating them to the other side of a frontier. On one side was reality, as defined by reason and intellectualism; on the other was the unreal, everything that could not be appropriated to the realm of reason. They refer to this other side of rationalism, that which is outside the frontier, as "das Andere der Vernunft" – the extra-rational. However, this Other of reason would not stay hidden; it was given strength by its very banishment, and it fought to re-emerge (Horkheimer and Adorno, 1973: Böhme and Böhme, 1983).

The Romantics did not decry rationalism as such, merely the uses to which it was being put. They wanted to achieve a more realistic balance between the rational and the extra-rational. Many of them, especially in the mid and late Romantic, tended to favour the latter; their work became much more subjective and inward-looking. Fantasy and the uncanny, the unconscious and psychology, mythology and fairy tales, dreams and the imagination were prominent in their writing (Tymms, 1955: 4; Hoffmeister, 1978: 33; Riou, 2004: 27). They questioned the ability of rationalism alone to account for the subjective side of human nature, and used imagination in their writing as a tool to examine aspects of the extra-rational.

E.T.A. Hoffmann and Johann Wolfgang Goethe were no exception to this trend. In this research report I have shown how they used two synthetic life-forms – Hoffmann's Olympia and Goethe's Homunculus – to critique the ability of rationalism alone to account for human nature. Olympia was pure mechanism, and

Homunculus pure spirit – opposite ends of a spectrum of being. How did Hoffmann and Goethe use these characters in their writing?

Hoffmann's tales tended to explore the relationship between the self and reason, and in *The Sandman* he responds to the Enlightenment's pure rationalism and materialism, as expressed in two women – Clara and Olympia. Through this medium, Hoffmann investigates Nathaniel's response to the expectation that he be a rational man. Clara typifies Enlightenment reason; she is cast as a level-headed, rational woman with no imagination, who knows what she wants and who proceeds, coolly and calmly, to work towards it in a rather programmed manner (Ellis, 1981: 9). She is so focused on this, and is so unreceptive of Nathaniel's poetry, that he accuses her of being an automaton. Meanwhile, in a beautifully ironic twist, Olympia, the real automaton, is beloved by Nathaniel and is becoming a success in society because of her "womanly accomplishments". However, she is actually unsatisfying and incomplete (Drux, 1988: xiii-xiv). Faced by these two, it is Nathaniel who is the representative of the Romantic extra-rational. He is pre-occupied with his feelings and desires, and is (perhaps) going mad.

Olympia is central to the process of Nathaniel's descent into confusion and madness. She represents the shortcomings and dangers of the Enlightenment viewpoint. Hoffmann makes good use of the fantastic and the uncanny in his novella. A scientist (Spalanzani) and a mechanician (Coppelius/Coppola) make a clockwork doll and pass her off as a human woman. Is she real, or is she too good to be true? Her liminality accounts, in large part, for the uncanny nature of the tale. Hoffmann is a

master of playing with Jentsch's "intellectual uncertainty" (Kang, 2011: 22).

Goethe's Homunculus episode focuses on a different aspect of the Enlightenment – its separation of the natural body from the rational mind, a key element in Böhme and Böhme's (1983) description of the extra-rational. Like many writers of his time, Goethe shared the view that pure rationalism was an inadequate way to represent the world, including the natural world (Heller, 1966: 84). He believed that it was not enough to know how things worked, but that one needed to know what they were and what they meant. He used the Homunculus episode to explore these aspects.

Homunculus is totally incorporeal. He was made in a laboratory by a scientist who believed in Paracelsus' hypothesis that it was possible to create a human being without the agency of sexual union between a man and a woman (Drux, 1988: 15-16). The recipe worked only partially, creating a synthetic life-form that was spirit but that had no body. Right from the beginning, Homunculus realises that he is incomplete; he is in fact a symbol of the necessity to join the rational and the extra-rational that the Enlightenment forced apart (Böhme and Böhme, 1983: 50-51). Most of the Homunculus episode consists of the mannikin's quest to become a complete human being. The philosopher Thales advises him that he must undertake a long journey, "durch tausend abertausend Formen" (*Faust II*, 8325), to wholeness. This reflects Goethe's partiality to slow, controllable evolutionary processes and his distaste for the uncontrollable chaos of revolutionary change. Eventually Homunculus follows Thales' advice. He shatters his phial against Galatea's shell-wagon and blends his spiritual essence with the waters which engender life, an act

sanctioned by Eros, who provides the spark of life. The merging of fire (Homunculus's spirit and Eros' life-giving spark) with the water of life may be interpreted as a sort of orgasm that will eventually lead to a new and whole existence (Latimer, 1974: 815). It is symbolic of the union of spirit with matter, and of the rational with the extra-rational, thus returning balance to the world.

What is the significance of how Hoffmann and Goethe portrayed their artificial life-forms? Hoffmann used his clockwork doll to expose the inadequacy of the kind of materialism which La Mettrie had espoused, and Goethe utilised Homunculus to examine the relationship between body and spirit. Both Goethe and Hoffmann explored the extra-rational which was marginalised by Enlightenment intellectualism – "die Beziehung von Geist und Leben, das Schöpferische als Bewußtes und Unbewußtes, als Denken und Natur" (Trunz, 1981: 558). Human beings always search for meaning in the world around them. The Romantics concluded that overweening rationalism did not provide that meaning or explain the world adequately. They strove against the "reductive materialism" of the Enlightenment (Gray, 2009: 9). Their ongoing search for the reality that existed "über die Grenzen der Vernunft" (Böhme and Böhme, 1983: 14) is exemplified in the two works studied in this research report. Neither pure body (as exemplified in the mechanical Olympia) nor pure spirit (as portrayed by the "Licht-Zwerg" Homunculus) can properly portray the human condition. The Enlightenment divided body and spirit, the rational and the extra-rational, but both are necessary for a whole, fulfilled, balanced human being.

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