A Psycho-Biological Approach to Suspense and Horror: Triggers of Emotion in a Passage from Lewis's *The Monk*

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That repose I wooed in vain. The agitation of my bosom chased away sleep. Restless in my mind, in spite of the fatigue of my body I continued to toss about from side to side, till the Clock in a neighbouring Steeple struck 'One.' As I listened to the mournful hollow sound, and heard it die away in the wind, I felt a sudden chillness spread itself over my body. I shuddered without knowing wherefore; Cold dews poured down my forehead, and my hair stood bristling with alarm. Suddenly I heard slow and heavy steps ascending the stair-case. By an involuntary movement I started up in my bed, and drew back the curtain. A single rush-light, which glimmered upon the hearth shed a faint gleam through the apartment, which was hung with tapestry. The door was thrown open with violence. A figure entered, and drew near my Bed with solemn measured steps. With trembling apprehension I examined this midnight Visitor. God Almighty! It was the Bleeding Nun! It was my lost Companion! Her face was still veiled, but She no longer held her Lamp and dagger. She lifted up her veil slowly. What a sight presented itself to my startled eyes! I beheld before me an animated Corse. Her countenance was long and haggard; Her cheeks and lips were bloodless; The paleness of death was spread over her features, and her eye-balls fixed stedfastly upon me were lustreless and hollow.

I gazed upon the Spectre with horror too great to be described. My blood was frozen in my veins. I would have called for aid, but the sound expired, ere it could pass my lips. My nerves were bound up in impotence, and I remained in the same attitude inanimate as a Statue.

The visionary Nun looked upon me for some minutes in silence: There was something petrifying in her regard. At length in a low sepulchral voice She pronounced the following words.

"Raymond! Raymond! Thou art mine!
Raymond! Raymond! I am thine!
In thy veins while blood shall roll,
I am thine!
Thou art mine!
Mine thy body! Mine thy soul! ——"

Breathless with fear, I listened while She repeated my own expressions. The Apparition seated herself opposite to me at the foot of the Bed, and was silent. Her eyes were fixed earnestly upon mine: They seemed endowed with the property of the Rattle-snake's, for I strove in vain to look off her. My eyes were fascinated, and I had not the power of withdrawing them from the Spectre's.

In this attitude She remained for a whole long hour without speaking or moving; nor was I able to do either. At length the Clock struck two. The Apparition rose from her seat, and approached the side of the bed. She grasped with her icy fingers my hand which hung lifeless upon the Coverture, and pressing her cold lips to mine, again repeated,

"Raymond! Raymond! Thou art mine!
Raymond! Raymond! I am thine! &c. ——"

(Lewis 1994 [1796]: 263–264)[1]

1. Still Largely Downplayed in the Humanities: The Biological Foundations of Emotions

Though emotions have become an increasingly important topic in the study of literary fiction texts in the past twenty years, attempts to explain their powerful potential from a psycho- or neurobiological perspective have remained comparatively rare. The reservations of many literary scholars about biological approaches are obviously a consequence of the humanities' long-standing belief in Cartesian dualism and in Dilthey's postulate of a categorical difference between 'scientific explanations' and 'historical understanding'. This fatal

1 In the following, all quotations without any reference specified are taken from this literary excerpt.

schism has led to secret or even openly voiced fears of many traditional scholars that opening up the humanities to psycho- and neurobiological knowledge must result in reductionism, deterministic reasoning and a loss of the very principles on which philology has customarily been grounded, i.e. history, culture and the value of the individual text.[2] Given the general shift from an a-modal to an embodied view of cognition (see Hufendiek 2016), however, it appears justified to overcome the traditional reservations[3] and take the biological backgrounds of emotions much more seriously.

In what follows, I will pursue this endeavour by giving an analysis of a suspense-and-horror-passage from a classic Gothic novel, drawing on a multiplicity of biology- and nature-oriented paradigms such as evolutionary psychology (e.g. Griffiths 1997; Tooby/Cosmides 2008), neuropsychology (e.g. Damasio 1999, 2003), evolutionary cultural semiotics (Koch 1993), German 'Biopoetics' (Eibl 2004; Mellmann 2006, 2007) and various emotion-focussed literary approaches (e.g. Robinson 2005; Hogan 2003, 2011, 2018; Vernay 2016).[4] My intention is to emphasise the psycho- and neurobiological aspects of suspense and horror without denying that there are also historical and cultural causes of their effects. This will make it necessary to specify the concept of 'emotion', which is an all too general and unitary notion from folk psychology. Thus, I will first draw a distinction between three 'levels' or 'types' of emotion (section 2). This preliminary step will be followed by

2 Blatant German examples of this position are Kelleter 2007 and Feige 2009. The title of Kelleter's article ("A Tale of Two Natures: Worried Reflections on the Study of Literature and Culture in an Age of Neuroscience and Neo-Darwinism") nicely shows to what a degree humanist reservations against science are often linked with pent-up frustration about a supposed loss of power and influence of the humanities. See for a witty ironic refutation of such lamentations Eibl 2007: "On the Redskins of Scientism and the Aesthetes in the Circled Wagons".

3 For a general plea for overcoming the Cartesian mind/body-dualism and for integrating scientific knowledge into the humanities, see Slingerland 2006; for an excellent short and balanced overview of the entire debate about the significance of the sciences for the humanities, see Dancygier 2012: 11–16.

4 I intentionally pass over the so-called "Literary Darwinists" here, because I think that the adherents of this school (such as Joseph Carroll and D.S. Wilson) tend to ascribe too specific, utilitarian functions to literature (so that for them, early oral storytelling, for instance, is just a device of male sexual display to attract female mates). I think that this position ignores the possibility that literature may serve more general needs (maybe that of providing some pleasant relaxation from stress in a tiring struggle for existence [see Eibl 2004: 302–319]).

a contextualisation of the selected Gothic text (section 3) as well as a brief conventional stylistic analysis of it (section 4). In sections 5 and 6, I will then explicate my emotion-focussed, psycho-biological approach, exposing a prey-predator confrontation (section 5) and a fatal confusion of bio-programmes (section 6) as the most powerful devices for triggering suspense and horror in the text. In my conclusion (section 7), I will finally provide some preliminary empirical evidence for the relevancy of my psycho-biological approach, but I will also show why it should still be supplemented with a cultural and historical analysis.

2. From the Vernacular Concept of Emotion to a Structured Typological Analysis

As has often been emphasised in both scientific and humanist research (see Griffiths 1997, Menninghaus et al. 2019), the term 'emotion' is far too broad and vague to be of any analytical value, unless it is specified. In the present article, I will therefore draw a distinction between three different levels or types of emotions: 1) emotion as an affect programme; 2) emotion as a subjective feeling; 3) aesthetic emotion.

ad 1) In its first and simplest sense, emotion is a mere affect programme — a stereotyped, involuntary response, steered by the limbic system, more specifically by two almond-like shaped nuclei, the amygdala. Such amygdala reflexes are called forth in a non-linear process that involves environmental stimulus, non-cognitive appraisal and physiological change (see Robinson 2005: 3). These phenomena precede a more complex evaluation (see Mellmann 2006) that may then lead to a conscious realisation of fear. Affect programmes of this automatic nature are deeply grounded in evolution and of central significance to what one calls 'basic' or 'primary emotions'[5], especially fear, anger

5 The concept of 'basic emotions' is still fiercely contested in psychological research. While only a few extreme social constructivists reject the notion entirely, the exact number of basic emotions has always remained unclear. Based on lists established by scholars such as Ekman and Plutchik, most frequently distinguished are fear, anger, sadness, joy, and disgust; further often accepted candidates are surprise, pride, shame, and contempt; to which one might add attachment, hunger, and lust (see Hogan 2018: 52–53). Of all these, fear must certainly be regarded as the most fundamental one, since it is most important for survival and thus, from an evolutionary perspective, least

and disgust, i.e. those emotions that are most important for a species' survival in a perilous environment.

ad 2) While amygdala circuits trigger and control all the physiological responses elicited by threats, they are not directly responsible for feelings of "fear" (see LeDoux 2015). Rather emotion in this second sense is a higher cognitive phenomenon that is experienced subjectively and can be culturally influenced and remodelled (see Damasio 1999, 2003). But although it is therefore indispensable to keep emotion as a mere affect programme and emotion as a subjective feeling theoretically apart, nearly all researchers assume that there are many feedback loops between these two systems.

ad 3) Yet another level or type of emotion, least explored so far, is aesthetic emotion. According to the first comprehensive article on the subject, published only recently (Menninghaus et al. 2019), there are at least two features that set off this type against the two others: Aesthetic emotion is usually linked with positive appraisal, focusing on such positive values as pleasantness or novelty, and it always includes an element of conflict or incongruity, thus constituting what one may call a 'mixed' or 'multicomponent' emotion (e.g. sadness and joy, horror and pleasure, a feeling of separation and reunification, etc.).

The present article will direct its attention mainly to level 1 — emotion as a mere affect programme — and have occasional recourse also to level 2 — the characters' and readers' subjective feelings. Level 3 — the question of a possible aesthetic quality of emotion triggered by the text – will only be touched on briefly in the conclusion.

3. The Text and Its Context: Lewis's *The Monk* as a Prototypical Gothic Novel

Matthew Gregory Lewis's (1775–1818) *The Monk* (1796), from which the present text passage is taken, has rightly been regarded as probably the most powerful and effective British Gothic novel — "a romance of extraordinary fascination" (Varma 1966: 140), blood-curdling and taboo-breaking, "an orgy of sadistic and sexual fantasies" (Seeber et al. 1991: 262). While a public scandal to the critics — Coleridge, for instance, termed the book "a poison for youth" and a work

dispensable (see Stanley-Jones 1970: 34; Panksepp 2005: esp. 206–217; Öhman 2008: 710).

"which if a parent saw in the hands of a son or daughter, he might reasonably turn pale" (Varma 1966: 147) –, Lewis's novel was yet a sensational success with its contemporary audience.[6] The prototypicality of the novel as an exemplar of suspense and horror is also attested by its intertextuality. For Lewis, who was only nineteen when he composed the book, plagiarised many of its plot elements and even parts of the surface structure from various French and German sources (see Varma 1966: 149–153 for the details).

The present text passage, a scene from the sub-plot of the novel (Book II, Chapter I), is thus strongly grounded on a tale called "Die Entführung" (i.e. "The Abduction") in Johann Karl August Musäus's *Volksmärchen der Deutschen (Popular Tales of the Germans)* (see Guthke 1958: 176–183): When trying to free and elope with his mistress from a castle, the protagonist — named Fritz in the German, Don Raymond in the British text — unfortunately confuses her, who was supposed to disguise as a legendary ghost named the "Bleeding Nun", with the real spectre. As a welcome, he kisses the spectre, reciting a love poem, and is now haunted by her in return. She adopts the role of his mistress, kisses him and recites his welcoming love poem in a slightly modified version (see the text extract above). While the general course of the action in Musäus and Lewis and even some details are virtually the same, Lewis manages to increase the effectiveness of the scene considerably by giving a more realistic description of the ghost's accessories, emphasising the protagonist's passion (see Guthke 1958: 179) and employing both conventional stylistic and bio-psychological textual strategies to intensify the scene's suspense.

4. Two General Strategies of Suspense: 'Narrative Urgency' and Experientiality

Lewis's text passage owes some of its attraction to conventional suspense-producing stylistic strategies: There is, first, what Paul Simpson (2014) has termed 'narrative urgency', i.e. a "constellation of stylistic tendencies" (ibid.: 7) that produce the impression of fast-moving action and motivate readers to identify with the protagonist's plight: More specifically, these devices are simple sentences with single clauses, a primacy of the text world over any

6 See Varma 1966: 148: "Lewis did not offend the taste of the majority of his readers […]. That his book was read with eagerness and discussed without reserve is shown by several anecdotes told at length by his biographer in his *Life and Correspondence*."

modalised sub-worlds, a comparatively short duration of the scene (in Genettian terms, many lines of the text display an identity of story-time and discourse-time), and the use of free forms of thought or speech foregrounded by exclamation marks. Second, the readers' identification with the startled and horrified response of the protagonist to the intruding spectre is further heightened by the production of a fairly high degree of experientiality or 'embodied perception' (see Sanford/Emmott 2012: 132–160; Caracciolo 2014). Thus, there is (to use Dorrit Cohn's terminology) a consonant first-person narrative situation and much thought- and speech-representation, often in connection with the use of 'experience verbs' (namely, "listened", "heard", "examined", "beheld") and other references to sense impressions (see "sight", "lustreless", "silence", "silent"). All these suspense-producing factors are, however, not sufficient for explaining the enticing appeal of the passage. Only an emotion-focused psycho-biological analysis can accomplish this purpose.

5. A Psycho-biological Analysis I: An "Emotion Episode" Based on a Prey-Predator Confrontation

Beyond its suspenseful experience-focused presentation, the present passage can be classified as a prototypical "emotion episode" as it has been described by Patrick Colm Hogan in several of his publications (2003: 145–146 and 169–170, 2011: 2–3, 2018: 43–44 and 179). First, there are *eliciting conditions*. These are the circumstances that give rise to the emotion of fear — in this case "the Clock in a neighbouring Steeple" which strikes 'One'[7], and various frightening noises such as "the mournful hollow sound" that the protagonist hears "die away in the wind" at the beginning of the scene and the "slow and heavy steps ascending the staircase" he perceives somewhat later. The next component of the emotion, following directly from the eliciting conditions, is what Hogan calls the feeling or *phenomenological tone*. As this is "the subjective quality of an emotion" that "cannot be shared" (Hogan 2018: 46), Lewis

7 Conventionally, the scary hour when the clock strikes is midnight, not one. But this deviation can easily be accounted for: In Lewis's source, Musäus's "The Abduction", the clock actually strikes at twelve ("Wie die Glocke Zwölfe schlug […]", Musäus 1922 [1782–1786]: 250); thus, it is likely that Lewis, as in so many other cases, changed this detail in order to veil his plagiarism (see Guthke 1958: 178–181 for a detailed discussion of Lewis's borrowings from Musäus's version).

typically has recourse to the topos of inexpressibility for its illustration: "I gazed upon the Spectre with horror too great to be described." While this emotional response is situated at the second of the above distinguished levels, much more basal are Hogan's *physiological outcomes* and *actional outcomes*, as these components are immediate manifestations of the embodied affect programme triggered in this scene. To understand these outcomes in more detail, it becomes necessary to cast a closer glance at what psycho-biologists have said about the 'biology of fear'.

Physiological manifestations of fear, as most blatantly visible in a prey's confrontation with its predator, include the following phenomena (see Marks 1987: 68–69; McNaughton/ Zangrossi 2008: 13; Tooby and Cosmides 2008: 135, note 1):

1) reduced temperature (produced by vasoconstriction, see Stanley-Jones 1970: 34), bringing about a sensation of coldness,
2) goose bumps as well as hair standing on end,
3) startle (like the other items an involuntary response),
4) shivers,
5) silence (in the sense of inability to call out or scream),
6) gazing at the predator in a reaction of "tonic immobility" (see Marks 1987: 61–62),
7) increased respiration,
8) the predator's gaze at the prey, hypnotising it.

Amazingly, each of these eight typical components of a prey-predator confrontation is also explicitly mentioned in Lewis's text:

ad 1) "I felt a sudden chillness", "I shuddered", "[c]old dews poured down my forehead",
ad 2) "my hair stood bristling with alarm",
ad 3) "[b]y an involuntary movement I started up",
ad 4) "[w]ith trembling apprehension",
ad 5) "I would have called for aid, but the sound expired",
ad 6) "my startled eyes", "I gazed", "bound up in impotence", "[m]y eyes were fascinated, and I had not the power of withdrawing them from the Spectre's",
ad 7) "[b]reathless with fear",

ad 8) "[h]er eyes were fixed earnestly upon mine", "endowed with the property of the Rattle-snake's".

Even the numerous metaphors in the passage — with the exception of those in line 1 ("[t]hat repose I wooed" and "chased away sleep") — have a direct link to the prey-predator programme determining the scene, because without any exceptions, they turn out to be offshoots of three conceptual metaphors that are closely interwoven with some of the above-outlined components of fear:

1) Fear is death (see "I heard it [i.e. the mournful sound] die away in the wind", "[t]he paleness of death was spread over her features", "the sound expired", "in a low sepulchral voice").
2) Fear is coldness (see "[m]y blood was frozen in my veins"; also: "her icy fingers").
3) Fear is immobility (see "I remained […] inanimate as a Statue", "[t]here was something petrifying in her regard").

Of the various components that form part of the prey-predator confrontation, the most interesting ones are clearly items 6 and 8, i.e. the fact that prey and predator keep staring at each other, which seems to give the predator some hypnotic power and leads to a 'shock paralysis' on the part of the prey. This phenomenon is not only well known in biology, where it has been "documented in scores of vertebrate and invertebrate species ranging from arthropods and molluscs to fish, amphibians, reptiles, birds and mammals, including humans" and is known under "numerous names" such as "death feint", "terror paralysis", "animal hypnosis", "bewitchment" or "fascination" (Marks 1987: 61), but also in anthropology and the study of culture.[8] In classical antiquity, for instance, the notion already manifested itself in the 'Medusa effect', i.e. the myth of the terrible sight of a monstrous goddess that would turn onlookers to stone; in the Early Modern period, such powers were strongly associated with sorcery and witchcraft; and in the time of Neoclassicism and Romanticism, they became a far-spread cliché in the form of the mesmerising, fiery eyes of the Gothic villains (see Baumbach 2015).

8 See Nöth 1990: 406: "Phylogenetically, staring eyes are a threat signal for many animal species. For several primate species, the glance has been shown to be a signal by which social dominance is established or strengthened […]. In human culture, the motif of the evil eye […] seems to be an archetypal pattern of a threat signal."

Typically, "of all beings, serpents were attributed the greatest power of fascination: they were believed to petrify their prey by fixing it through their lethal gaze, holding it mute and frozen before its death" (Baumbach 2010: 232). As early as 1796, as I found out, i.e. the very year in which Lewis's *Monk* appeared, Benjamin Smith Barton, a professor of natural history and Botany in the University of Pennsylvania, already published a disquisition on the subject, in which he ascribes "the fascinating faculty" "to the rattle-snake and other American serpents" in particular (see Barton 1796). What is interesting is that in our text passage, Lewis refers to the very same animal: "Her eyes […] seemed endowed with the property of the Rattle-snake's". Nonetheless, it is likely that there is no direct connection between the two references, especially as Lewis wrote his novel two years before its publication.[9]

Finally, in addition to its particular prominence in Lewis's text, there is further evidence that the prey-predator confrontation provides an essential function for the production of suspense and horror in Gothic texts. For exactly the same physiological and actional outcomes of horror and fear appear in the key passages of other famous Gothic novels. Due to lack of space, the only example that I will adduce here is the well-known scene in *Frankenstein* in which Victor awakes from a troubled sleep to look at his self-made monster for the first time:

> I started from my sleep with horror; a cold dew covered my forehead, my teeth chattered, and every limb became convulsed: when, by the dim and yellow light of the moon, as it forced its way through the window shutters, I beheld the wretch — the miserable monster whom I had created. He held up the curtain of the bed, and his eyes, if eyes they may be called, were fixed on me. His jaws opened […] (Shelley 1994 [1818]: 490–491)

Just as in Lewis's horror scene, the protagonist is confronted with the 'spectre' while lying in his bed, similar to an animal that is attacked in the very core of its shelter, namely its resting place. Again, the situation is typically that of

9 Rather, the belief in the fascinating faculty of serpents appears to have been general knowledge. Thus Barton (1796: 20) refers to it as follows: "The belief in the fascinating faculty of serpents has spread through almost all the civilized parts of North America. Nor is it confined to America. It has made its way into Europe, and has there taken possession of the mind of scholars, of naturalists, and of philosophers." It does not come as a surprise that some three quarters of a century later, Darwin (1872: 108, note 28) in his famous study on *The Expression of the Emotions in Men and Animals* makes mention of the belief as well.

semi-darkness, a state that is particularly dangerous for prey animals (more than complete darkness, in which most predators are not able to see, either). And again, the depiction of the scene is dominated by the typical physiological outcomes of fear — startle, a sensation of coldness, shivers, and most importantly, the predator's lethal gaze at the prey: "his eyes, if eyes they may be called, were fixed on me." What is interesting in addition to that is that in Shelley's text, the prey-predator pattern even becomes manifest in the use of a conspicuous animal metaphor: "His jaws opened".

6. A Psycho-biological Analysis II: Confusion of Bio-programmes Highlighted by Charm-like Repetition

In addition to the prey-predator confrontation climaxing in the prey's shock paralysis and the predator's lethal gaze, there are yet some other psycho-biological effects which may contribute to the thrilling emotional effect of the scene. Particularly noticeable here is a fatal confusion of two deep-seated biological programmes whose distinction is essential for all animal species as well as for humans. To understand the functioning of these programmes, it is necessary first to discuss them briefly in a wider scope.

According to the teachings of various socio-biologists, all animals must be able to handle three essential 'instincts', 'drives', or 'biocultural survival programmes', as the semiotician Walter A. Koch (1993: 45–46, 120–121, 154–156) has termed them. These bio-programmes are related to the three fundamental areas of behaviour:

1) "crimen", i.e. the aggressor-defender relationship, comprising activities of fight, flight, and pursuit,
2) "fructus", i.e. the parent-offspring relationship, comprising activities of feeding and parental care,
3) "sexus", i.e. the male-female relationship, comprising activities of mating and sexuality.

All species as well as humans must keep their behavioural programmes in the three areas strictly apart, especially because "there is so strong a temptation for transition and promiscuity" (Koch 1993: 159) since the same parts of the

body (such as the mouth, for instance) are used for performing actions in each of the three areas. That is why in human culture, any behavioural transitions of the boundaries between the areas are strictly tabooed. In literary fiction texts, however, these boundaries are often transgressed with the help of a thrilling story the task of which is to confirm the taboo through its ending. Oedipus Rex, for instance, violates the taboo in a twofold manner, transgressing the boundary between "fructus" and "crimen" by killing his father, and that between "fructus" and "sexus" by having intercourse with his mother. Likewise, the famous vampire-myth can be related to this framework, since in many stories it implies thrill-providing transitions from "sexus" to "crimen".

Lewis's horror passage, when analysed in the larger context of its surrounding story, can also be assigned to this framework. For as was already mentioned, the protagonist, unaware of the fact that the refugee from the castle was not his mistress Agnes in ghostly disguise but the real spectre, gave her a welcome kiss and — pressing her to his bosom — recited the following love poem, thereby triggering the "sexus"-frame:

> *"Agnes! Agnes! Thou art mine!*
> *Agnes! Agnes! I am thine!*
> *In my veins while blood shall roll,*
> *Thou art mine!*
> *I am thine!*
> *Thine my body! Thine my soul!"* (Lewis 1994 [1796]: 261)

In the horror passage under discussion, the spectre repeats the protagonist's poem, exchanging its addressee and modifying the position of some of its pronouns in a mocking, parodying manner, thereby intermingling the "sexus"- with a "crimen"-frame:

> "*Raymond! Raymond! Thou art mine!*
> *Raymond! Raymond! I am thine!*
> *In thy veins while blood shall roll,*
> *I am thine!*
> *Thou art mine!*
> *Mine thy body! Mine thy soul! —-"* (ibid.: 263)

When reciting the poem for the second time, the spectre even grasps the protagonist's hand, "pressing her cold lips to [his]" in an aggressive erotic gesture. What was first a love poem emphasising the protagonist's submission to his mistress (see the last two lines of version 1: "I am thine! / Thine my body! Thine

my soul!") thus changes into an aggressive erotic onslaught foregrounding the spectre's possessiveness (see the last two lines of version 2: "*Thou art mine! / Mine thy body! Mine thy soul!*"). The outcome of this is a strange but thrilling blend[10] — a mixture of the bio-programmes of "sexus" and "crimen".

It is also instructive to cast a closer glance at the poem's well-thought out linguistic structure. To an unusual degree, the poem is marked by obtrusive repetition. Thus, in addition to rhyme, there are numerous instances of sound repetition, verbal repetition and grammatical repetition (see the frequent assonances on '*ai*' and '*ei*', the alliteration contained in *thee, thine* and *thy*, and the chiasmus of "*Thou art mine! I am thine!*" as well as "*I am thine! Thou art mine!*").[11] In an interesting article on the linguistic structure of charms and spells, no less a scholar than Northrop Frye (1976: 126) has uncovered the particular rhetorical purpose of such extreme manifestation of repetition: "it sets up a pattern of sound so complex and repetitive", Frye states, "that the ordinary processes of response are short-circuited. Refrain, rhyme, alliteration, assonance, […], antithesis: every repetitive device known to rhetoric is called into play. Such repetitive formulas break down and confuse the conscious will, hypnotize and compel to certain courses of action." The poem, then, employs the principle of repetition for achieving a mesmerising effect. Quite in line with that, the charm-like quality of the poem is further enhanced by its metre, which is catalectic trochaic tetrameter throughout.[12] In contrast to other metrical patterns, this metre sounds unnatural and mechanical — similar to the trochaic tetrameter Shakespeare uses for the uncanny verses of his witches in *Macbeth*. In Lewis's text, the purpose of the charm-like poem is that of suggesting a mysterious, inescapable identity of *mine* and *thine*[13],

10 On the concept of blending, see Fauconnier/ Turner 2002, and with particular regard to narrative: Schneider/ Hartner 2012.

11 That Lewis created the obtrusiveness of these repetitions with deliberate intention can be concluded from the fact that the original version of the poem in Musäus ([1782–1786] 1922: 251) is much less repetitive: "Friedel, Friedel, schick' dich drein, ich bin dein, du bist mein mit Leib und Seele" (in English: "Friedel, Friedel, give in to me, I am thine, thou art mine with body and soul").

12 Lines 4 and 5 of the poem can be interpreted as two half-lines whose catalectic trochaic dimeter adds up to another line in trochaic tetrameter.

13 Interestingly, the parallelism "*thine* and *mine*" provides what the semiotician Koch (1991: 4–5) termed a "fit" or "zipper" structure, i.e. an eye-catching structural coincidence of a signifier with its signified, which — since the two areas normally function independent of each other — appears as something non-accidental, thus assuming

thus overpowering and hypnotising the protagonist in a manner similar to the predator's lethal gaze. And again, the extremely repetitive structure of the poem can be regarded as being closely related to an embodied psycho-biological effect, for although reliable research results in the field are still scarce, there is some interesting neurobiological evidence that such extreme repetition in a text tends to go hand in hand with extreme neural activation in the brain of its recipient (see Ernst 2013: 129–131 and 154–156).

7. Conclusion: Suspense and Horror — A Psycho-biological, but also a Cultural Phenomenon

Carrying out what I have called a psycho-biological analysis, I have illustrated various deeply embodied biological patterns with the help of which the triggering of suspense and horror in Lewis's text can plausibly be explained. To produce further evidence that the strong emotional appeal of the text really hinges on these patterns, I also conducted an exploratory empirical experiment.

For this purpose, questionnaires were distributed to 15 students in a seminar on the gothic novel at RWTH Aachen University.[14] I asked the participants to mark those three passages in Lewis's text that struck them as most suspenseful. As I had expected, the passages named were those that also played a major role in my emotion-focused psycho-biological analysis. Thus eight times, the paragraph describing the protagonist's coldness, silence and tonic immobility, climaxing in his shock paralysis was mentioned; six times, the passage in which the ghostly predator unveils her face; five times, the scene in which with her icy fingers she grasps the protagonist's hand and presses her cold lips to his; four times, the enchanting poem.

In spite of this empirical confirmation of the relevancy of my psycho-biological approach, the question must finally be raised whether the recommended new focus on the 'natural', biological aspects of suspense and horror demands a complete paradigm change in literary emotion research or whether it should rather only be employed as a complementary methodology.

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the seeming quality an inherent logical proof. 'Nomen est omen' and 'traduttore – traditore' are other examples provided by Koch for this intriguing semiotic effect.

14 I am obliged to my colleague Jan Alber for allowing me to conduct the experiment in his class.

In my opinion, the second option is preferable. For in spite of the immense significance of psycho-biological patterns for the triggering of emotions, an important influence of cultural and historical factors cannot be denied. Thus, two thirds of the students participating in the above-mentioned experiment were of the opinion that they were probably less thrilled by the response and horror of Lewis's text than its original reading public. They adduced cultural and historical factors as reasons for this judgment. While in Lewis's time, beneath a Christian and enlightened veneer superstition was still alive in many areas (see Stearns 2008: 209), no remnants of the belief in ghosts are left in modern times. Moreover, the strong presence of suspense and horror in the cinema is likely to have reduced the susceptibility of modern readers for the emotions in Lewis's text. Last but not least, as one of the participating students commenting on his personal response rightly remarked, the archaic language in Lewis's text[15] produces a strongly distancing effect on the modern reader. In combination with Lewis's tendency towards overdoing his depiction of emotions in a grotesque and comical manner (see Schumacher 1990: 184), this factor might even lead to the experience of 'mixed' or 'multicomponent' emotions and thus open up the possibility of an aesthetic reading of the text.[16] But whether that is really the case could only be explored in another, more sophisticated empirical reception study.

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15 See the following examples: "[t]he agitation of my bosom", "[a] single rush-light", "Corse" (for: "corpse"), "sepulchral", "endowed with", "fascinated" (for: "bewitched"), "Coverture" (for: "covering").

16 See Jerrald E. Hogle's opinion that in the Gothic novel, there is quite generally an "intermixture of the sublime with what Burke calls the unthreatening 'beautiful' *and* with the comically bathetic and other incongruous elements", adding to the "deliberately forced unreality" and "insistent artificiality" of the genre (Hogle 2002: 15). I find it difficult to believe, however, that the majority of the common readers in Lewis's time really approached the novel from such a complex, aesthetic perspective.

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