

“Can’t Sleep, Clowns Will Eat Me”

Telling Scary Stories

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“Among the earliest forms of human self-awareness was the awareness of being meat.” (Quammen 2004, p. 3)

I. Lost in the Woods

Ordinary people rarely get lost in the woods during wild witch-hunts. Nevertheless, this is basically the plot line of the stupendously successful horror film *The Blair Witch Project* (1999),¹ which was produced for \$35,000 and grossed almost a quarter of a billion US dollars worldwide.² Why would anyone pay good money to sit in for an hour and a half on such a film? Why would anyone *care*?

The horror genre continues to draw large audiences in literature, film, and interactive entertainment. It might seem strange that vicarious fear and anxiety are sought out by many people, maybe especially when considering the relative safety of modern urban environments. As William James pointed out in 1892, the “progress from brute to man is characterised by nothing so much as by the decrease in frequency of proper occasions for fear” (James 1920, p. 408).

To understand the present, we must know the past and the forces that hammered and twisted our species into shape. One problem reliably faced by our forebears in the “environment of evolutionary adaptedness” – the hypothetical, statistical conglomerate of selective pressures which shaped *Homo sapiens* – was that of predators. Even if modern, civilized existence offers little in the way of true peril, our species grew up in a dangerous world. We have evolved specialized neural machinery dedicated to the problem of danger detection and handling – adaptations that were essentially established far back in our pre-hominid past – and it is my contention that this has far-reaching consequences for the study of horror fiction, consequences that are largely unexplored. In this essay, I propose a theoretical framework for a bio-

1 *The Blair Witch Project*, dirs. Daniel Myrick and Eduardo Sánchez, Haxan Films, 1999.

2 “The Numbers,” 2 November 2009: <http://www.the-numbers.com/movies/series/Blair-WitchProject.php>.

cultural approach to horror fiction, an approach which is vertically integrated with the evolutionary social sciences (cf. Gottschall 2003).

II. Defining Horror

Horror fiction is the kind of narrative art which is designed to scare and / or disturb its audience.³ Thus, horror fiction is defined affectively and not according to, for example, a specific setting, like the Western. The affect caused by horror ranges from wild-eyed fear to low-level anxiety or *Angst*. Cinematic horror is better at engendering powerful fear and startle responses, whereas literary horror usually aims for a quieter sort of unsettlement. Horror can also figure as an element in a narrative not otherwise regarded as a "horror story," an observation which has been used by several critics to validate the genre, asserting that most, if not all, of our great writers have written horror stories or stories with fear-inspiring passages (cf., e.g., Winter 1989, p. 12; Sullivan 1986, p. vii).

To understand the nature of horror, it is essential to recognize that horror fiction is evolved from earlier, recognizably similar kinds of stories; that horror is not, exclusively, a cultural or social construction but rather a predictable product of an evolved human nature (even as individual works of horror are strongly modulated by cultural context). Horror is what happens when *Homo sapiens* meets the world; it is a "natural" genre, not merely the chance product of an unusual mind or a specific set of cultural circumstances. As the American writer and critic H. P. Lovecraft asserted, "the horror-tale is as old as human thought and speech themselves." This, he said, is "naturally [to be] expected of a form so closely connected with primal emotion." In his slim history of the genre, Lovecraft found the roots of the modern horror story in "the earliest folklore of all races" and charted its development from folk- and fairytales via the Gothic novel to the modern tale of terror (Lovecraft 1973, p. 17). This conception stands in stark contrast to the widespread historicist notion that horror fiction came into miraculous being with the publication of Horace Walpole's *The Castle of Otranto* in 1764, the first Gothic romance. In this view, the birth of the horror story is seen as a symptomatic by-product of the Enlightenment.⁴

3 Although adequate as an operational definition, my definition is easily criticized. It is perhaps too inclusive or too restrictive, or too reductive. Moreover, a horror story may scare one person witless and leave another relatively unperturbed. However, insofar as a work of horror is discernible as being consciously *designed* to scare and/or disturb, the parameter of the 'scarieness' of a fiction can be viewed as an objective structural feature, rather than as a subjective criterion of success.

4 E.g. Kendrick 1991: "Scary entertainment, as we know it today, showed its first stirrings in the middle of the eighteenth century" (p. xxii). See also Stephen King, *Danse Macabre* (1983); Botting 1996; Skal 2001.

There is some truth to the historicist view, however. Even as horror stories through time and space display several static features (e.g., a relatively limited monster gallery), they should also be seen in their cultural context, since a work of horror is always, to an extent, a translation of locally and historically contingent, and usually salient, anxieties. And yet horror varies within a narrow range: like languages, horror stories are cultural variations on a limited, biologically constrained set of “rules.”

III. Differential Interest

There is a striking disconnect between the plots of most horror stories and the lives of ordinary people. We rarely get possessed by demons (*The Exorcist*),⁵ get chopped up by chainsaw-wielding maniacs (*The Texas Chainsaw Massacre*),⁶ or are preyed upon by animated corpses (*Night of the Living Dead*),⁷ and yet stories featuring such unlikely events attract large audiences.

This disconnect is baffling only until one dons a pair of evolutionary glasses. As Benson Saler and Charles A. Ziegler remark, “since monsters, in one form or another, were an omnipresent feature of our evolutionary past, tales about slaying monsters [...] have a salience and relevance for us that represent a heritage from our Paleolithic ancestors” (Salter and Ziegler 2005, p. 224).

As Brett Cooke observes, “no one wants to read a novel on tax preparation” (Cooke 1998, p. 50). “There are limits to our interests,” as he points out, “and this is reflected in viable art.” Cooke invokes the concept of “differential interest” to explain why humans are generally more interested in certain themes than others, and he predicts that once a “biothematics” – an investigation into the sort of themes that perennially interest readers – is more fully developed, “*topoi* will accord with central principles of sociobiology” (p. 51).⁸ Thus, adaptationist literary study predicts that themes associated with or derived from the concerns of inclusive fitness (e.g., mate selection, survival, reproduction, kin relations) are likely to be overrepresented in narrative art, especially in popular fiction.

It certainly seems that horror fiction is obsessed with a few themes of keen adaptive importance. Horror stories are so often about identifying and negotiating monstrous threats, about surviving in a universe brimming with hostile forces. Horror is a very “primal” genre, a genre intimately concerned with life and death and the struggle for existence.

5 *The Exorcist*, dir. William Friedkin, Warner Bros., 1973.

6 *The Texas Chainsaw Massacre*, dir. Tobe Hooper, Vortex, 1974.

7 *Night of the Living Dead*, dir. George A. Romero, Image Ten/Laurel Group, 1968.

8 See also Cooke 1999.

IV. Universal Monster

The monster is a defining feature of the horror story. This is the case even when we don't know whether it exists only in a character's head or is really out there, as in Henry James' "The Turn of the Screw," or if it is merely the unfortunate combination of a case of bad nerves and an optical illusion, as in Poe's "The Sphinx," or if it turns out not to be a monster at all, as in Washington Irving's "The Legend of Sleepy Hollow." As Noël Carroll suggests, a "monster or a monstrous entity" (Carroll 1990, p. 16) is a necessary, though not sufficient, condition for horror. We can supplement this with the claim that a monster or a monstrous entity (such as a curse, like in Richard Bachman's *Thinner*) – a *monstrum* – needs to have narrative dominance for a tale to be classified as a horror story.

The monster gallery of horror fiction is conspicuously narrow. A few fearsome creatures seem destined to prey on us, with little hope of rest eternal.⁹ In tales from all over the world we thus find undead creatures like zombies and vampires, half-animal predators like werewolves and trolls, and revenants from beyond the grave. As David Gilmore notes in his cross-cultural anthropological survey of monsters, "people everywhere and at all times have been haunted by ogres, cannibal giants, metamorphs, werewolves, vampires, and so on" (Gilmore 2003, p. ix). Gilmore finds a range of universal monster characteristics which are summarized by Saler and Ziegler as follows:

[G]reat size and / or remarkable strength; a prominent mouth with fangs or some other means of facilitating predation on humans; an urge to consume human flesh and / or blood; and hybridism, for they often combine human and animal features, or mix living and dead tissue, or manifest amalgams of discordant parts of various organisms. (Saler and Ziegler 2005, p. 220)

Gilmore relies on psychoanalytical theory in explaining the fear and fascination that monsters engender universally. For example, he notes that monsters almost always come with a mouthful of horrible teeth: "However else they are rendered in anatomical terms, monsters are depicted as [*sic*] having yawning, cavernous mouths brimming with fearsome teeth, fangs, or other means of predation." (Gilmore 2003, p. 176). This "obsession with oral aggression" (p. 178) is explained by Gilmore as a variant of the "oral-aggressive stage" in psychosexual development and the Freudian wish to eat the mother (cf. pp. 180f.). However, the sharp teeth of monsters make me think of what David Quammen calls "alpha predators" rather than repressed infantile complexes and matricidal babies. Occam's razor applies: the more parsimonious explanation is preferable. Likewise, Freud claimed that the fear of being

⁹ Stephen King, in his monograph on horror fiction *Danse Macabre* (1983), offers four horror archetypes: the Vampire, the Werewolf, the Thing Without a Name, and the Ghost (p. 50).

buried alive was “merely a variant of [...] the fantasy of living in the womb” (Freud 2003, p. 150). There is, however, no good scientific reason for decorating with fantastic assumptions and quirky theorems the trivial observation that nobody would desire such a fate.

Quammen’s alpha predators include tigers, bears, crocodiles, the great white shark, lions, pythons, and other fearsome animals. This grouping of organisms has “no taxonomic or ecological basis” – rather, its “reality is psychological, as registered in the human mind” (Quammen 2004, p. 5). Our species’ past struggles with real monsters have left a lasting imprint in our genome and our psychology, one that not even an existence free from the danger of predation can quite erase. In the words of E. O. Wilson, “a sweet sense of horror, the shivery fascination with monsters and creeping forms that so delights us today even in the sterile hearts of the cities, could [in ancestral environments] see you through to the next morning [...] We stay alert and alive in the vanished forests of the world.” (Wilson 1984, p. 101).

And interestingly, even monsters of which description is scant are frequently depicted in animal and predatory terms. For example, in the beginning of Stephen King’s monumental *It*, six-year-old George enters the basement in search of a candle. As he turns on the basement light, he fears that “while he was feeling for the light switch, some horrible clawed paw would settle lightly over his wrist,” a paw belonging to a thing “all hairy and full of killing spite” (King 1987, p. 18). And when the eponymous monster is glimpsed for the first time, George sees “yellow eyes [...] the sort of eyes he had always imagined [...] down in the basement. *It’s an animal*, he thought incoherently.” (King 1987, p. 24). Similarly, in Clive Barker’s short story “Coming to Grief,” a monster figures in the periphery, a monster whose only described feature is a “clawed hand” (Barker 1989, p. 103). And the single attribute offered of the ancient and otherwise amorphous monster in T. E. D. Klein’s acclaimed horror novel *The Ceremonies* is that it has “claws” (Klein 1985, p. 7). That a claw should be synecdochal of a modern horror monster is striking, since claws are probably responsible for very few casualties in modern urban environments. However, in ancestral environments, a claw spelled potential death.

V. Predation Pressure

There is good reason to believe that predators exerted a strong selection pressure on our evolutionary ancestors, and that this selection pressure resulted in a change in our genome so that even today, when predators are relegated to cages and nature programming on TV, we are wired to pay attention to things that were dangerous to us in prehistory (cf. Öhman and Mineka 2001).

This gives a “non-random distribution of fears” (Marks and Nesse 1994, p. 255),¹⁰ and fears and phobias fall in a short, predictable list – a list which includes snakes, spiders, “heights, storms, large carnivores, darkness, blood, strangers, confinement, deep water, social scrutiny, and leaving home alone.” (Pinker 1999, p. 386). As Steven Pinker notes, the “common thread is obvious. These are the situations that put our evolutionary ancestors in danger.” (*ibid.*).

Several of the items on Pinker’s list are strikingly reflected in horror writer Stephen King’s list of “personal terrors,” published in 1973 (quoted in Spignesi 1991, p. 4):

1. Fear of the dark
2. Fear of squishy things
3. Fear of deformity
4. Fear of snakes
5. Fear of rats
6. Fear of closed-in spaces
7. Fear of insects (especially spiders, flies, and beetles)
8. Fear of death
9. Fear of others (paranoia)
10. Fear for someone else

It is remarkable indeed that few of the items constitute a serious threat to a denizen of the north-eastern US state of Maine, where King lives.¹¹

Yet as Brett Cooke speculates: “Since mundane actuality seems to curb our fantasy, we may be more likely to fantasize about the snake in a relatively snake-free milieu.” (Cooke 1999, p. 155). This may be why Stephen King writes of one spider “perhaps fifteen feet high” (King 1987, p. 1029) and another the size of a cat (King 2004, p. 676), why Ray Bradbury in “The Fog Horn” describes a sea serpent “ninety or a hundred feet” (Bradbury 2007, p. 244) long, and why horror monsters in general seem to be rather exaggerated in terms of size and fearsomeness (think *King Kong* and the giant serpentine monsters of *Tremors*). What seems to corroborate Cooke’s claim is the way that systematic habituation or desensitization is used therapeutically in the treatment of phobia. If sustained exposure to the object of fear decreases its power to instil fear in the patient, then presumably, if the mental monster has no immediate real-world counterpart with which to compare it, the imagined monstrosity can grow independently and

¹⁰ See also Barrett 2005.

¹¹ For somebody born in 2006 (the most recent year from which statistics are available) in the US, the lifetime odds of dying from spider bite are about 1 to 1,000,000 (National Safety Council, “Odds of Death Due to Injury,” 15 December 2009: <http://www.nsc.org/news-resources/injury_and_death_statistics/Documents/Odds%20of%20Dying.pdf>).

free of the natural constraints that are imposed on actual organisms. Happily, we find no fifteen-foot spiders in nature.

As the horror film director John Carpenter has observed, “What scares me is what scares you.

We’re all afraid of the same things. That’s why horror is such a powerful genre.” (McCarty and McLaughlin 2003).¹² A related observation is offered by the horror writer Thomas F. Monteleone: “a horror writer has to have an unconscious sense or knowledge of what’s going to be a universal ‘trigger’.” (Wiater 1997, p. 119). The things that humans fear are not random and not entirely culturally constructed; nobody fears a perfect triangle, and nobody could be conditioned to acquire a serious phobia of perfect triangles. It comes easily, on the other hand, to acquire fear of deadly animals and supernatural menace. And so, when it comes to fashioning horrors, the human imagination is startlingly limited and circumscribed by our evolutionary heritage.

VI. Distortions of the Human Morph

It may be that humans are born with abstract predator templates (cf. Barrett 2005) which are then fleshed out either by experience or vicariously, for instance via narrative (cf. Tooby and Cosmides 2001; Scalise Sugiyama 2006). It may also be that we are born with a set of general principles: avoid animals that are larger than you and / or have a sharp muzzle. There are, however, two species which depart from this general template, both of which presumably exerted a sustained selection pressure on our ancestors: snakes and spiders. We have reason to believe that human beings are born with templates for these species¹³ and a simple epigenetic rule which instructs the organism to pay attention to snakes and spiders, and to easily acquire fear of them if appropriate.

Not surprisingly, then, we find both snakes and spiders in modern horror fiction produced by and for urban audiences (cf. Clasen 2010), who are in no overwhelming danger from snake or spider bite. Regarding the snake, Arne Öhman has pointed out that “reptiles provided an archaic prototype for threats emanating from predation pressure, and [...] this may explain the human tendency to equip the embodiments of evil with bestial features.” (Öhman 2000, pp. 587f.).¹⁴

12 See also “John Carpenter Looks Back at Halloween on Its 25th Anniversary,” 19 May 2006: <<http://www.scifi.com/sfw/issue339/interview.html>>.

13 On an evolved spider detection mechanism, see D. H. Rakison and J. L. Derringer 2008. See also Wilson 1984; Cooke 1999.

14 A good example is the juxtaposition of the cute and cuddly Mogwai with the evil, reptilian Gremlins in the film of that name.

However, not all horror monsters are variations on ancestral threats, or so it would appear. It seems reasonable to assume that the selection pressure from ghosts was negligible in our past, yet the ghost is a true universal (Atran and Norenzayan 1992, p. 713). However, the ghost appears to spring from an innate dualism in our psychology, a hard-wired tendency to view humans as consisting of matter and spirit, and to suppose the existence of a spiritual dimension alongside the physical, observable one. Conspicuously, flesh decays, whereas the soul may just hang around after the decomposition of the organism. Typically, the ghost wants not to eat you: its hunger is spiritual or emotional. It may seek revenge, it may seek to right a wrong perpetrated to it or maybe its kin *pre-mortem*, and it may wish to consume your soul. Ghosts disturb on a more cerebral level than other monsters; they may create cognitive dissonance and disturbances in one’s world view, insofar as they are, in fact, portrayed as horrible, odious, or unnatural. As Lovecraft pointed out, the true “weird tale” – a particular class of horror literature associated with that author – must have a “hint [...] of that most terrible conception of the human brain – a malign and particular suspension or defeat of those fixed laws of Nature which are our only safeguard against the assaults of chaos and the daemons of unplumbed space” (Lovecraft 1973, p. 15). Possibly the raw power of the ghost stems from a common apprehension that “there’s more than we can see, that the visible world is not the whole story,” as the author Peter Straub puts it: “We know within us, somewhere at a very deep level, that there is simply more, and the supernatural comes out of that apprehension, I think.” (quoted in Clasen 2009, p. 41). The supernatural typically takes the shape of occult agency or disembodied minds (sometimes with uncanny access to the inner lives of mortals), and the apprehension that Straub talks about is probably a product of an evolved “Theory of Mind” or intuitive understanding that other people are not just physical objects but that they also have psychological existence or *minds*.

Another pertinent case is the evil clown, by now a mainstay of horror fiction. As the horror actor Lon Chaney reportedly observed, “[t]here’s nothing funny about a clown in the moonlight” (quoted in Skal 2001, p. 364). Murderous or insane clowns appear in as different venues as Stephen King’s *It* and an episode of the TV-show *The Simpsons*.¹⁵ We are obviously not born with an epigenetic algorithm coding for coulrophobia, but the clown may trigger other adaptive responses. As Robert Winston points out, “clowns obscure their face with paint, thus covering their features and

15 King 1987 and “Lisa’s First Word” (in: *The Simpsons*, dir. Mark Kirkland, episode 10, season 4, 20th Century Fox, 1992), from which I take the title quote of this essay. Brett Cooke pointed out to me that the lead character in Leoncavallo’s 19th-century opera *I Pagliacci* is also a murderous clown (personal communication).

true emotions; they confuse our ability to judge their mood” (Winston 2002, p. 37). A murderous clown is merely a human predator with facepaint; we may note in passing how many human monsters of psychological horror films or thrillers obscure their faces with masks or clothing, from Leatherface in *The Texas Chainsaw Massacre* to Michael Myers of *Halloween*, from the killer of *Scream* to Jason Vorhees in *Friday the 13th* and the maniacal fisherman in *I Know What You Did Last Summer*. An earlier example is the Phantom of the Opera of Gaston Leroux’s 1909/1910 novel of that name; the Phantom’s face is severely disfigured and he therefore covers it up.¹⁶

In general, what Joanne Cantor and Mary Beth Oliver call “distortions of natural forms” (Cantor and Oliver 2004, p. 226) plays a significant role in horror fiction. Many scary creatures look decidedly sick, thus activating powerful, innate disgust mechanisms. Zombies are a case in point, since they are generally portrayed as animated rotting corpses, and bodies in a state of decomposition are found cross-culturally to evoke disgust because they activate mechanisms selected for by the threat of disease (cf. Curtis and Biran 2001). They may thus trigger an avoidance mechanism that originated in adaptations for food choice: spoiled meat is bad for you (and even more so when *it* wants to devour *you*).

Zombies may also, as recognizable humanoids, tap into an evolved social decision system designed for mate selection: part of the repulsion that zombies engender may be due to their poor mate potential. Since physical attractiveness (or beauty) has been found to correlate with phenotypic and genetic quality (Grammer et al. 2003, p. 399), unattractiveness may signify relatively poor health or fitness. Zombies presumably activate the psychological machinery that we use to assess the attractiveness of other people: skin quality is one such parameter (Grammer et al. 2003, pp. 369f.), and zombies have notoriously bad skin. The phenomenon known as the “uncanny valley” – the observation that entities which resemble humans significantly yet lack something essential in their appearance, like moving corpses or very humanoid robots, tend to be perceived as uncanny or repulsive – is well-documented (cf. MacDorman et al. 2009), but the cause of the aversive response to uncanny creatures has until recently remained the object of speculation. Several evolutionary explanations for the uncanny valley have been offered (relating mainly to pathogen avoidance and mate selection), and one study set out to test whether it is based on cognitive machinery unique to humans, and thus whether the evolutionary hypotheses pan out. In this study, five macaque monkeys were shown a variety of computer-generated monkey faces, and they “consistently exhibited the uncanny valley effect” (Steckenfinger and Ghazanfar, 2009, p. 18363), preferring not to look at the uncanny, realistic-yet-synthetic CG monkey faces (“monkey zom-

16 Gaston Leroux, *The Phantom of the Opera*, New York, NY: Dorset Press, 1988.

bies”) that they were presented with. Thus, the uncanny valley does indeed seem to run through an evolved mental landscape.

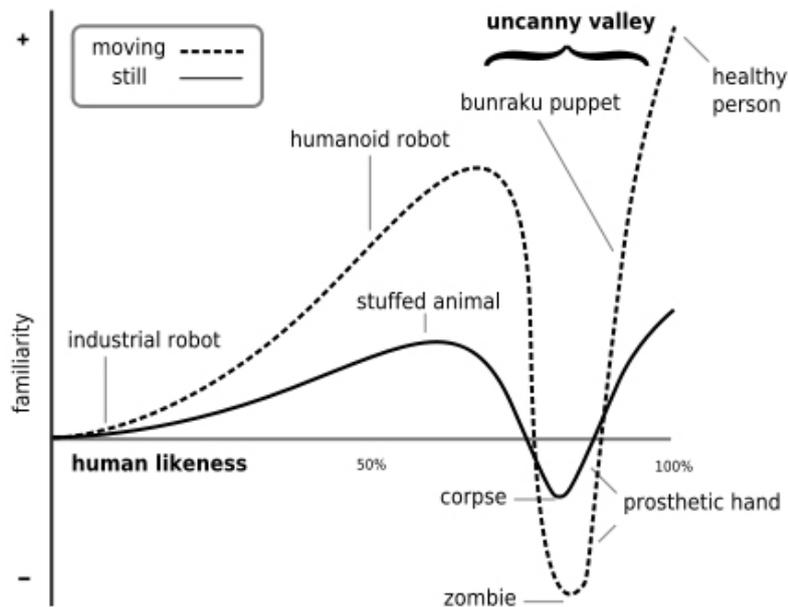


Fig. 1: Mori Uncanny Valley graph (source: Wikimedia Commons).

The uncanny valley effect presumably pertains to all humanoid monsters. Of course, the sexy vampires of *True Blood* are a far cry from the repulsive blood-suckers in *30 Days of Night*: some vampires are decidedly attractive, and in *True Blood*, a sizable demographic known as “fangbangers” actively seek out sexual liaisons with vampires. The vampire in general is more malleable than the zombie – indeed, the zombie is merely a vampire without the bells and whistles, and folkloristic vampires are more like modern zombies than their own post-Stokerian descendants (Barber 1988) – and can be disgusting or attractive, according to the author’s needs.

The vampiric genotype – the basic blood-sucking revenant – is realized as different vampire phenotypes in different cultural ecologies. Or in other words, each culture breeds its own monsters, yet within a possibility space constrained by human nature. Just like human behavior and culture are products of intricate interactions between genome and environment, so are fictional monsters products of cultural circumstances and conserved dispositions in human hard-wiring. As an example, Brian Regal has cogently suggested that the werewolf’s formerly central position as human-like monster *par excellence* has been supplanted by the monstrous primate such as the Yeti or Bigfoot, and that this takeover can be explained with reference to the in-

roduction of Darwinian evolutionary theory in the nineteenth century: actual wolves gradually ceased to be a threat to mankind, whereas the ape-man composite became an object of fear and revulsion, not least due to anti-evolutionary sentiment (cf. Regal 2009). To understand our monsters, we need to understand both the deep history of human evolution and the local ecology of specific monsters.

VII. Distorted Eyes

Eyes are frequently distorted in horror fiction. In Bram Stoker's *Dracula*, the count's conspicuously red eyes are mentioned about a dozen times (cf. Stoker 1992, pp. 43, 88, 91, 94, 126, 221, 244f., 247, 251, and 325). In Stephenie Meyer's *Twilight*, supernaturally handsome Edward Cullen's vampire eyes change color according to his mood (cf. Meyer 2008, e.g., pp. 46, 70, 170, and 243). The eyes of demonic André Linoge in Stephen King's *Storm of the Century* are occasionally pitch-black with no whites (cf. King 1999, pp. 11, 30, 60, 112, 124, 142, 215, 221, 271, 297, and 373), and the eponymous new-born monster of Ira Levin's *Rosemary's Baby* is more than just "so small and rosy-faced": his eyes are "golden-yellow, all golden-yellow, with neither whites nor irises; all golden-yellow, with vertical black-slit pupils" (Levin 1997, pp. 295f.).

For human beings whose ecological niche is highly social, others' attention and the direction of other people's gaze matter. The eyes of our species have evolved to be particularly salient due to the high contrast between the white sclera and the colored iris, a feature not seen in the same degree among other primates (cf. Tomasello et al. 2007). It is of keen importance to us to track other people's attention, especially when engaged in some form of intercourse – we all know how annoying it is to converse with somebody who is wearing a pair of sunglasses. Even newborns attend preferentially to human faces (cf. Boyd 2005a, p. 152), and so the distortion of faces and eyes are, conceivably, yet another tool available to the artist who wishes to disturb and unsettle; a tool that must be understood in its evolutionary context.

VIII. Tweaked Predators

Why is it that hybridism is a feature of the Universal Monster described by Gilmore?¹⁷ Why aren't horror stories simply full of big cats, spiders, and other real (if anachronistic) threats?

17 Several other horror scholars have noted the hybridism or "interstitiality" of horror monsters, e.g., Noël Carroll (1990), who relies on the cultural constructionist theory of disgust proffered by Mary Douglas to explain why "anomalies command attention and elicit curiosity" (p. 195).

As Brian Boyd points out: “Works of art die without attention.” (Boyd 2005b, p. 8), and the same goes for fictional monsters. The terrifying creatures of horror fiction are engaged in a fierce competition for attention, and the most attention-demanding or *interesting* monster wins this struggle for survival. If cultural concepts are like viruses and in constant competition for host organisms, then it would appear that the by-now common monsters of horror fiction are highly successful cognitive parasites, since they in many cases have lived for several hundred years and have traveled freely across cultural borders.

An intriguing finding from the cognitive study of religion is that so-called minimally counterintuitive (or MCI) agents enjoy a certain cognitive advantage. That is, agents that breach one or a few ontological boundaries and violate intuitive assumptions – agents that are “taxonomic anomalies” (Atran and Norenzayan 1992, p. 715) – and which have good explanatory power for apparently inexplicable phenomena are more attention-arresting and more memorable than standard, non-ontology-violating concepts or bizarre ones which have many taxonomic oddities (cf. Boyer 2002; Barrett 2004; Norenzayan et al. 2006). Our basic ontological categories include person, animal, plant, and substance. Creating an MCI agent is easy: switch or delete one or two features from distinct categories – e.g., fashion a person that is able to move through solid objects or a tree with cognition – and you have an interesting concept drawn not from empirical reality, but from a mind primed to make fast and automatic inferences about objects in the world and to extract agency from even minimal cues in the environment.

Belief in supernatural agents is not the result of a cognitive failure. It is, rather, the product of normal, automatic cognition; of cognitive machinery which evolved to deal with other challenging aspects of existence, such as predator detection and the problem of inferring what’s on other people’s minds. We simply seem to fashion ghosts and gods as a matter of routine. As Atran and Norenzayan put it, “supernatural agents are readily conjured up because natural selection has trip-wired cognitive schema for agency detection in the face of uncertainty” (Atran and Norenzayan 1992, p. 720). The reason for this too-human tendency to attach agency to the apparently inexplicable – from freak weather incidents to bumps in the night – may have its roots in the problem of predator detection. A rustle in the leaves may and may not signal danger: it’s the wiser choice of action to assume that some bad thing is there, even if it turns out to be wrong (cf. Marks and Nesse 1994). A false negative is better than a false positive, and so a “hyperactive agency detection device” or HADD (Barrett 2004, p. 31) is part and parcel of human cognitive machinery. This device is routinely exploited by horror fiction, which often features glimpsed or intimated monsters in more or less obscured environments, for example at night, something which sets the agency detection device on high alert. As Öhman has demonstrated,

“anxiety causes heightened attention to threats in the environment” (Öhman 2000, p. 581). Thus, anxiety engendered by a fiction readily bleeds into the real world. One contemporary reviewer of Stoker’s *Dracula* noted how, having begun reading the novel in the evening, by “midnight the narrative had fairly got upon our nerves; a creepy terror had seized upon us, and when at length, in the early hours of the morning, we went upstairs to bed it was with the anticipation of nightmare. We listened anxiously for the sound of bats’ wings against the window.” (Anon., quoted in Stoker 1997, p. 364).

Another well-developed and oft-used strategy for priming the HADD consists in making the monster’s ontological status within the narrative ambiguous – is there really a harmful agent “out there”?¹⁸ As the cognitive devices responsible for producing and entertaining supernatural concepts function subconsciously, we begin to understand why the well-told horror story can make even the most hard-headed skeptic break a sweat. It seems simply to bypass our cognitive defenses. The bump in the night triggers an intuitive “who’s there” response long before it causes rational deliberation and the weighing of evidence regarding a possible impending threat.

Apart from more or less exaggerated (usually enlarged) predators, the usual suspects of horror fiction can be categorized as MCI agents: vampires, zombies, werewolves, animated mummies, and ghosts are all ontological bastards. We find ordinarily inanimate objects imbued with malicious will or agency – from cars (Stephen King’s *Christine*) to industrial laundry machines (King’s “The Mangler”), from houses (Richard Matheson’s “Mad House”) to church organs (Matheson’s “Shock Waves”). The shape-shifting revenant sometimes known as Eva Galli in Peter Straub’s *Ghost Story* runs counter to what we intuitively expect of human morphology, and the zombies of George A. Romero’s *Night of the Living Dead* have traded most cognitive functioning for a firm determination to ingest live human tissue, thus largely eliminating cognition from the “person” ontological category and borrowing predation from an “animal” subcategory. From the Holy Ghost to the revenant of *Macbeth*, from the putative ghosts of “The Turn of the Screw” to their too-real Asian siblings in *Ringu*, from Beowulf’s *Grendel* to the horror of *Cloverfield*, from Stoker’s Count Dracula to Anne Rice’s tragicomic existentialists (cf., e.g., Rice 1994), our stories brim with counterintuitive, sometimes malicious agents built on, yet also crucially departing from, standard human or predator templates.

18 For example, Henry James turned the screw on agency detection to such an extent that an entire academic sub-industry has been devoted to the problem of deciding whether his ghosts are supernatural or psychological in origin.

IX. Monstrous Narrative Strategies

As Noël Carroll argues, horror stories show not just scary monsters but scared people, as well: "What appears to demarcate the horror story from mere stories with monsters [...] is the attitude of characters in the story to the monsters they encounter." As he points out, the "emotional reactions of characters [...] provide a set of instructions or, rather, examples about the way in which the audience is to respond to the monsters in the fiction." (Carroll 1990, pp. 16f.).

In his 1872 book *The Expression of the Emotions in Man and Animals*, Darwin elaborated on the communicative aspects of the facial expression of emotion (cf. Darwin 1998). As subsequent research has shown, fear travels quickly across individuals via facial expressions and even body postures (cf., e.g., Bannerman et al. 2009). This explains why horror stories tend to dwell on scared people. For example, in *The Exorcist* (novel and film) we are frequently shown the possessed girl's mother's reaction to the horrors of the narrative, prior to being shown the horrors themselves (cf. Kermode 2003, pp. 42ff.).

Usually, a monster speaks for itself. By its appearance and behavior, it is clearly dangerous or threatening (to life and limb or to soul and sanity). Yet the audience may know something about the monster which is not immediately deducible from its appearance or behavior. This contextual knowledge may render the monster (even more) monstrous: for example, in the film *The Sixth Sense*, a boy famously "see[s] dead people." At one point, he is surprised by the sudden appearance of a very pale, but clearly vivacious, girl. It is the viewer's knowledge that the girl is *dead* and not, say, suffering from anemia or acute nausea which makes the scene so disturbing.

That the monster is always embedded in and framed by a narrative is a trivial point, but *The Blair Witch Project* shows how the monster itself can retain its narrative dominance without coming on stage at all, and by dwelling on the portrayal of scared faces, the film also highlights the effectiveness of emotional contagion in horror. Moreover, a range of narrative strategies other than the elaborate description of a monster or a frightened character can be employed to attain the desired effect (or rather, affect). Suspense is the most obvious such tool, and opening a narrative with a passage which establishes the proper atmosphere of anxiety and maybe impending doom is a good example. Such introductions may establish or presage the presence of the narrative's *monstrum*. For example, Dan Simmons' *Song of Kali* opens with a brief panoramic description of the Calcutta that is to spell death and soul-wrenching despair to the narrator: "Some places are too evil to be allowed to exist. Some *cities* are too wicked to be suffered. Calcutta is such a place." (Simmons 2008, p. 1). And the first sentence of the first chapter is an *in medias res* admonition to the narrator: "'Don't go, Bobby,' said my

friend.” (Simmons 2008, p. 2). Thus, the stage is set for a cascade of entirely nasty events.

Similarly, the wonderfully composed and enigmatic introduction to Shirley Jackson’s *The Haunting of Hill House* is designed to plant a seed of unease in the reader’s mind, prefiguring and coloring subsequent events. This introductory passage is non-focalized and like Simmons’, panoramic, offering the reader a detached, “objective” vision:

No live organism can continue for long to exist sanely under conditions of absolute reality; even larks and katydids are supposed, by some, to dream. Hill House, not sane, stood by itself against its hills, holding darkness within; it had stood so for eighty years and might stand for eighty more. Within, walls continued upright, bricks met neatly, floors were firm, and doors were sensibly shut; silence lay steadily against the wood and stone of Hill House, and whatever walked there, walked alone. (Jackson 2006, p. 1)

The reader’s attention is forced toward whatever it is that walks alone in Hill House; a creature, presumably, associated with mental disease and darkness, or maybe it’s the insanity stalking the limbic corridors of a sick house. At any rate, the passage is quite disconcerting and clearly aims to establish an atmosphere of apprehension.

Opening passages such as these stimulate attention, urge engagement, and create suspense. As Donald Beecher suggests, suspense is “the attentional component [...] that keeps the mind excited about its options” (Beecher 2007, pp. 276f.). As he points out, suspense is “an automatic barometer of attention priority in relation to perceived stressors” (Beecher 2007, p. 264), and should be seen in relation to evolved event comprehension systems in our psychology.

X. Why Horror?

In *The Expression*, Darwin related the story of a personal visit to the zoo:

I put my face close to the thick glass-plate in front of a puff-adder in the Zoological Gardens, with the firm determination of not starting back if the snake struck at me; but, as soon as the blow was struck, my resolution went for nothing, and I jumped a yard or two backwards with astonishing rapidity. My will and reason were powerless against the imagination of a danger which had never been experienced. (Darwin 1998, pp. 43f.)

As Darwin’s anecdote nicely illustrates, the fear response is largely immune to cognitive control. Conceivably, the horrors of fear fiction pick the locks of the reader’s or viewer’s cognitive defenses, confirming our nightmare that there are monsters lurking in the shadows and grinning clowns in dark alleyways, confirming our suspicions of uncanny causal relations discarded by modern physics.

Why would anyone want that sort of confirmation and the hair-raising experiences offered by scary entertainment? Of course, there are huge variations in individual preferences for horror stories. But a main motivation for reading and viewing horror fiction probably comes from a desire to experience "extremity of circumstance in perfect safety," in Peter Straub's phrase. However, Straub thinks that there is more to horror than vicarious thrills and "artificial" arousal of the autonomous nervous system. In his view, horror fiction is about "discovering one's ability to feel in certain ways, and deepening and widening one's emotional experience by that means." (quoted in Clasen 2009, p. 40).

Straub's view is closely aligned with Joseph Carroll's conception of literature as a kind of adaptive emotional simulator, a provider of "paradigmatic and emotionally saturated images of the world and of human experience" (Carroll 2006, pp. 42f.).¹⁹ By extension, it may be that horror fiction offers us simulated worlds of threat and anxiety in which we can practice adaptive behavior – much like nightmares may function as a kind of threat rehearsal (cf. Revonsuo 2000). What horror teaches is not, as per *The Exorcist*, to call the local chapter of the Catholic Church in case of possession and to hell with modern medicine; rather, it provides us with emotionally saturated – perhaps, sometimes, over-saturated – images of the world, it teaches us about human relations and about the emotional qualities of experience. In Stephen King's words, "the primary duty of literature [is] to tell us the truth about ourselves by telling us lies about people who never existed" (King 1983, p. 251). Supernatural horror fiction is by its very nature counter-empirical, yet in one respect even supernatural horror needs to be realistic: in its portrayals of the behavior, psychology, and interactions of its characters. *That's* where horror matters; *that's* where horror can teach us something truly valuable.

XI. A Biocultural Approach

The cognitive-evolutionary approach to horror fiction outlined above is at present rather speculative, but it readily yields testable hypotheses. For example, the neurophysiological signature of the fear response is well understood. With the aid of MR scanning and bio-feedback measurements, one could test whether the response elicited by horror fiction is, indeed, qualitatively similar to the response elicited by real threats. Extensive quantitative literary study would reveal whether a biometrics of horror fiction is viable, and to what extent Gilmore's universal monster characteristics hold water. Psychological

¹⁹ Carroll's argument is part of a larger argument about the adaptive function of literature. It is notable that Straub's views implicitly support Carroll's argument, even though Straub is unaware of the debate within adaptationist literary study.

experiments might reveal which personality traits are involved in a preference for and susceptibility to horror fiction, and further on, we may even know the genetic underpinnings of such preferences. Regarding the question of whether horror fiction is adaptive or an exploitation of an adaptation, one might investigate whether regular horror consumers leave more offspring than non-consumers.

Put this way, the question sounds ridiculous. And while late-modern horror tales may prepare us for the zombie holocaust, allowing zombie fans to survive and reproduce – a film like *Zombieland* comes complete with useful survival rules –, most horror stories probably have scant adaptive value, although horror films can be effective dating vehicles for young cinema-goers. At any rate, in ancestral times horror stories may have been adaptive, offering free information about predators and about strategies for predator avoidance, as Michelle Scalise Sugiyama suggests (cf. Scalise Sugiyama 2006).

Another strength of the biocultural theory of horror fiction is that it converges with a common-sense understanding of the genre, for example, the kind of general introductions to horror one finds in anthologies or in commentaries by horror writers. Such understandings are usually formulated in a colloquial idiom, rather than Theory-speak or with appeals to arcane psychologies,²⁰ and they invoke a common human nature: human fears are basically common and very old, and the horror genre has probably existed for as long as our species has had the ability and inclination to tell stories.²¹

At present, the biocultural approach promises to explain the basic structures of horror fiction and the psychological foundations of the genre. Yet to be of extensive use in humanistic horror study, the approach should yield consilient readings of actual horror texts. Such readings have yet to be produced, but I predict that viable Darwinian readings of horror texts should conform to Joseph Carroll's tenets of adaptationist readings of literature in general. That is, they should "assess each individual literary work or group of works as a peculiar configuration of a specific temperament or individual identity within a specific cultural ecology" and "identify both the individual identity and the cultural ecology as a specific organization of the elements of human nature" (Carroll 2006, p. 46). In other words, such readings

20 For example, Twitchell in his influential study of the genre asserts that the "fear of incest underlies all horror myths in our culture that are repeatedly told for more than one generation" (Twitchell 1985, p. 93).

21 For example, in their introduction to their classic 1944 anthology *Great Tales of Terror and the Supernatural*, Wagner and Wise claim that the widespread "deep fascination in tales of sheer terror and the supernatural" is "an ancient one – as ancient as the human race". As they say, "Therein lies its power [...] going down to the primitive core of our being" (Wagner and Wise 1994, p. xiii).

should incorporate not just an understanding of evolved human nature, but also of the author and the cultural context. It should be biocultural.

Take *The Exorcist*, which seems to encode a pertinent socio-cultural anxiety, namely an explosively growing generation gap in 1970s USA (cf. Skal 2001; Kermode 2003; King 1983). Yet it conspicuously uses strong, relatively context-independent imagery to tell the story (a diseased-looking child, the idea of a spiritual dimension as well as the mind- and body-possessing demon Pazuzu). And significantly, the film as well as the novel continue to attract and affect large audiences, even ones far removed from post-Vietnam North America.²² Another example could be given with reference to Richard Matheson’s 1951 short story “Through Channels.” The story features monsters emerging from a TV to feed on a small party. This would appear to be a metaphorical treatment of a very specific, culturally contingent anxiety derived from the sudden explosion in communication technology and the epidemic spread of TV sets in mid-century USA.²³ And yet, a closer analysis of the monsters from the TV suggests that Matheson’s story is not just an interpretation of the possible effect of the developments in mass communication. Description is scant, but the monsters “was [sic] like ... bugs, maybe, or maybe ... w-worms. Big ones. All mouths. Wide open” (Matheson 2002, p. 57), according to a witness. Conspicuously, then, Matheson is manipulating a context-dependent anxiety, but he chooses to do so metaphorically, by presenting an abstract threat as a supernatural horde of “bugs” or “w-worms.” This, presumably, makes the story more inherently interesting (and its message more edible), and it showcases the potential of fantastic fiction as a kind of double text, one which can be read and enjoyed metaphorically as well as literally. And the fact that Matheson chooses murderous bugs or giant worms as embodiments of this particular evil is testament, again, to the ubiquity of dangerous and tweaked animals in horror fiction, as well as an innate fear of predation which is capitalized upon by scary stories.

Horror stories vary within a narrow range because they are designed to target the human mind in specific ways. The human mind, in turn, is designed in a specific, species-typical way by a process of adaptation, and consequently, there are only so many effective strategies and monsters available to horror-mongers. The basic scientific theories and findings necessary to a Darwinian theory of horror fiction are out there, but they have not been applied to horror fiction in a sustained, systematic way: the efforts to construct a consistent theory of horror fiction thus far are in the main brief and

22 The 2001 re-release of *The Exorcist* draw large audiences around the world: “The Exorcist (1973) – Box office/business,” 6 November 2009: < <http://www.imdb.com/title/tt0070047/business>>, and Blatty’s 1971 novel has never been out of print.

23 According to one historian, the number of TV sets in North America rose from 500,000 in 1948 to 19,000,000 in 1952 (Halberstam 1993, pp. 185, 195).

scattered, even as they are often very intelligent.²⁴ The trick is going to be to construct a biocultural horror theory that engages rigorously with scientific evidence and empirical aspects, and at the same time keeping in view the complexity and richness of its material, that is, the horrifying cinema and literature that so many of us enjoy.

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²⁴ Summarized in Clasen 2010.

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