

How Wonderful is Wonderland? Negative Emotions in Children's Literature from an Evolutionary Perspective

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ABSTRACT

This MA thesis seeks to investigate negative emotions and their function in children's literature from an evolutionary standpoint. Insights from evolutionary biology and evolutionary psychology are used to build an evolutionary framework that is then used in a literary analysis that shows how negative emotions are evoked in literature, and what adaptive purpose(s) they have. The main argument is that we feel strong emotions when engaging in story because storytelling has an adaptive function, and that this function is to provide us with low-risk, vicarious input that can be employed as a future guide for behaviour. This argument explains not only the human proclivity for producing and consuming art, but also why we generally feel pleasure and satisfaction when engaging in stories, no matter the form they take.

Keywords: literary Darwinism; children's literature; storytelling; vicarious experience; negative emotions

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Chapter 1

1.1 Introduction

Whether we are aware of it or not, we surround ourselves with story. Stories come in the shape of films, TV series, books, news stories, documentaries and so on. Even most popular music has story traits such as identifiable characters, events, and plot. It is safe to say that we, as a species, take pleasure in stories, that we are somehow driven towards the vicarious experience with which storytelling provides us. But this ‘pleasure’ can be tricky to define – we are not just driven towards happy stories, which presumably give us pleasure through the depiction of good outcomes for nice characters, but unpleasant and scary stories, too. In fact, stories are rarely ‘just’ happy. A large part of the emotions we feel when engaging in story are ones we would classify as ‘negative’. Fear is not a positive feeling, nor is disgust or anger. Yet, we happily pick up genres such as horror fiction, and we wallow in intense feelings of sadness when reading a story with a tragic ending.

And it seems that children have the same experience. What made me interested in the topic of this paper was an experience I had while working as a substitute at a kindergarten. One day, a group of children had gathered around me because they wanted me to tell them a story. But not just any story, no, it had to be a *scary* one. I racked my brain and I think I came up with a somewhat scary story about a witch – or at least what I thought they might find scary. After a (very) short while, they interrupted me and complained that it was not scary enough. I tried to make it a little scarier, but very soon they made the same complaint again. I do not think I ever managed to make it scary enough. What they wanted was clearly that intense feeling that is both scary and thrilling at the same time – they wanted to be frightened, but in a safe setting: the kindergarten, surrounded by other children and with a trusted adult telling a story they instinctively know is not true. It brings to mind a quotation from an essay by the children’s author C.S. Lewis: ‘Nothing will persuade me that [a frightening story] causes an ordinary child any kind or degree of fear beyond what it wants, and needs, to feel. For, of course, it wants to be a little frightened’ (“On Three Ways” 48). ‘Of course’. It seems to Lewis that this goes without saying, that we all know it to be true. Perhaps we do. We know that children delight in games of tag or other forms of chasing, and most of us have probably witnessed their hybrid expressions of fear and thrill when they are caught by an adult. Occasionally, they even seem unsure about whether they should truly be afraid or laugh it off. Pretend play is in the same category as storytelling: fictitious experience. And the want and the need Lewis mentions are two sides of the same coin – something innate that drives us towards stories that may scare us or make us uncomfortable. It seems that there is something about experiencing even negative emotions through storytelling that brings a sort of pleasure. Why may that be?

The still relatively new field of literary Darwinism argues that storytelling (and the arts in general) is an evolved part of human nature. Literary Darwinists posit that the human disposition for producing and consuming art and stories evolved through natural selection to serve an adaptive

purpose. In other words, that whatever we gain from engaging in stories enhances our chances of survival and reproduction. If we assume that this is correct, then what exactly is it that we gain by engaging in story and what is its exact adaptive function? In relation to this, why are we particularly attracted to fiction – what can it provide us with, that ‘true’ stories cannot? And, perhaps most important of all, why do we feel such strong emotions when engaging in story, whether in the form of a film, a song, or a novel? Using insights from the natural sciences and evolutionary psychology, these are the questions that literary Darwinists set out to answer. Here, I am attempting to join that effort.

The purpose of this paper is to investigate negative emotions, in particular, in this evolutionary framework: their importance for our survival and, most importantly, how and why it may have adaptive value to experience negative emotions vicariously through storytelling. I will make the point that there is no difference between adults and children in this respect, and that children’s books are in fact fraught with passages that describe and evoke negative emotions. I will analyse a number of representative children’s books and series according to Ekman’s five basic negative emotions – anger, contempt, sadness, fear, and disgust – to illustrate this point, and to show how and why we react with certain emotions to certain situations from an evolutionary perspective. The children’s books chosen are *Alice’s Adventures in Wonderland* (1865) by Lewis Carroll, *Peter Pan* (1911) by J.M. Barrie, *The Magician’s Nephew* (1955) by C.S. Lewis, *Charlie and the Chocolate Factory* (1964) by Roald Dahl, *Northern Lights* (1995) by Philip Pullman, and *Harry Potter and the Philosopher’s Stone* (1997) by J.K. Rowling. They were chosen mainly because they are generally regarded as current or future children’s classics, and thus are representative of what children and their parents have read and are reading. It is therefore a literary project, but the goal is not to locate a literary meaning or quality in the chosen works, it is rather to show how we feel and exercise negative emotions in (children’s) literature. The nature of the project also requires a substantial amount of theory to support the main argument, as well as the analysis and following discussion, making the project necessarily more theory- than analysis-focused.

I will argue that the human species evolved motivational systems (manifested as emotions) whose purpose it is to guide our attention towards that which has adaptive value to us. Consequently, the main argument will be that we feel strong emotions when engaging in story because storytelling has an adaptive function, and that this function is to provide us with low-risk, vicarious input, which is stored in our cognitive adaptations as actual experience to serve as a guide for future responses and behaviour in similar situations. Arguably, gaining experience with negative emotions and situations is of great importance, as this might contribute directly to chances of survival and reproduction. Therefore, I further argue that experiencing particularly negative emotions through storytelling is essential, and indeed, because of this, that negative emotions are prevalent in stories in general. Inherent in this argument, and central to this paper, is that this is just as true for children as for adults,

despite cultural beliefs that the child is ‘different’ from the adult and should generally be ‘protected’ from negative experiences.

I will start with a brief introduction to literary Darwinism and its history, then move on to a more in-depth account of what an evolutionary approach entails. I will discuss the term ‘human nature’ and what it signifies in evolutionary terms, as well as theoretical presentations of the human mind and the arts, also within an evolutionary framework. I then focus on storytelling, in particular, and present the main argument, a proposed adaptive function of literature, and the primary theories that inform it. An outline of childhood and children’s literature is also presented at the end of the theory section, as a segue to the analysis. In the analysis section, I elaborate on negative emotions and their evolved functions, and combine the theory with an analysis of the five basic negative emotions in the chosen children’s books. This analysis, through concise examples from each book, is meant to illustrate the theory and show how we feel and exercise negative emotions through vicarious experience, and how they are very much present in children’s literature. Lastly follows a discussion that touches upon the limitations of this approach, as well as the benefits, and continues on to argue how we can use the insights gained in this paper in practice.

Chapter 2

2.1 The Evolutionary Approach

The aim of literary Darwinism is, among other things, to understand the nature of literature from an evolutionary perspective (Gottschall, “Quantitative Literary Study” xvii). Literature is one of the last remaining subjects relevant to humanity that does not have an expanding interest in the application of an evolutionary perspective. Several evolutionists and literary scholars have become interested in exploring this territory in recent years, but the evolutionary perspective has not yet ‘become part of the normal discourse for the field of literary studies as a whole’ (Gottschall, “Quantitative Literary Study” xvii) – and this in spite of the fact that, it could be argued, literature (and the arts in general) are essential to what we call human nature. The central concept that evolutionary social science and evolutionary literary studies concern themselves with is exactly ‘human nature’, which, in Carroll’s terms, can be described as ‘genetically mediated characteristics typical of the human species’ (“An Evolutionary Paradigm” 103). In other words, what in our genetic makeup makes us specifically *human*. The evolutionary approach to literature is not strictly biological, but rather what Carroll and others call ‘biocultural’. This approach takes full note of biology *and* culture (Boyd, *Origin of Stories* 25). Culture plays an important part, as our genetically mediated dispositions interact with environmental conditions, but the primary focus of the biocultural approach is ‘human universals’ that ‘derive from regularities in human nature’ (Joseph Carroll, “An Evolutionary Paradigm” 105). One such universal is the abovementioned disposition for producing and consuming art, and for producing and consuming stories in particular.

The most ambitious literary Darwinists ‘regard evolutionary biology as the pivotal discipline uniting the hard sciences with the social sciences and the humanities’, an idea first proposed by Edward O. Wilson in

Consilience (1998) (Joseph Carroll, “An Evolutionary Paradigm” 105). Wilson had stirred the waters even earlier, however, with the publication of *Sociobiology: The New Synthesis* in 1975, which was the first widely recognised challenge to the theory of cultural autonomy (Joseph Carroll, *Literary Darwinism* 152) – the idea that culture exists on its own, separate from the evolved human nature, and influences the same instead of the other way around. This evolutionary approach to social science, by combining adaptationist thinking with the study of human society and behaviour, prepared the ground for evolutionary literary study (Joseph Carroll, *Reading Human Nature* 39). Carroll’s own book *Evolution and Literary Theory* was one of the first full-length books on literary Darwinism and appeared in the mid-90s. He developed his ideas further in *Literary Darwinism* and continued – and continues – towards his goal of ‘producing a comprehensive model of human nature and literary meaning’ (Joseph Carroll, “An Evolutionary Paradigm” 109).

The key to the success of that model lies in the understanding of the human mind, and for that insight, we necessarily need, among other fields, neuroscience, evolutionary biology, and evolutionary psychology to inform us (Gottschall, “Quantitative Literary Study” viii). Indeed, there is a strong logic to the argument: the mind creates art, and the natural sciences have built an (although not at all exhaustive, then at least rough) understanding of the mind, so how would we propose to understand why the mind creates art, without the inclusion of the natural sciences? The empirical findings in these fields, regarding the psychological, cognitive, and emotional organisation of individual organisms, can, in the words of Carroll, provide a ‘framework for the critical analysis of literary depictions of human nature’ (*Literary Darwinism* 127). Mapping human nature is the first step towards creating such a complete framework, but while headway continues to be made, much is still in the dark and will likely continue to be so for some time yet. Thus, the framework must still rely on a certain amount of informed speculation.

2.1.1 Human Nature and Evolution

Human nature is central to literary criticism and always has been. Theory-driven criticism has presupposed ideas about human nature. The question is what informs those ideas – a folk understanding or the natural sciences. The folk understanding is actually much closer to the truth than we might imagine, because, as Boyd argues, ‘even on an everyday level we could not engage with other humans without an implicit theory of human nature’ (*Origin of Stories* 19-20). This implicit theory of human nature is what we apply to literature as well. It explains how and why we can understand the meaning and the purpose of a translated work from a different culture – if culture was all there was, this would be impossible. Accepting the idea of human nature and accepting evolution’s power to explain it, however, are two very different things.

We cannot begin to think about evolution, or a human nature derived from it, without thinking of Darwin. His theory of natural selection – the idea that there is individual variation in all species, and that evolution ‘selects’ the variations that enhance a certain organism’s chances of survival and reproduction to be inherited by the offspring – is what informs all evolutionary approaches in various fields. Indeed, according to adaptationist thinking, ‘all things human are contained within the scope of biological evolution’ (Joseph Carroll, *Reading Human Nature* x), and it would seem that most academics and intellectuals in the 21st century agree about the theory’s importance: Darwin’s book *On the Origin of Species* (1859) was recently voted the most influential academic book in history (Flood), and while it was perhaps originally merely a highly logical

hypothesis, based on selected findings and examples, it was cemented in the early 20th century when it was integrated with Mendelian genetics in the ‘Modern Synthesis’, giving the theory the scientific explanation it needed to explain the issue of variation inheritance (Joseph Carroll, *Reading Human Nature* 197).

Our human nature is the compilation of all the variations that have been ‘selected’ for in our evolutionary past and have turned into species-typical characteristics. Essential to a full evolutionary account of human nature, then, is the concept of ‘life history’. Life history refers to basic biological characteristics in a given species, such as length of life and forms of mating, and whether there is parental care involved, and what form this might take – and these same characteristics are part of what we call human nature (Joseph Carroll, *Reading Human Nature* 110). They started out as small variations that were passed on, selected by evolution, because they enhanced survival or reproduction, and then accumulated before becoming fixed as a general trait of our species. One of the more important characteristics specific to humans, and of relevance to the subject of this paper, is extended childhood development. I will return to the importance of this characteristic in a later section, and what it means for our particularly human disposition for storytelling.

What constitutes human nature is then what we would call human *behaviour*, which, when we break it down, can be considered as a set of motives and emotions derived from an adaptive evolutionary process that is specific to our species. The above-mentioned life history is what entails these motive dispositions and emotional responses (Joseph Carroll, *Reading Human Nature* 83). What this means, is that our particular life history necessitates certain motives and emotions, such as the motive of caring for offspring long enough to ensure that they become fully functional adults that can pass on the familial genes. The crucial idea is that there is a total systemic organisation in human nature, where all the parts of the system are functionally interactive (Carroll et al. 212). As Carroll argues in *Reading Human Nature*, ‘animals make sense as integrated functional wholes ... because they have evolved in an adaptive relation to the conditions of their existence’ (202).

According to the theory of inclusive fitness, which has become the ultimate regulative principle of life on earth in modern evolutionary theory, the abovementioned motives and emotions have been shaped by natural selection ‘to maximize the chances that an organism will propagate its genes’, which has further shaped the organism’s behavioural dispositions (Joseph Carroll, “An Evolutionary Paradigm” 112-114), as we see in the example of offspring-care. In short, our behaviour is directed by motives and emotions towards that which will enhance not only our survival, but also our reproduction. These motives and emotions evolved in adaptive relation to the human condition for that exact purpose, and thus are not only enormously complex, deeply integrated with our behavioural dispositions, and a crucial part of human nature, but also have an adaptive function.

The elementary logic in adaptation and the theory of natural selection is that this selection can only work on variation: you need individual differences for a selection to take place. Without the selection of some variation above another, there will be no adaptation (Joseph Carroll, “Human Nature” 80-84), a key argument to Darwin’s concept of ‘the struggle for life’: ‘variations, however slight, if they be in any degree profitable to the individuals of a species ... will tend to the preservation of such individuals, and will generally be inherited by the offspring’ (68). Literary Darwinists do not disregard variation. They do not believe that all humans act after a universal pattern and *only* that pattern: rather, they agree with the notion of individuality, created from

individual temperaments, cultural conditioning and individual experiences (Joseph Carroll, “Human Nature” 76). But they do believe that underlying our individual behaviour are cognitive behavioural systems specific to the human species, which result in human universals: features of human culture and behaviour that can be found in all known peoples and therefore necessarily must be a part of our species-typical characteristics. As Carroll emphasises, ‘human universals ... are merely behavioral patterns so firmly grounded in the logic of human life history that they are characteristic features of all known cultures’ (“Human Nature” 91). And these features have been adapted under different selection pressures, the most intense of which occur in relation to survival (Boyd, *Origin of Stories* 44).

2.1.2 Behavioural Systems

David S. Wilson makes a valid point when he argues that ‘we might be playing the reproduction game differently than other species in some respects, but we are playing the same game’, indicating that the study of humans should be centred upon survival and reproduction, exactly as it is with any other species (28). This implies that all our behavioural dispositions should be considered in relation to survival and reproduction – including storytelling. One of our most noticeably human features is our large brain. We have evolved to occupy the cognitive niche, and thus we gain most of our advantages from our intelligence (Boyd, *Origin of Stories* 89). But how? What exactly is the brain for? In relation to human behaviour, Carroll introduces the concept of ‘cognitive behavioural systems’ and presents the definition as being ‘coordinated suites of behavior subserving specific life goals’ (“Human Nature” 78-83). Life goals are motives, and vice versa, and ‘they are the chief organizing principle in human behavior’, as elaborated on above (Joseph Carroll, *Reading Human Nature* 157). In short, Carroll argues that humans have a number of these behavioural systems (a number that is still debated) which consist of motivational complexes that have a set ‘goal’, a motive which organises our behaviour. The goal is a regulatory principle, rather than a direct and active motive. Rather, it triggers several related mechanisms that mediate the behavioural system in question, and these mediating forces ‘manifest themselves psychologically as the “basic” emotions identified by Ekman and others as universal motivating forces in human psychology’ (“Human Nature” 85-87). In short, emotions mediate our behaviour, and they are triggered by the behavioural system’s ‘goal’. In other words, our emotions are designed to guide us towards life goals. It is perhaps necessary to specify that a life goal in the evolutionary sense is not ‘getting a job’, for example, but rather reproducing, or entering in valuable social relationships within the community. We will return to the important link between emotions and motivation later, and how this has an adaptive value for us.

Carroll believes the motivational structure of human nature to be hierarchical, and in his presentation of a diagram of that hierarchy, Carroll suggests that above our specific goals and motives, we have ‘a generalized but distinct desire to acquire resources and also to achieve successful reproduction’ (“Human Nature” 88). Again, individual variation might cause different desires, but if the desire for reproduction, for example, was not a characteristic of the species as a whole, it is likely we would be extinct in a very short time. Beneath the abovementioned desires, he further argues, are the various behavioural systems that subserve them (“Human Nature” 88). Behavioural systems that motivate us towards entering in social relationships or choosing a mate, for example, will help, directly or indirectly, to further our reproductive and survival-related efforts. And at the top of this pyramid we find inclusive fitness, which the underlying behavioural systems impinge on in

various degrees, survival and reproduction being the most direct (Joseph Carroll, *Literary Darwinism* 108). In other words, inclusive fitness is the ultimate regulative principle and thus is above all else, while simultaneously being affected by all the behavioural systems beneath it. Thus, for instance, survival of an individual may happen at the cost of inclusive fitness, if an individual chooses to save him- or herself from a dangerous situation rather than staying to help other group members.

Within this conceptualisation of behavioural systems is a further one, conceptualised by evolutionary psychology, of ‘evolved psychological structures as “modules” dedicated to specific domains or adaptive tasks’ (Joseph Carroll, *Literary Darwinism* 103-104). These modules are not behavioural systems but can be activated by and within a relevant system – for instance, the cognitive module for vision would be activated within the survival system (Joseph Carroll, “Human Nature” 88), enabling the organism to perceive visual cues of any danger. There is a fair degree of consensus about some of the main categories that these modules should be grouped into; a starting point has been the purely sensory modules and the concept of a language module. There is also widespread agreement on three main cognitive domains: physics, biology, and psychology, where the psychological domain consists in the recognition of feelings and thoughts in other minds and is also called the ‘theory of mind’ module (Joseph Carroll, *Literary Darwinism* 106-107). This characteristic is of vital importance to the particularly social nature of the human species.

2.1.3 The Mind

In the late 20th century, a new vision of the human mind emerged – a vision which includes ‘the most distinctive feature of the specifically human mind’, namely our flexible general intelligence, which enables us to quickly adapt to shifting environments (Joseph Carroll, “Human Nature” 81). This vision is the alternative view to the mind as a blank slate, and hypothesises that ‘the human mind inherits from evolution a large stock of ... innate ideas, as well as emotion programs, and other psychological programs’ (Tooby and Cosmides 22), thus applying evolutionary theory to psychology. This premise assumes that ‘behavior serves biologically useful functions and that evolutionary processes are helpful in explaining the characteristics of human behavior and human mental life’ (Öhman and Mineka 484). It is more commonly known as evolutionary psychology (EP) and is an approach to psychology, rather than a separate field, which applies adaptationist logic to the study of the human mind (Cosmides and Tooby, *Evolutionary Psychology* 13). In the view of evolutionary psychology, ‘the mind is a set of information-processing machines that were designed by natural selection to solve adaptive problems faced by our hunter-gatherer ancestors’ (Cosmides and Tooby, *Evolutionary Psychology* 1). Adaptive problems are conditions that occurred recurrently in the evolutionary history of a given species and affected ‘the reproduction of individual organisms ... however indirect the causal chain may be, and however small the effect on number of offspring produced’ (Cosmides and Tooby, *Evolutionary Psychology* 6). In practical terms, this means that the neural circuits of these ‘machines’ are designed to link certain stimuli in the environment to a certain kind of behaviour (Cosmides and Tooby, *Evolutionary Psychology* 5). An example could be the evolution of disgust in relation to bodily products: the problem that needed to be solved would have been the need to avoid possible pathogens (as will be specified later in the emotions section), and since there is a high risk of pathogens in, say, feces or vomit, being in contact with either would increase the probability of contracting a disease. We can easily imagine that contracting a disease could be fatal in that

environment, and thus hinder reproduction, or could be crippling enough that no further offspring could be produced. The neural circuits that generate the emotion of disgust steer us away from such possible contamination sources and are thus better at solving that particular problem than circuits that would make us curious to approach or touch bodily products, for example. In this way, disgust has been ‘selected for’ over time by evolution, because it enhanced the fitness of the individuals with those particular circuits and thus their genetic propagation (of course, as emphasised earlier, variation does occur, and some may be more fascinated than disgusted by bodily products).

According to Carroll, our brains have been shaped by natural selection to benefit the entire community – to promote inclusive fitness, as it were (*Literary Darwinism* 107). In this, he is backed up by, or is backing up, Darwin, who theorised that ‘in social animals [natural selection] will adapt the structure of each individual for the benefit of the whole community; if the community profits from the selected change’ (86). This purpose of general intelligence has resulted in, among other things, highly social relationships. Such relationships need to be mediated by something other than belonging to the same group; some factors beyond kinship are needed for the complexity we find in modern human social environments. One is language. Communication makes social manoeuvring easier and it conveys information in non-genetic ways – a transmission we call ‘culture’ (Joseph Carroll, “An Evolutionary Paradigm” 114). Another is what is called Theory of Mind (ToM), mentioned briefly above, which is ‘the ability to attribute mental states to one’s self and others’ and is essentially the basis for self-awareness ‘and for an awareness of others as distinct persons’ (ibid.). Both are made possible by our large brains. ToM gives us the ability to infer the beliefs, desires, and not least intentions of others, and to ‘run scenarios in which we can test our own possible courses of action against the possible reaction of others’ (Boyd, *Origin of Stories* 49), allowing us to navigate the highly complex social world of *Homo sapiens*. Our ability to run scenarios that will test possible courses of action is also what we would call our ability to ‘imagine’, and from this grows our ability to conjure up entire imaginary stories. As Dutton argues, imagination ‘allows for intellectual simulations and forecasting, the working out of solutions to problems without high-cost experimentation in actual practice’ and for ‘making chains of inference for what might have been or what might come to be’ – a capacity that gave a vast adaptive advantage in our evolutionary past (184). In Boyd’s words, ‘minds generate future’ and are ‘bundles of expectations’ that anticipate what happens next, and if that is done well, we will respond more appropriately to a given situation (*Origin of Stories* 330). He further argues that anticipatory skills have been the main driver of the evolution of our intelligence (ibid.). Because humans are intensely social animals, because our socio-sexual relationships are so complex and highly developed, those skills are important contributions to survival and to successful reproduction. And this, Carroll suggests, is the reason ‘having an intuitive insight into the workings of human nature can reasonably be posited as an evolved and adaptive capacity’ (Joseph Carroll, “An Evolutionary Paradigm” 115). But are we born with this intuitive insight? Do we come into the world knowing how to read facial expressions, how to infer the intentions of others around us, without ever having encountered a certain expression or a certain intention before? Do we come into the world fully equipped with social skills? The short answer is ‘not exactly’. As Boyd notes, evolution may provide us with some general guidelines for action, ‘but for some behaviors fine-tuned choices and wider ranges of options that can be deployed at short and context-sensitive notice make a decisive difference’ (*Origin of Stories* 92), a complexity which is impossible to inherit

genetically. But we might be born with the basic neural circuitry for these skills that can then be ‘wired’ through experience.

Several of the literary Darwinists introduce the notion of *honing* our social skills and thus improving our ability to navigate in our socially complex reality (and imagination). Indeed, we can all agree that we ‘learn’ and acquire skills throughout life in various areas. And, as Cosmides and Tooby emphasise, ‘the brain must have a certain kind of structure for you to learn anything at all’ (*Evolutionary Psychology* 17). Traits that are not as obviously required for survival and reproduction, such as social interactions, require an elaborate innate circuitry on the same level as seeing or hearing, and the circuits are different for each purpose – in other words, they are specialised cognitive adaptations, designed for particular purposes, and they run into ‘the hundreds and thousands, covering all the important behaviors that helped us to survive and reproduce in ancestral environments’ (Wilson 27). However, this does not mean that all cognitive adaptations must be specialised to be smart – there is more to human evolution than genetic adaptation to ancestral environments. Indeed, if they *were* specialised to be smart, there would be no blind variation to be selected for if it turned out to enhance fitness. Thus, the solution is not that the mind is a blank slate, nor that it consists exclusively of specifically evolved cognitive modules, but a middle ground between the two (Joseph Carroll, “Human Nature” 80-84).

2.1.4 The Adaptive Functions of the Arts

While there is now a relative consensus model of human nature, one element remains partially outside this model, and that is our ‘disposition for producing and consuming literature and the other arts’ (Joseph Carroll, “An Evolutionary Paradigm” 103), and this even though such aesthetically-driven activities are enormously widespread in all cultures and of high significance in ordinary life (Tooby and Cosmides 7). The reason that this element has not yet been fully integrated into the model is that there is widespread disagreement about the notion that the arts have *adaptive functions*, and what those might be, if they do (*ibid.*). Indeed, according to Cosmides and Tooby, ‘almost all of the phenomena that are central to the humanities are puzzling anomalies from an evolutionary perspective’ (7). There have been – and still are – passionate arguments against the notion that they should have adaptive functions. A few of the more lasting arguments are the ones made by Steven Pinker and George Miller. Pinker has argued that art is a coincidental by-product, that it does nothing more than hitting our ‘pleasure buttons’, and Miller has argued that it is a product not of natural selection but of *sexual* selection (Boyd, “Evolutionary Theories” 150; Joseph Carroll, “An Evolutionary Paradigm” 119). Firstly, regarding Pinker’s argument, a concept of the arts as evolutionary by-products that do nothing more than activate pleasurable fantasies does not entirely explain fictional narratives that evoke painful emotions (Joseph Carroll, “An Evolutionary Paradigm” 127), and secondly, regarding Miller’s argument, Boyd suggests that a child’s delight in stories, music, etc. should falsify the sexual selection theory at once (*Origin of Stories* 84). But there are even more convincing arguments in favour of an adaptive function of the arts. And, as Tooby and Cosmides also note, ‘the idea that people listen to stories because they find them interesting is the first step, not the last, in the chain of explanation’ (8). Thus, *why* we feel pleasure when engaging with storytelling and the other arts is the question that needs to be asked.

The interesting aspect, and likely the reason scholars are hesitant to accept an adaptive function for the arts, is that ‘art has no immediate physical function but only an immediate psychological one: to appeal to attention and emotion’ (Boyd, “Evolutionary Theories” 164). It may be hard to imagine how this could be fitness-enhancing in any way, but Tooby and Cosmides argue that for much aesthetic-driven behaviour, ‘the goal is instead to make adaptive changes to the immense and subtle internal world of the mind and brain’, rather than have an external impact (16). To give an example, learning is a continuous organisation of the mind, and we can easily accept that learning – the way we naturally think of it, as acquiring an additional skill or improving an existing one – is a fitness-enhancing adaptive change. Why should this not be true for other psychological functions? Carroll suggests that the desire to create and consume art is aroused by a cognitive behavioural system, in order to create conceptual and imaginative order (“Human Nature” 86). If the arts have a vital adaptive function, then the need to produce and consume them would be as real as the need for food, sex etc. and this need would motivate us towards the ‘fabrication of aesthetic and imaginative artifacts’ – what we know as stories – and we would, Carroll proposes, feel satisfaction in fulfilling this formulation (“Human Nature” 86-87). Our biological need for the above things has resulted in a reward system that consists first of the desire for the thing and second of the pleasure and satisfaction when fulfilling that desire (Joseph Carroll, “An Evolutionary Paradigm” 128). An important point to make in relation to this, is how much time and energy the average human spends on producing or consuming art. This time could be spent instead on something that would more overtly enhance our survival and reproduction chances. In fact, this problem is the crux of the matter: Boyd and Carroll, among others, emphasise that natural selection is ruthless and that a cost without a benefit, a seeming waste of precious resources, would most likely have been ‘weeded out’ by natural selection long ago (*Origin of Stories* 83; “An Evolutionary Paradigm” 119). The fact that it has not, is an argument in favour of the adaptive functions of literature and the other arts. Darwin himself, in *On the Origin of Species*, is convinced that ‘any variation in the least degree injurious would be rigidly destroyed’ and that, metaphorically speaking, ‘natural selection is daily and hourly scrutinising ... the slightest variations; rejecting those that are bad, preserving and adding up all that are good’ (82-84). We can arguably infer that ‘injurious’ in this case is a variation that gives the individual a disadvantage in survival or reproduction, or, perhaps, a variation that takes time and energy *away* from that which gives it an advantage, such as we might imagine the arts and literature do. The arts themselves may not be regarded as being either useful or damaging, but can be viewed as indirectly damaging when considering the energy we spend on them. Unless, of course, the arts have an adaptive function, in which case the time and energy are well spent.

Beyond this, there are two other aspects of the arts that are ‘characteristic, defining features of adaptations’: firstly, they are universally found in human culture, and secondly, the ability to produce and consume forms of art – however varying in quality and skill – develops reliably in all normally developing humans (Joseph Carroll, “An Evolutionary Paradigm” 119). Yet another argument in favour is the complex functional organisation of the cognitive mechanisms that are involved in the production and consumption of art (Joseph Carroll, *Literary Darwinism* 108), and the fact that art stirs strong emotions supports this argument, since emotions are evolved indicators that something matters, biologically, to an organism (Boyd, *Origin of Stories* 69). The most significant problem facing literary Darwinism, then, is not necessarily whether art has an adaptive function, but what that adaptive function *is*.

One of the first to theorise an adaptive function for the arts was Edward O. Wilson in *Consilience: The Unity of Knowledge* (1998). What Wilson argued was the precursor to what Carroll himself theorises in his book *Literary Darwinism*, too – that the arts serve to fill the gap between animal instinct and the incredible possibilities that come with high intelligence (69). Of course, ‘fill the gap’ is too vague to be a convincing hypothesis, but it brings attention to the fact that there *is* a gap – it is essentially a basis on which can be built the detailed design of a theory of the adaptive function of the arts. If we assume that Wilson is correct, then the vital adaptive function the arts fulfil is the bringing together of ‘the forces at work in the environment and inside the mind’ into what Carroll describes as emotionally meaningful relations – something that relating practically useful information alone will not achieve (“An Evolutionary Paradigm” 127). Carroll’s own, more fleshed-out hypothesis argues that the arts produce ‘cognitive order’ - that our disposition for creating art ‘would have solved an adaptive problem that, like art itself, is unique for the human species: organizing motivational systems disconnected from the immediate promptings of instinct’ (“An Evolutionary Paradigm” 122, 126). In other words, art’s adaptive function is to serve as a device of ‘behavioral orientation’ (Joseph Carroll, “An Evolutionary Paradigm” 128), and we (unconsciously) use art to organise the motivational and behavioural systems that subserve our basic instincts. But what exactly is meant by ‘organising’?

2.2 Storytelling

Until now, the focus has been broad and included the other arts as well as literature. For the purposes of this paper, it will now be narrowed down to focus on storytelling in particular. I note that my use of the term ‘storytelling’ encompasses all the ways to tell a story, no matter the medium, and that this includes the forms of storytelling used in our ancestral environment.

We are surrounded by story. We are so deeply immersed in story that we do not even notice it. It is such a large part of our existence that we take it for granted, we do not think about its importance, and consequently we do not fully understand why exactly it is so. In the words of Gottschall, ‘nothing so central to the human condition is so incompletely understood’, and indeed, it is not just a question of story’s existence, which, as Gottschall puts it, ‘is strange enough’, but especially of story’s centrality (*The Storytelling Animal* xiv, 8). He argues that we, as a species, are addicted to story (*The Storytelling Animal* xiv), and Dutton has dubbed this our fiction ‘instinct’ (187) – a fitting description, as ‘will’ has very little to do with what grabs our attention or what we day- or night dream about (Gottschall, *The Storytelling Animal* 4). Most likely, we all think of story as something we hear, watch, or read. Something external, told *to* us, in one form or another. But story is not simply external, it is something we *live* and something we tell ourselves, unconsciously, too. Carroll in particular emphasises that we use story to make sense of the world around us; like other animals, we have physical needs and are prompted by our instincts, but unlike other animals, we ‘create imagined worlds and live in them’ – the physical world surrounding us is always ‘mediated by images and beliefs, dreams and fantasies, ghosts and demons’ (Joseph Carroll, *Reading Human Nature* 273). In other words, we live in the imagination.

A central issue in explaining story is our predisposition for the fictional kind. In Boyd’s words, the mind is a data-gathering system, and we would assume that such a system would nurture an appetite for true stories only (*Origin of Stories* 129). Tooby and Cosmides pull the question of survival in relation to our fiction

‘instinct’ into the picture, when suggesting that ‘if survival depended only on accurate information, then children should pay attention only to factual broadcasts, and parents should only find providing accurate information to their children rewarding’ (12). Indeed, Dutton argues that ‘evolutionary theory would ... have no difficulty in attributing adaptive utility’ to humans only taking pleasure in true narratives, if that was the reality (186). But it is not. Pinker, though generally believing art to be an evolutionary by-product, has conceded that storytelling might fulfil an adaptive function in that it works as a source of information or of lessons in conduct or action that are memorised and stored away to be used in relevant situations (Gottschall, *The Storytelling Animal* 64). Gottschall argues that Pinker’s suggestion is unlikely, because storing specific information and lessons relies on explicit memory, and chances are that the majority do not remember the plots of films and books from years ago in detail, even if they remember that they were affected by them (ibid.). Carroll has the same view, and believes that while the idea has some merits, the same could be achieved in more efficient ways than through fictional storytelling (“An Evolutionary Paradigm” 121), such as simply informing the individual how to behave and what the consequences could be if they did not follow those directions, or by telling true stories rather than fictional ones – in other words, in ways where you would consciously recognise and learn from information. But it is important to note that most of what is going on in our minds is hidden from us, and that ‘the only things you become aware of are a few high level conclusions passed on by thousands and thousands of specialized mechanisms’ (Cosmides and Tooby, *Evolutionary Psychology* 7). Thus, the psychological function a psychological effect fulfils when engaging in stories does not have to be consciously recognised by readers – and Carroll argues that the creation of cognitive order is indeed unconscious (*Reading Human Nature* 153).

Carroll’s argument, and my own, is that we *do* learn from fiction, though not in the sense that Pinker believes. All animals learn from experience. A cat might come across a hedgehog for the first time, and, being curious, goes up to it and tries to play with it. Chances are it will get hurt by the spikes. Not necessarily seriously, but enough to scare the cat away – and next time, it will stay far away from the hedgehog. Humans are not limited by actual experience, but can immerse themselves in vicarious, orchestrated, imagined, or fictional experience instead (Tooby and Cosmides 23). Furthermore, it is not just part of our particularly human nature to produce and consume stories – the stories themselves are also steeped in human nature. Carroll argues that there is a ‘fundamental parallel between the structure of human motives and concerns and the organizing principles of literary representation’ (*Literary Darwinism* 108). The most frequent and important themes and plots concern individual identity, sexual romance, and family (Joseph Carroll, *Literary Darwinism* 109), just as individual identity, sexual romance, and family are central to human existence. In the words of Gottschall and David Sloan Wilson, ‘the problems of survival and reproduction are “on the minds” of all species that have minds and should dominate the stories of the one species that speaks and writes’ (Gottschall and Wilson xxv).

The units that constitute narrative and the rules that combine them have been grouped under the term *story grammar* (Sugiyama 180). The structural components that make up this grammar are universal, as is evident from e.g. translated literature, and have been identified and agreed upon by both literary analysis as well as research in cognitive psychology. According to this story grammar, narrative requires ‘at least one

character, setting, states and events, sequence, causal connections, goal-oriented action, and resolution' (Sugiyama 181).

Related to the structure of story, Gottschall puts particular emphasis on our appetite not only for the fictional, but for the unpleasant or downright scary. In life, it is assumed, we want pleasant and joyful experiences. We want our wishes fulfilled and we want to be happy. Yet if fiction was nothing but a pleasurable fantasy, we would not bother reading it – in fact, we would find it boring. As Gottschall puts it, 'there is a yawning canyon between what is desirable in life ... and what is desirable in fiction' (*The Storytelling Animal* 48), and he is thus in agreement with Ekman, who also emphasises that 'most of us don't want to experience fear, anger, disgust, sadness, or anguish *unless it is in the safe confines of a theater or between the covers of a novel*' (*Emotions Revealed* xxi, my emphasis). The notion of storytelling as escapism is a problematic one as well, as 'fiction may temporarily free us from our [own] troubles, but it does so by ensnaring us in new sets of trouble – in imaginary worlds of struggle and stress and mortal woe' (Gottschall, *The Storytelling Animal* 49). What purpose would this attraction have, if not an adaptive one? Surely, as mentioned earlier, Pinker's argument about our pleasure buttons is inadequate. Negative emotions are a large part of our experiences with narrative and they are an equally large part of our real-life experiences. In the following section on emotions, I will elaborate on the adaptive function of negative emotions in particular, and why they seem to be so prevalent in our lives, compared to more positive emotions, and, hopefully, the importance of gaining experience with them (in the low-risk environments that fiction provides) will become clear.

Relevant for story and its function is our ability to recognise patterns. According to Gottschall, 'the human mind is tuned to detect patterns' in order to 'perceive meaningful patterns in our environments' (*The Storytelling Animal* 103). Those meaningful patterns may help us predict a certain outcome or make better choices that enhance our chances of survival. They register in our minds like cues that might signal a certain situation. For instance, angry facial expressions directed at you from the people around you might signal that you have done something wrong. Those facial expressions are cues that form a meaningful pattern which informs you of the situation, and that pattern could help guide consequent behaviour, perhaps by prompting an apology or a more altruistic approach, to make up for any wrongdoing. In much the same way, our minds take a pattern of events and turn them into a story, e.g. from information we receive. Studies show that we take even random, unpatterned information and almost compulsively weave it into a story (Gottschall, *The Storytelling Animal* 104-105). Boyd also emphasises pattern recognition and its significance; patterns of character, patterns of action etc. set up certain expectations for the development and outcome of a story (*Origin of Stories* 87-90), because we have experience with certain patterns and recognise what they indicate. What this means in practice is that a certain pattern of events may lead us to infer where the plot is going, e.g. a build-up to a climactic conclusion. The same is true for patterns and inference of real-life events, as we will see later in relation to negative emotions.

Furthermore, encountering certain patterns several times results in our knowing them and their consequences better. When experience makes certain situations more familiar to us, it becomes possible to respond to them in ways that demand less of our conscious information-processing and thus less time and energy, leaving more time and energy to process novel situations. Boyd suggests that this is one function of storytelling; giving us experience with social situations, so that we will be able to speed up 'our capacity to

process patterns of social information, to make inferences from other minds and from situations fraught with difficult or subtle choices or to run complex scenarios' (*Origin of Stories* 49). It works like learning to ride a bike, or practicing other similar skills, like karate, playing an instrument etc.; with every practice, the action requires less conscious thought, it becomes easier and practically automatic. When e.g. processing social information patterns becomes just as easy and automatic as riding a bike, we will be able to react more easily and faster to certain clues, which will likely enhance our fitness. Boyd's is a less complete, and in some areas less convincing version of what Carroll, and later also Tooby and Cosmides, argue to be the adaptive function of storytelling, but the basic idea is the same. What Carroll means by literature providing cognitive order, is that it 'provides emotionally saturated images for a psyche designed to assimilate such images and use them for evaluative, affective, and ultimately behavioral orientation' (*Reading Human Nature* 49). The hypothesis that fiction only conveys adaptively important information, as e.g. Pinker suggests, does not identify any adaptive function that is specific to art or literature (Joseph Carroll, *Literary Darwinism* xxi). It makes literature a means to an end, instead of an end in itself. But the idea of cognitive order makes literature the end and explains why we seek the experiences of various types of art just for the pleasure of it.

So, how does this work? How do we get experience from reading about an experience? One chief working hypothesis is that 'when people respond to characters in novels, they respond in much the same way, emotionally, as they respond to people in everyday life' (Joseph Carroll, *Reading Human Nature* 152). In other words, while we do not experience the exact situation ourselves, we simulate it imaginatively and respond *emotionally* to the situation as though we were there, in person. And the emotional response is crucial, as I will return to later. The environment and exact situation are not important to cognitive order, but the simulation of human *experience* is essential; otherwise sci-fi, fantasy, dystopias, and apocalyptic narratives would not have any appeal. In short, no matter the environment, human experience is the same; the characters embody human motives, passions, behaviours etc., even if the plot takes place in outer space or in a supernatural world, which makes even unrealistic stories relatable. Engaging in story becomes a vicarious participation, one that is low-energy and low-risk, but that will give the reader or listener or watcher experience as if they had encountered the situation in real life. You could perhaps liken it to practicing gymnastics at the gym, with a coach and other tools and resources to make sure you are safe while you build on your experience, compared to practicing gymnastics at an actual competition – the competition situation might not happen often enough to build up sufficient experience, and the situation itself is more dangerous and might have a bad outcome the very first time you encounter it. The relation to the enhancement of fitness becomes clearer, however, if we compare it to an encounter with a predator. If you needed to learn how to cope with such a situation by actually *being* in the situation, the chances that you will escape with your life are small indeed. Now, the intensely social nature of the human species means that our social navigation is just as crucial to our chances of survival and reproduction as, say, avoidance of predators. Social skills are of fundamental importance when managing social relationships, and Dunbar argues that maintaining relationships 'of sufficient depth that they can be relied upon to provide unstinting mutual support when one of them is under attack' is at the core of the social structure in primate groups and is thus a 'crucial basis for primate sociality' (Dunbar 186). In the same way as the above examples then, learning by doing in social situations can also get you into serious trouble, so learning by vicarious experience seems a good and logical alternative. It can be likened to a simulator. And, according

to Gottschall, ‘to simulate is to do’ (*The Storytelling Animal* 59). His basis for this is the still relatively new field of research concerned with mirror neurons. Nothing is proven yet, but research suggests, and many scientists believe, that ‘we have neural networks that activate when we perform an action or experience an emotion, *and also when we observe someone else performing an action or experiencing an emotion*’ (Gottschall, *The Storytelling Animal* 60, my emphasis). Gottschall argues that mirror neurons may be the key to our ability to run fictional simulations in our minds, and the reason that we are affected both mentally and physically by stories, and Boyd agrees (*Origin of Stories* 192; *The Storytelling Animal* 61). This ties in with Tooby and Cosmides’ statement that ‘some psychological subsystems reliably react to [fiction] as if it were real, while others reliably do not’ – in particular, fiction engages emotion systems but disengages action systems (8). This selectivity, giving us the full emotional experience while making sure our action systems do not make us flee from the screen when seeing e.g. a predator on TV, suggests that there is adaptive value in engaging one system and not the other when engaging in vicarious experiences. It suggests that there is a *point* in differentiating between the two systems, which further suggests functional design rather than a happy accident. Another feature that suggests functional design is the issue of what Tooby and Cosmides call ‘decoupling’, the protection of our knowledge stores from false information derived from fictional stories. We have the ability to recognise when a story is not ‘true’ and to separate that information and representation from our knowledge about our environment, greatly lessening the risk of misapplying it (19-20). They argue that the decoupling adaptation is designed to prevent data corruption from fictional information and that this implies that there is a particular benefit in being able to entertain fictions (9-10). This decoupled cognition means we know that the potential dangers of a story are not real, and therefore we feel safe, while simultaneously going through the various emotions evoked by the fictional experience as if it *were* real.

To return to Carroll’s cognitive order, it is, simply put, an adaptive need to make ‘sense’ of the world in ‘emotionally and imaginatively meaningful ways’ (Joseph Carroll, *Literary Darwinism* 164). And the adaptive function of cognitive order is, like other evolved adaptations, to enhance our chances of survival and reproduction. We are not born with an innate sense of the world – we make sense of it over time, throughout our lives. Tooby and Cosmides argue that this is because we are not born with ready-made, fully developed cognitive adaptations; rather, the brain’s adaptations need to be matured by the input they receive, input that Tooby and Cosmides argue is in the shape of emotional experience. They propose two modes for these adaptations: an organisational mode and a functional mode. The organisational mode is where the adaptive brain circuitry is being organised and constructed, through the help of what they have termed ‘developmental adaptations’, and the functional mode is where the adaptation is performing its evolved function (15-16), i.e. helping us to react to situations in a way that is fitness-enhancing. It is exactly this, *readying* the brain’s adaptations to perform their fitness-enhancing functions, that Tooby and Cosmides argue to be a ‘vastly underrated adaptive problem’ (14). Our cognitive inheritance comes equipped with many practical functions, but ‘does not supply very much information about [humans themselves], or how they interrelate to each other or to the world’ (Tooby and Cosmides 23). That is information we need to get through external input, and according to Sugiyama, this information is of great importance, as ‘a deep and broad understanding of human nature can greatly improve an individual’s survival and reproduction prospects’ (188). We all must recognise that we are not born with theory of mind, and that we are not born with our acute sensitivity to the actions,

reactions, and intentions of the people around us. Instead, our understanding of the world around us matures with time. What we *are* born with, are specialised neurocognitive systems that can be developed and become even more finely tuned with time and experience. What Tooby and Cosmides' theory suggests, is that the circuitry itself is innate, but that it is 'wired' through external input. It is the same argument that goes for language and Universal Grammar; that we are born with an innate faculty for language, but that it can only develop when exposed to external input, which will organise the language circuitry according to the syntactic rules of that particular language (Pinker). This allows the language faculty and other complex adaptations 'to be far more elaborate than could be managed if all the necessary information had to be supplied by the genome' (Tooby and Cosmides 15). In order to guide our attention towards relevant external input, Tooby and Cosmides expect that 'humans have evolved motivational systems that are designed to find rewarding the kinds of actions and experiences that would have been adaptive for our ancestors' (13-14). Thus, when something holds our attention, and we experience related emotions, they argue that it is our adaptations working in their organisational mode (17).

The abovementioned motivational systems guide our attention. Boyd's theory of the adaptive function of literature and the arts stresses exactly that: *attention*. He argues that we have evolved to learn from and share attention, and that we come into the world prepared especially for this, as when children imitate the facial expressions of the adult (usually the mother) holding its attention (*Origin of Stories* 40). It is, in fact, the very first thing we learn – to pay attention to our surroundings – and social attention is an important human characteristic. Boyd states that even though apes note where others look, only humans track eye gaze as well as head movement (*Origin of Stories* 97). And we do it for the rest of our lives. Elsewhere, Boyd argues that the development of our particular social attention led to the development of behaviours that focus on 'directing attention and engaging emotion for its own sake' ("Evolutionary Theories" 152). He does not believe in the theory of cognitive order, or the organisational modes Tooby and Cosmides suggest, however. He argues that the organisational mode they propose would mean that the interest in the arts should wear off when the mind has been organised, which he assumes happens at a certain point ("Evolutionary Theories" 169). But it can be argued that he has misunderstood the use of the word 'organisational', or else he has misunderstood the mind. As Tooby and Cosmides state, we use external input to create cognitive order *continuously*. The mind is never done being organised, we constantly receive new input that needs to be put through our cognitive organisational machines (Tooby and Cosmides 25). In opposition to Boyd, I further argue that a theory that stresses attention does not necessarily exclude the theory of cognitive order – and vice versa. In fact, they may be more closely linked than either Carroll or Boyd believes. A hypothesis could be that our motivational systems, designed to make us focus on what is adaptively valuable, guides our attention toward experiences that will provide cognitive order.

Tooby and Cosmides group fictional experience and pretend play under 'aesthetic activities' (16). They are behaviours that may seem purposeless, but which are in fact being driven by adaptations operating in their organisational mode. The organisational mode of each adaptation has an aesthetic component, and this aesthetic component is what drives our behaviour towards a goal of making adaptive changes in the internal world of the mind and brain – an argument that, Tooby and Cosmides suggest, can solve the puzzle of how natural selection built complex systems to produce 'pointless' behaviour (*ibid.*). Darwin, too, makes a point of

arguing that what we, as humans, may regard as a feature of trifling importance (in any species), is perhaps essential to the survival of that species (84). Storytelling might be just such an essential feature.

So, what does motivate us? What does it mean that the motivational systems find certain behaviour rewarding? Emotions is the short answer. Emotions indicate that something is important, and, most importantly, emotion directs attention (Boyd, *Origin of Stories* 362). Our motivational systems, our emotions, drive our attention and behaviour towards that which has adaptive value – and our emotions are very much driving us toward stories. In the words of Tooby and Cosmides, ‘natural selection ... seduces you into devoting your free time to these improving activities by making them gratifying’ (16). Stories give us joy, but it is not obvious they *should* give us joy. So it is the joy – or rather, the emotions – of stories that is the riddle (Gottschall, *The Storytelling Animal* 23-24), and the exact same that might prove that storytelling indeed has an adaptive function.

2.3 Childhood

We are bipedal, but with very large brains proportional to body size, compared to other primates. Our upright posture resulted in a narrowed birth canal, through which our equally large-brained offspring needs to be pushed through. In order for the head not to be too big, and potentially kill the mother, human infants have to be born at a stage in their development where they are virtually helpless. They are therefore ‘heavily dependent on parental care for much longer than other animals, and they have, further, a greatly extended period of childhood development’ (“An Evolutionary Paradigm” 112). Consequently, there is protracted parental care in our species, which further means that there is a relative security for offspring in being in the presence of parents (Boyd, *Origin of Stories* 91); in the human case, both mother and father are involved in caring for the young. Scientifically speaking, the period of childhood development is the period previous to reproductive maturity (Joseph Carroll *Reading Human Nature* 15). The successful care of offspring will result in children that, when grown, are capable of ‘forming adult pair bonds, becoming functioning members of a community, and caring for children of their own’ – this long period of childhood development serves as time where they can develop and hone the social skills that the complex social environment of the human species requires from them (Joseph Carroll, “An Evolutionary Paradigm” 112, 114), and this is where the relative security of being cared for by parents becomes important. One way they achieve this skill-honing is through play. More specifically, pretend play. As Boyd notes, ‘play is widespread among animals, but *pretend* play appears to be an almost exclusively human activity’ (*Origin of Stories* 181, emphasis in original). Children begin to understand the rudiments of social relationships in roughly their second year. By four or five years old, they have developed a human Theory of Mind (Boyd, *Origin of Stories* 328-329). As their theory of mind continues to develop, they ‘learn subtler ways of extending and linking events by incorporating aims and intentions, then feelings, then even beliefs ... into their play, their own stories’ (Boyd, *Origin of Stories* 186). When pretend playing, children construct imaginary scenarios, and they do this without training, both alone and in company. They ‘begin to understand imitation *as* imitation or representation through play, like the exaggerations of mock chase and peek-a-boo’ (Boyd, *Origin of Stories* 162) – in other words, they develop and successfully employ what Tooby and Cosmides termed ‘decoupling’. What is essential to note here, is that ‘almost no one thinks that children’s pretend play is some sort of random accident of human evolution’ (Gottschall, *The Storytelling*

Animal 41), on the contrary, most experts believe that play is *for* something, exactly as all our different body parts and behaviours are also *for* something – and what it is for, is practicing for adult life by building social and emotional intelligence (ibid.).

Boyd argues that art derives from play. Tooby and Cosmides agree, noting that ‘from a cognitive ... point of view, [pretend play and adult involvement in fictional worlds] seem to be fundamentally the same activity’ (10). If storytelling is mental pretend play, is it not likely that it is *for* something, as well? Related to the input argument in the storytelling section, Boyd’s argument is that ‘play solves the new problem that if organisms need to *learn* flexible behaviors, they cannot come fully preloaded’ (*Origin of Stories* 324, emphasis in original), and Boyd suggests that art solves a similar problem, in that most of our advantages as a species are to be found in our intelligence, and thus ‘our minds solve the new problem of maximizing their capacity to process information patterns in flexible ways, in low-risk situations, through the cognitive play of art’ (*Origin of Stories* 325). By new problem, Boyd means a problem that arises from the creation of a solution to another problem. In the case of play and art, it is a problem that arises from our minds having evolved in a way that makes us capable of making better choices for future actions, primarily by predicting on the basis of relevant patterns (*Origin of Stories* 324), as mentioned in the Storytelling section.

Dutton emphasises that our attraction to story emerges spontaneously in all normally developing children in ways ‘that are already so logically complex even in children’s play that they require an explanation in terms of innate capacities’ (193). In short, children instinctively play at story. Gottschall goes as far as saying that ‘story is so central to the lives of young children that it comes close to defining their existence’ (*The Storytelling Animal* 7). His notion is a condensed version of what Tooby and Cosmides state as well: that the payoff of engaging in aesthetic activities such as storytelling and play should be even more rewarding earlier in the lifecycle (that is, in childhood), because the child’s neurocognitive adaptations are less developed and competing opportunities are lower (17). In short, they are relatively safe to gain experience, and therefore that is what they do, as much as possible.

2.3.1 Children’s Literature

Working with children’s literature requires, to some extent, a basic understanding of what exactly that term entails. So, what exactly is children’s literature? It seems at first sight to be a simple enough definition: children’s literature is books written for, and read by, children. But how do we then define the books that are supposedly ‘adult’, but are also read by children, or the ‘children’s’ books that are also read by adults? (Hunt 4-5). What it really comes down to, is our concept of ‘children’ and ‘childhood’, which is difficult enough in itself: it differs between cultures and *in* cultures, from family to family, and it changes over time. It is, in modern times, especially associated with innocence and a lack of responsibility, but the most useful definition would, in Hunt’s words, be ‘that children are people whose minds and bodies have not yet matured in various definable ways’ (5). Lukens makes the same point, and argues that children ‘are different from adults in experience, but not in species’, and therefore it is a matter of difference in degree and not in kind – and their literature, too, should be different in degree, rather than kind (9). Because of this difference in experience, expressions of complex ideas need to be simpler, in both language and form, for most children to be able to understand them (ibid.), leading to a form of literature that is largely defined as a genre for children, and that

has, as a consequence of this simplicity, been considered unimportant and ‘low-brow’ and is still today mostly ignored by anthologies of national literatures (Mickenberg and Vallone 7).

The idea of childhood innocence is a modern phenomenon. Mickenberg and Vallone emphasise that ‘until relatively recently, most children were not shielded from sex, death, or other realities’ (15). Indeed, they were expected to work and add to the family income as soon as they were able (*ibid.*), something that might seem outrageous to us now, but may not seem so out of place or even cruel when imagining children in hunter-gatherer societies (both modern and ancient). You would probably not be surprised, or even indignant, if the children worked with the adults to prepare food, or make tools, or improve the camp, or, when able, hunted with them, too. The difference, perhaps, is that we do not consider this ‘work’ but a part of their particular lifestyle. But the crucial point is that children in these societies are and were not shielded from any unpleasant realities of their existence. Indeed, the argument of this paper implies that we are doing them a disservice if we do *not* let them gain experience with negative emotions of any kind. Furthermore, childhood itself as a concept is also a fairly new one. When it came into being, around the mid-nineteenth century, it was something only the middle and upper classes could ‘afford’ – the children of the lower classes had to work to sustain the family, and thus there was no particular ‘split’ between the adult and the child, but more of a gradual development (Hunt 176).

In the early nineteenth century, when books began to be made with a child audience in mind (and to some extent their parents), they were steeped in conservatism and often showed children as they ‘should’ be, rather than as they were. The change from this was slow, and there was an evident struggle between pleasing adults and pleasing children (Hunt 46-47, 50). From the mid-nineteenth century, literacy grew, and the industry of popular literature expanded. ‘Writers were responding to a redefined childhood, one that required a distinctive literature’, and the scene was being set for what has been termed the ‘golden age’ of children’s literature, generally regarded as being the period between 1860 and World War I (Hunt 58). In this period, children’s books became more complex, with any didactic intent being a second priority to entertainment, families became smaller and more stable, and fantasy, mystery, and imagination entered children’s books (Hunt 59-61). The period between the wars was a period of contrasts, but it was also in those years that ‘the tone of voice, the mode of telling, and the narrative contract between narrator and implied child reader ... that we recognize today were fully established’ (Hunt 104, 106). The second half of the twentieth century, from World War II and onwards, saw ‘children’s literature established as a major commercial area of publishing’, and there was, once again, a strong trend towards fantasy (Hunt 127, 134). The current picture of the field, writes Hunt in 1994, shows a ‘spectacular range, from the formulaic to the metafictional’ (152-153), but despite this range, made possible by its commercial success, the children’s book is still haunted by its association with innocence and ‘appropriate’ material, giving rise to e.g. movements by parents and other worried adults to ban certain books from children’s sections at libraries or from school curriculums for various reasons. There have been plenty of exceptions throughout the history of children’s literature, of course, not least some of the books chosen for this paper. But an overview gives us a good idea of the general attitude towards children and childhood.

It is usually obvious to most people when a book is a children’s book, and thus ‘it seems equally obvious that there must be some textual characteristics that the books all share’ (Hunt 12). I argue that these

characteristics usually add up to what Hunt would refer to as a certain simplicity of ideas and of language and form, as mentioned above. In relation to this, Hunt also states that the tone or the features of a book will imply the reader's knowledge or maturation level (ibid.). What he means to say is that, from a literary viewpoint, 'we need to distinguish children as *developing* readers – that is, in terms of experience of life and books they have not reached the theoretical plateau upon which mature readers can be said to operate in mutual understanding' (Hunt 5, emphasis in original). Indeed, from the standpoint of evolutionary psychology, Cosmides and Tooby argue that one would expect 'organisms to have mechanisms that are adapted to their particular life stage ... after all, the adaptive problems an infant faces are different from those an adult faces' (*Evolutionary Psychology* 17). So, when talking about the implied child reader in the analysis, I talk in terms of 'maturity'. It is thus not necessarily a question of age but rather of maturity, in terms of theoretical and emotional understanding, and consequently, what degree of complexity the reader is expected to understand when engaging with a given story.

Chapter 3

3.1 Emotions and Human Nature

In the evolutionary context of this paper, it is not enough to list the emotions and what may trigger them (in real life and in stories). We need to understand their evolved function to also understand the part they play in human nature. Emotions are a part of human nature, in the sense that they have evolved through natural selection. Evolution has selected for fitness-enhancing emotions, and that fitness-enhancement consists of driving the organism towards an adaptive behaviour. As Barr-Zisowitz notes, thinking in Darwinian terms of the function of emotions is that they enable and motivate us 'to respond adaptively' (607-608). You could think of it this way: we need to behave or respond in a certain way to certain situations or encounters in order for them to fall out in our favour, and how do we ensure that that behaviour or response enhances our chances of survival and reproduction? Well, by having adaptive mechanisms that can motivate us to behave or respond in the favourable way. Emotions do that. As Boyd emphasises, emotion is evolution's way of indicating importance (Boyd, "Evolutionary Theories" 161): emotions are telling you that it is important to pay attention to this situation, and that a response or behaviour is needed, and what that response or behaviour should be. In short, 'an emotion is the mode of operation of the entire cognitive system' (Cosmides and Tooby, *Evolutionary Psychology* 22).

A rich theory of emotions is provided by evolutionary psychology. As mentioned earlier in the paper, evolutionary psychology aims to 'map' human nature (Cosmides and Tooby, "Evolutionary Psychology" 91), and there is widespread agreement that our emotions are an essential part of our human nature. What is particularly interesting about emotions, is that they can override what has been considered the more powerful fundamental motives of the human (or rather, the animal) condition: hunger, sex, and the will to survive (Ekman, *Emotions Revealed* xxi). This poses an adaptive problem, according to Tooby and Cosmides, and they argue that there must be 'superordinate programs' that coordinate the different components, so they are activated or deactivated at the right time – emotions are, they believe, such superordinate programs (Cosmides and Tooby, "Evolutionary Psychology" 92). What this means, in practical terms, is that an emotion will entrain

and orchestrate other adaptive programs in order for the organism to respond or behave adaptively to a specific situation that has triggered that particular emotion.

Repeated encounters with a certain situation (say, predator attacks) in hominid evolutionary history ‘selected for adaptations that guided the information processing, behaviour, and the body adaptively through the clusters of conditions, demands, and contingencies that characterized that particular class of situation’ – those selected adaptations being the abovementioned superordinate programs, that is, emotions (Cosmides and Tooby, “Evolutionary Psychology” 92). If a given situation then exhibits a structure, if you will, that is repeated over evolutionary time, then the statistical properties of this situation ‘will be used as the basis for natural selection to build an emotion program whose detailed design features are tailored for that situation’ (Cosmides and Tooby, “Evolutionary Psychology” 101). This becomes a bit technical, but in practical terms it means that recurrent encounters with large predators, for instance, drove natural selection to build an emotion program (the fear program in this instance) that is tailored to recognise and respond to large canine teeth or long, sharp claws, as they are cues that signal the presence of a predator. In other words, the emotion program will respond to certain cues or triggers in the environment that signal a certain situation and will motivate the organism to respond appropriately.

The psychologist Paul Ekman has done extensive studies on emotional expressions and the universality of emotions, and he argues that there are some emotions that are ‘basic’. His list of basic emotions consists of seven: joy, surprise, fear, anger, contempt, disgust, and sadness. The term ‘basic’, among other things, indicates ‘that there are a number of separate emotions, that differ one from another in important ways’ (“Basic Emotions” 45). That is, they are not just versions of the same emotion that vary in intensity, such as sadness and anguish. The second meaning of the term is that ‘emotions evolved for their adaptive value in dealing with *fundamental life tasks*’, fundamental life tasks being universal human predicaments (Ekman “Basic Emotions” 46, emphasis in original). Ekman’s presumption is that emotions evolved to deal with inter-organismic encounters, and that their primary function is to prepare and mobilise the organism to deal quickly with such encounters. He argues that certain characteristics not only show this function, but also define which emotions are basic and distinguish them from each other. These characteristics, among others, are: distinctive universal signs that will inform conspecifics of what is occurring; physiological changes that prepare the organism for different responses relevant to different emotional states; an automatic appraisal mechanism that attends to stimuli that will occasion one or other emotion; and universal commonalities in emotion antecedents (“Basic Emotions” 47-56).

The automatic appraisal mechanism is worth a closer look in relation to the main argument of this paper. In order for the central mechanisms that guide our emotions to automatically appraise a situation, there must be stored, in a sense, in these mechanisms instructions for the guidance of response and behaviour, instructions that, Ekman and Cordaro argue, reflect both ‘what has been adaptive in our evolutionary past, and our own personal history’ (366). They describe the central mechanism that directs emotional behaviour as an ‘affect program’, and they further distinguish between what is called open and closed genetic programs. In open programs, input is ‘allowed’ during the life span of that particular organism – that is, something can be inserted into the behavioural system by *experience*, while closed ones are exactly that: closed for input or learning (Ekman and Cordaro 367). The proposed language program is an example of an open program. When saying

that the affect program also consists of instructions that have been adaptive in our own personal history, Ekman argues that this program is an open one, allowing useful input continuously. This means that we have emotional responses linked to our evolutionary past, such as being afraid of snakes (even if you live in a country with no snakes, or with snakes that are not deadly), while *also* having emotional responses that are linked to our own personal environment, such as being afraid if a gun or another modern weapon is pointed at you – it happens just as involuntarily and without thought as the ones linked to our evolutionary past. These latter responses Ekman terms ‘learned responses’ (Ekman and Cordaro 368). In relation to learning from input, Cosmides and Tooby argue that emotions are a part of a recalibration of subsequent choices: the reason emotions in some cases last longer, or recur with images of a certain situation over time, may be that the mind is replaying the situation, ‘running it through various decision rules and inference procedures’, as it recalibrates or continuously learns from the experience (“Evolutionary Psychology” 111). It is important to note that emotional *responses* and emotional *behaviours* are learned – the emotions themselves are not. That is what lies in the notion of them being basic: they are universal, a part of human nature, and thus ‘prewired responses to a set of stimuli’ (Ekman and Cordaro 369).

3.1.1 Negative Emotions

Looking at the list of Ekman’s basic emotions, it is clear that there are more of what we would consider negative emotions than positive ones. Even surprise can be argued to be somewhat of a mix. The reason for this is that negative emotions evolved to protect organisms from harm, and thus have been more directly important to our survival. That is the reason we are such fearful creatures – because, in the words of Clasen, given that the ancestral environments teemed with danger, ‘a fearless hominin in ancestral environments would soon be a dead hominin in ancestral environments’ (*Why Horror Seduces* 24). Indeed, the thing to note about hunter-gatherer societies – both modern-day and ancestral ones – is that ‘very few individuals die from sheer old age’, but rather from diseases, accidents, and violence and predation (Clasen, *Why Horror Seduces* 25). Avoiding these things was, and is, at the top of the human to-do list. And if we assume that the argument of learned emotional responses and behaviours is correct, it makes good sense to practice our negative emotional responses, even from an early age – it may enhance our chances not only of survival, but also of reproduction.

Related to this is the earlier mentioned fact that humans are not limited by actual experience. As Clasen notes, ‘a paradoxical aspect of our big brains and our uniquely developed imaginations is that we face not only real and plausible dangers, but also imaginary ones’ (*Why Horror Seduces* 23). But practice through fiction, including imaginary dangers, is low-risk, low-energy, and even enjoyable. According to Clasen, the negative emotions we feel when engaging in fictional representations are modulated by higher cognitive functions that are younger, evolutionarily speaking, than e.g. the fear module, and which tell us that there is no real danger (“Evil Monsters” 42). And when there is no real danger, ‘fear blends with fascination’ (ibid.). Ekman himself mentions that there are instances of enjoyment in relation to negative emotions, for example thrill seekers walking on a line between buildings or jumping out of airplanes, or perhaps the pride you may feel in your contempt towards someone else, and that they for this reason perhaps should not be called *negative* emotions (*Emotions Revealed* 158). I will argue, however, that these feelings of enjoyment of negative emotions are examples of hybrids or of the slower, cognitive appraisal of a situation rather than pure emotions. Of course,

what we feel are often hybrids, because emotions can occur in rapid succession of each other. But the pure feeling of fear, for example, perhaps when standing face to face with a predator, is not enjoyable. Below, I will briefly account for the evolutionary function of the five negative emotions that will be used in the analysis, as well as the stimuli that trigger them and the behaviour elicited by them. The purpose of this paper is not to determine which emotions are basic, however, or to review the literature in the field. Indeed, it is not essential to the main argument that the negative emotions felt are basic at all, in the sense that they are distinguishably different from other emotions (though it *is* essential to the argument that they are basic in the sense of having evolved for their adaptive value), but they provide a convenient base for an analysis. Thus, for the sake of the following analysis of negative emotions in children's literature, the five negative emotions identified by Ekman as basic and distinguishably different will be considered as such here, including the challenged emotions of contempt and sadness.

3.2 Analysis

The children's books used in my analysis were chosen based on the general and widespread agreement that they are – or are on the brink to become – children's classics, and thus represent, albeit a fraction of, what children (and their parents) have read and are still reading. I further aimed to include books from different time periods, starting with *Alice's Adventures in Wonderland* from 1865 and ending with *Harry Potter and the Philosopher's Stone*, published in 1997. A number of children's books are also series, as are three of the ones chosen here – in those cases, I have focused on the first book, due to space constraints, and because the first book illustrates my point as well as the rest of the series would have done. Only once do I draw on another book in the series, in order to include a specific example related to sadness.

Classic children's books are, in a way, the ones that have received a 'stamp of approval' from parents and critics alike. They are largely regarded as suitable and appropriate reading for children, with suitable and appropriate elements. They are also largely regarded as delightful reads that spark children's imagination, entertaining and instructive both, and most important of all, they are not seen as disturbing to the child reader. Adults think of Wonderland or Neverland or all the other -lands as happy places where children go to find adventure. The truth is, however, that these worlds are rarely *just* happy places. Many of us probably think of Wonderland as a wonderful place. Whimsical and silly, certainly, but generally curiously interesting and perfect for joyful exploration. But if we look a little closer, Alice does not, in fact, have many happy experiences while down in the rabbit-hole. The closest we get to a somewhat happy feeling is perhaps puzzlement. Otherwise she is either anxious, afraid, angry, irritated, indignant, disgusted, and many other not-so-happy things. The same is true for Peter Pan's Neverland: children die, pirates die, faeries die, and battles and hunts are genuine and frightening. Charlie's chocolate factory is not as happy as it seems, either: the children disappear, due to their bad behaviour, and while they come back in the end, it is in altered forms – punishments befitting their 'crimes'. The slightly more mature children's books do not get happier. Narnia is a wonderful and magnificent place, but an evil witch (who has killed her entire own world) has entered and eats from the forbidden tree and will take over the land eventually – not to mention that back in 'our' world, the main character's mother suffers from a terminal illness that haunts the boy throughout the first story. The world of Lyra in *Northern Lights*, with its dæmons and witches and *panserbjørne*, is as dangerous as any other:

children are kidnapped and experimented on, people are killed on their way to rescue them, and Lyra's own parents cause terrible things to happen to her and others for a 'greater good'. And finally, Harry Potter's wizarding world, a place modern children (and adults) associate with magic and marvels, is fraught with dangers, impostors, bullying professors, sinister secrets, and of course the threat of its great villain, Voldemort. To sum up, a children's book is not necessarily always a happy place and embedded in the argument of this paper is the notion that indeed it should not be.

Before beginning the analysis, I will emphasise, once again, that fiction serves as vicarious experience. This means that it is not things that are done to *us* that will trigger certain emotions, but things that are done to, or happen for, the characters in the story – thus, our fear is *for* them, our anger is *for* them, and so on, but in feeling and intensity it is the same as if we experienced it in real life. Sometimes the emotion that is evoked in us will correspond with the one shown in the character we empathise with, but it is equally possible that it will not. William Flesch talks of 'volunteering affect' for a character, in this regard (364). But we do not 'volunteer affect' for just any character: because of the prosocial disposition of the human species, we approve of and reward altruistic behaviour while we generally condemn and punish selfish behaviour. Consequently, in fiction we also 'like characters who engage in effective altruistic behavior and we dislike their opposites' (Flesch 361). Protagonists are generally portrayed as being prosocial, and therefore they are the ones we sympathise with. It is perhaps important to note that altruistic behaviour not only means behaving generously, but also punishing those who defect from altruism (*ibid.*). The analysis has been divided into the five basic negative emotions for the sake of simplicity, and an example of each emotion has been chosen from each book to illustrate the theory.

3.2.1 Anger

Anger is one of the earliest appearing emotions. It appears spontaneously in infancy, is universal, and has a species-typical neural basis. In short, it is part of 'the basic biology of the human species' (Sell et al. 15073). But why do we feel angry? What is the evolved purpose of anger? One theory is that it evolved as a tool to guide behaviour in situations of social conflict. Sell et al. hypothesise that bargaining tactics employed by the 'anger program' are used 'to resolve conflicts of interest in favor of the angry individual', and that the emotion is produced by a neurocognitive program that has been engineered by natural selection (15073). As Carroll notes, 'conflict is integral to the whole Darwinian conception of natural relations' (*Reading Human Nature* 46), but so is cooperation. The cooperative relationships of humans are more numerous, more intense, and more enduring than most other species, and therefore 'traditional models of animal conflict must ... integrate a parallel cooperative dimension' (Sell et al. 15074). Indeed, Cosmides and Tooby argue that 'in categorizing social interactions, there are two basic consequences humans can have on each other: helping or hurting, bestowing benefits or inflicting costs' (*Evolutionary Psychology* 18). Sociality, cooperation, and inclusive fitness entail WTR: welfare trade-off ratio. It is a term that signifies how much weight is placed on the welfare of the other compared to the self. Increasing others' WTR towards oneself is, of course, fitness-enhancing. Sell et al. argue that anger orchestrates behaviour in the angry individual that will motivate the target to increase the weight he or she puts on the welfare of that individual (15073).

What this means, is that when the anger program detects that another individual is not placing sufficient weight on the welfare of the actor, it triggers anger. The program can react in two ways: it can either deploy the negotiating tactic of inflicting costs (aggression) or it can withdraw or downregulate the target's benefits (i.e. the benefits that the target receives by being in a valuable relationship with the actor) (Sell et al. 15074). In other words, the point is to communicate to the target that they will be worse off if they continue their behaviour. When it will be more costly for the individual to experience the consequences of the actor's anger than it would be to increase his or her WTR towards the same, it is expected that 'the target's motivational system should increase its WTR toward the actor' (Sell et al. 15074). In other words, the individual will look to enhance its own fitness, and will behave in a manner that appears to be most beneficial. If an actor's anger leads to the individual being hurt, for example, it might be more beneficial to increase the WTR towards the actor instead. Ekman states that one of the most frequent causes of anger is 'someone interfering with what we are intent on doing', and he argues that frustration with objects as well as people, a threat of harm, a rejection, another person's anger – in short, all the things that may provoke your own anger – 'are all variations on the interference theme' (*Emotions Revealed* 110). It could be put this way: what you are intent on doing, your goal, so to speak, is likely fitness-enhancing for yourself. Interference with this goal shows that the other has a low WTR toward you, which will trigger your anger and consequently a behaviour that will, hopefully, increase that person's WTR towards you. Hopefully that will lead to less or no interference, in order for you to continue pursuing what enhances your own fitness. In view of this theory, it would make good sense for natural selection to favour the evolution of the emotion of anger.

When engaging in story, certain actions by characters or certain events interfering with the goals of the characters we empathise with can evoke anger in the reader. A good example of this is the scene in *Harry Potter and the Philosopher's Stone* where Harry receives his very first letter from Hogwarts. Because he has never received a letter before, his cousin, Dudley, immediately becomes suspicious and tells his father. Vernon, intent on keeping the secret of Harry's identity, snatches the letter from him and refuses to give it back. Harry, though not realising exactly what Vernon has taken from him beyond that it is a letter addressed to him, becomes angry, and shouts that he wants the letter, "as it's mine" (Rowling 30-31). Harry is portrayed as a prosocial character throughout the story, while the Dursleys are portrayed as very selfish characters. This automatically makes Harry the protagonist, and the one the reader feels for. The interference here is very clear; Harry wants to read his letter, Vernon refuses to let him. The reader, who is rooting for Harry, becomes angry, too, as Vernon interferes with *their* wishes for the character. Harry uses his anger and the argument of his ownership of the letter as negotiating tactics, but Vernon is clearly stronger and has motives of his own. Harry and the reader want Vernon to increase his WTR towards Harry, so that he will give him back his possession, but it clashes with Vernon's own idea of what is fitness-enhancing for *him*, and thus Harry fails to negotiate the situation in his favour.

A different version of the interference theme is seen in *Alice's Adventures in Wonderland*, in a scene where Alice talks to a caterpillar on a mushroom. She is attempting to be polite and answer the Caterpillar's questions, while also trying to explain her predicament and confusion as to who she is. The Caterpillar, however, keeps disregarding her answers, making short remarks, and contradicting her, while also posing new, puzzling questions, and we feel Alice's anger starting to rise as the narrator tells us 'she had never been so

much contradicted in all her life before, and she felt that she was losing her temper' (Lewis Carroll 42-46). Indeed, the reader likely feels their own anger stirring, as Alice's intentions to explain herself are prevented. It is clear that the Caterpillar's WTR towards Alice is not very high; what she says seems to have no value to him at all. Alice's, and the reader's, anger is likely a response to a wish to increase his WTR towards her, which might result in his help. But she keeps her anger somewhat in check and rather argues with a slight irritation instead, and she ends up getting his help after all – though it is not entirely clear whether this is just because the Caterpillar felt like it, or because Alice manages to increase the WTR towards her.

The third example, from *The Magician's Nephew*, the first book (in reading order) in *The Chronicles of Narnia*, is a more serious interference. The boy Digory and his friend Polly have been shut in the study of his Uncle Andrew, by and with the uncle himself. Uncle Andrew tricks Polly into touching a magical ring that makes her disappear right in front of their eyes. He proceeds to explain to Digory how the ring has sent her to another world, and Digory first gets angry that he has sent her somewhere she cannot get back from herself (Lewis, "The Magician's Nephew" 21-22). This first part is an interference with the bond of a friendship, and the reader is as angry as Digory that the uncle has done this to his friend and to himself to further his own cause. Uncle Andrew then explains that Polly can come back, if Digory goes where she went to bring her a magical ring to return by, and thus the second interference is with Digory's *own* intentions of staying safe in his own world. Digory's reaction likely mirrors that of the reader: "By gum," said Digory, "don't I just wish I was big enough to punch your head!" (Lewis, "The Magician's Nephew" 23). The uncle's WTR towards the two children is obviously very low: he 'sacrifices' them to serve his own needs, and his hopes that they will return are not for their sake but his own. Our anger is a response to this, in this case a negotiation tactic to increase the WTR in order for the uncle to at least feel remorse, if it is not possible to reverse what has happened, and to change his future behaviour to be more considerate of those 'beneath' him.

We come upon a similar situation in *Peter Pan*, when Wendy and her brothers have flown to Neverland with Peter Pan, but have been separated in the air. Tinker Bell is supposed to be guiding Wendy, but she is extremely jealous of Peter's fascination with her, and she comes up with a plan to get rid of her. As readers, we are wholly on Wendy's side, who is a prosocial protagonist – and somewhat on Peter's side, as well, though those sides sometimes clash. Peter is both prosocial and selfish, dependent on the situation, so our affect for him varies with every situation, too. So when Tink calls to the Lost Boys and says "Peter wants you to shoot the Wendy" (Barrie 92), we are at first horrified. But when it becomes clear that Wendy survived, and Tink is crying because she is not dead, our horror turns to anger – as does Peter's. He reacts by telling her: "I am your friend no more. Begone from me for ever" (Barrie 99). Peter is angry, because Tinker Bell has interfered with his plan to keep Wendy as a mother for him and the Lost Boys. We, the readers, are angry, because the intention was to interfere with her reaching Neverland *and* to end her life (which, it can be argued, is a strong form of interference in itself, as her 'fitness' would then be non-existent), showing that Tink's WTR towards Wendy is practically non-existent. Our anger here, like in *The Magician's Nephew*, reflects an unconscious wish for Tink to feel remorse and to change her behaviour in the future.

As Ekman says, rejection or frustration with another person are also variations of interference and can trigger anger. We see a form of rejection that sparks anger in *Northern Lights* when Lyra finally reaches Lord Asriel, a man who she has always known as her uncle but has recently learned is actually her father. She has

gone through a dangerous journey because of her wish to rescue him and her friend, Roger. Lyra ‘scolds’ him, and says that he should have told her, that it was cruel, and asks what difference it would have made had she known. Lord Asriel answers: “I don’t think I want to be interrogated and condemned by an insolent child” (Pullman, *Northern Lights* 366), and Lyra bursts out, close to tears: “I brought you the bloody alethiometer, didn’t I?” and continues her angry outburst: “You en’t my *father*. My *father* wouldn’t treat me like that” (Pullman, *Northern Lights* 366). Asriel continues his cold indifference, saying that if she is going to be sentimental, he will not waste his time talking to her, and Lyra finally states that he can take his ‘bloody alethiometer’ and she will go back with the armoured bear (Pullman, *Northern Lights* 366). Feeling for and with Lyra, we are equally angry at Asriel’s behaviour towards her. His responses indicate that he does not consider her welfare to be of a high priority, and Lyra’s, and the reader’s, anger reflects a wish to increase this consideration – a wish that is perhaps even higher than it would normally be, because the person rejecting her is her father.

In *Charlie and the Chocolate Factory* we experience an *attempt* at interference with achieving a goal; Charlie’s goal of getting a golden ticket and visiting Mr. Wonka’s Chocolate Factory. Charlie is in a shop and has just opened a chocolate bar containing a golden ticket. Soon crowds gather around to see, and before very long, some individuals start to offer Charlie things and money in exchange for the ticket: “I’ll buy it from you. I’ll give you fifty pounds. How about it, eh? And I’ll give you a new bicycle as well. Okay?” says one man (Dahl 65). A woman offers him two hundred pounds. Charlie seems much too overwhelmed to respond to any of this, but the shopkeeper then interferes and shouts: “That’s *quite* enough of that!” ... “Leave the kid alone, will you!” (Dahl 65, emphasis in original). Here, it is not Charlie himself that embodies the likely emotions of the reader – rather, it is the shopkeeper. The strangers’ WTR towards Charlie is very low, and they clearly consider their own welfare to be of a higher priority. The reader’s consequent anger at this treatment, which is born from our knowing and rooting for Charlie, reflects a wish to increase the strangers’ WTR towards him.

3.2.2 Contempt

There is relatively little contempt literature, and most of this assumes contempt as a basic emotion and focuses instead on e.g. methodological details. Some studies have grouped it with other emotions and argued that it is a blend of disgust and anger. The properties of contempt can vary greatly, in that it can be an enduring feeling or a brief one, and it is associated with a range of facial and behavioural expressions besides the unilateral lip curl that Ekman identified in his studies of facial expressions. In short, there does not seem to be any conclusive evidence that contempt is – or is not – a distinguishable basic emotion (yet) (Gervais and Fessler 1-2). As mentioned, however, the purpose of this paper is not to determine which emotions are basic, nor is it essential to the main argument. Therefore, for the sake of the analysis, we assume here that contempt *is* a basic emotion and treat it as such.

From an evolutionary perspective, Gervais and Fessler argue that ‘respect’ largely defines ‘contempt’, as contempt can be viewed as an absence of respect (11). They expect that, in a social species like the human, ‘respect evolved to facilitate the establishment and maintenance of valuable relationships’ (13), where valuable is understood in the sense that the conspecific you have entered in a relationship with can confer benefits on

you, whatever form they may take (11). When a conspecific *cannot* confer benefits on you, you may feel contempt towards the other. Gervais and Fessler’s hypothesis is that ‘the core of *contempt* is an attitude state that represent others’ low intrinsic value to self, due to their inefficacy in adhering to social-relational standards’ (11, emphasis in original). Social-relational standards include some form of exchange of benefits between individuals, in order to make the relationship valuable for both. Thus, contempt may be felt towards those lower-ranking conspecifics that cannot deliver benefits upwards and therefore do not earn respect, but also on those that impose actual or potential costs on an individual. A possible cost could be ‘contamination’ of practices and behaviour that earned the target contempt, so-called culture contamination, or e.g. stigma-by-association, that would lead to the exclusion of the self from social relationships – Gervais and Fessler also mention disgust as an avoidance tendency in relation to this (11-13), which means that these emotions may overlap in some instances, perhaps especially when ‘moral’ disgust is involved (a distinction that will be elaborated on in the section on disgust). Thus, the stimuli that trigger the emotion of contempt are related to people and their actions, and there is an element of condescension in it: you feel superior to the target, usually morally or regarding a particular attribute of that person (Ekman, *Emotions Revealed* 181). This feeling leads to indifference, intolerance, and exploitation and most often results in ‘cold-blooded’ treatment of the target, because ‘their welfare is not valuable, [so] empathy and compassion are not engaged’ (Gervais and Fessler 11). Furthermore, Gervais and Fessler emphasise that contempt is not hatred. Hatred might be considered the opposite of caring, while contempt is rather an *absence* of caring (12).

So, as mentioned, respect is typically lost (or never gained) when a person fails to provide another with any benefits or when a person imposes costs on another, and contempt takes its place. Benefits in this sense need to be viewed as a very broad concept – it can be the value of verbal support, the value of inspiring others, the value of being well-connected, and so on, that an individual automatically shares with its surroundings. It can also be the value of looking and being respectable, as we see in *Peter Pan*, when Wendy, her brothers, and the Lost Boys have been captured by the wicked Captain Hook. The boys admire the pirate ‘calling’, but Wendy sees nothing but the untidiness of the ship and the grimy glass in its portholes, and she in particular notices that Hook’s ruff is soiled (Barrie 202). All of these signs indicate to Wendy that the pirates are beneath her, even if she and the boys are all in danger of being killed by them. The emphasis on these details in the telling of the story makes the reader contemptuous of them, too. The pirates are no ‘gentlemen’, and thus they lose Wendy’s and the reader’s respect. Wendy says to the boys: “‘I feel that I have a message to you from your real mothers, and it is this: ‘We hope our sons will die like English gentlemen’”” (Barrie 202), which serves to further emphasise the distance and difference between the boys and the pirates, and show how the pirates are really beneath *them* instead of the other way around.

The behaviour of an individual towards others that are not the self can also lose them respect. An example of this is seen in *Harry Potter and the Philosopher’s Stone*, when Harry meets Draco Malfoy for the first time in Diagon Alley. They are getting their robes measured, and Draco does not yet know who Harry is – he keeps talking to him and his small remarks here and there about bullying his father into buying him a broomstick, and that it would be a crime if he was not picked to play for his house Quidditch team, let us know that this is not a particularly pleasant character. He exhibits highly selfish behaviour and thus not the prosocial characteristics we look for and approve of in a ‘good’ character. When Hagrid shows up, Draco goes on to call

him a ‘sort of servant’ and a ‘savage’ (Rowling 60). Because Hagrid has been established as a prosocial and therefore likable character, as well as a friend to Harry, Draco is now losing our respect – and Harry’s. The narrator tells us that ‘[Harry] was liking him less and less every second’ (ibid.), and that when his robes are done being measured, he is ‘not sorry for an excuse to stop talking to the boy’ (Rowling 61). There is a fine line here between contempt and moral disgust, as contempt can also make you feel morally superior to the other, but whereas moral disgust can ‘revolt’ you, as we will see in a later example, contempt is more clearly defined as a lack of respect, which I argue is what we see happening in this scene. Harry sees no value in establishing a relationship with Draco, because of his selfish behaviour, and thus any beginning respect (perhaps due to Draco’s knowledge of the wizarding world) is quickly quenched during their talk.

A somewhat similar situation takes place in *The Magician’s Nephew*. As mentioned, contempt has an element of condescension in it, a feeling of being superior to another individual in some way. Now, two characters in this story, the Empress Jadis and Uncle Andrew, feel superior in every way to all other characters: in their view, everyone else is beneath them, and they use this justification to exploit those around them. Jadis has killed an entire world and everyone in it, to further her own cause, because, as she says: “‘what would be wrong for you or for any of the common people is not wrong in a great Queen such as I’” (Lewis, “*The Magician’s Nephew*” 42). Uncle Andrew has experimented on guinea pigs, and has sent Polly and Digory to the Other World instead of him, to test whether it was safe, because, as *he* says, “‘Men like me, who possess hidden wisdom, are freed from common rules’” (Lewis, “*The Magician’s Nephew*” 19). Their actions and obvious disregard for others’ lives are excellent examples of contempt and its behaviour: they do not in any way consider relationships with others valuable (except Uncle Andrew, who finds his relationship with Jadis very valuable). But the reader does not feel for these particular characters, because of their outrageously selfish behaviour. The reader feels for Digory and Polly, who exhibit prosocial behaviour – Digory in particular, for going to rescue Polly at the risk of his own life – and, in short, everyone else that Jadis and Uncle Andrew consider inferior, which means that in the reader the contempt is turned around and directed at Jadis and Uncle Andrew instead, making us feel morally superior to them. The same is true for Polly (and Digory, to some extent), resulting in the sort of ‘cold-blooded’ treatment Gervais and Fessler mentions, as she attempts to leave Jadis to die in the in-between place.

Northern Lights, while still being a children’s book, is intended for a more mature reader than, say, *Alice* is. Consequently, there is a higher complexity to its tone and form of telling, and thus also to its ideas and the emotions it evokes. This complexity often leads to situations where not just one emotion in its pure form is felt, rather, the emotions are often hybrids, perhaps with one being a bit stronger than the other(s). An example is a mix of contempt with both anger and disgust, in the scene where Mrs. Coulter has just saved Lyra and Pantalaimon from being ‘cut’ from each other. Lyra knows the truth about Coulter’s identity and her role in kidnapping children but must pretend to be ignorant. After having listened to Coulter explaining away and lying about all she knows and reacting with hidden anger at Coulter’s lies and disgust at her behaviour, the narrator tells us that ‘Lyra wondered how she had ever, ever, ever found this woman to be so fascinating and clever’ (Pullman, *Northern Lights* 284). This shows clearly how Lyra once had respect for Coulter but has replaced it with contempt as she has uncovered her true person. The same is true for the reader, whose contempt and hatred for the woman has grown right alongside Lyra’s. The value the reader and Lyra initially took from

that relationship has disappeared: we see no benefits in being lied to or considered ignorant, nor in the fact that Coulter prioritises ‘the greater good’, which could lead to imposed costs— like the harming of Lyra’s friend, Roger, and thus a loss of a valuable attachment for her.

In *Charlie and the Chocolate Factory*, morality plays a large part. And while this is connected to moral disgust, as we shall see later, it also has an element of contempt. The four other children who visit the factory, besides Charlie, all embody a behaviour that is portrayed as contemptuous. One example is in the Nut Room, where Veruca Salt throws a tantrum because she wants one of Wonka’s trained squirrels. When Wonka says they are not for sale, Veruca opens the door and goes in to grab a squirrel herself – and is in turn grabbed by all the squirrels, who start ‘tapping’ her to test if she is a ‘bad nut’ (Dahl 142). The squirrels then proceed to drag her towards the rubbish chute in the middle of the floor, and Wonka exclaims: “‘My goodness, she *is* a bad nut after all,” ... “Her head must have sounded quite hollow”” (Dahl 143). Her behaviour in the first place triggers our contempt – there is no value in a possible relationship with her, because her selfishness indicates that she will not confer any benefits but will likely impose plenty of potential costs. Consequently, we feel indifferent to her fate and are not guilty about sending her down the chute. That the squirrels find her to be a bad nut, and that her head is apparently ‘hollow’, only confirms and approves this emotion and the feeling that the relationship would not be valuable to us.

In the trial scene in *Alice’s Adventures in Wonderland*, there is nonsense and confusion all around. Of course, this is true for the entire book, but Alice (and the reader) seems to have gained some confidence in recognising nonsense by this point. What at last gets to us and to Alice is the fact that they all take the nonsense seriously and use it as evidence to sentence the Knave for stealing the Queen’s tarts. This seems not only unfair but absolutely ridiculous, especially because the tarts are right there in the room with them. Alice’s reactions reveal to us that she considers the whole trial ridiculous, and she has no respect for the ceremony at all: after a jurymember has been placed head down on his seat and she is asked to put him right, she says to herself: “‘I should think it would be *quite* as much use in the trial one way up as the other”” (Lewis Carroll 110). This exclamation mirrors the reader’s feelings. The cards and creatures that make up the people at the trial do not provide Alice or anyone else with the benefit of fair hearings, nor the benefit of a reasonable questioning, or any other discernable benefit. In fact, they impose possible costs on everyone, as any person can suddenly be condemned based on absolutely nothing. We feel absolutely no value in entering in a relationship with these ‘creatures’. The reader feels more and more contemptuous and superior to their follies as the silliness of the entire situation escalates, a feeling we share with Alice. And, of course, the whole spectacle ends with Alice proclaiming contemptuously: “‘Who cares for you?’” ... “‘You’re nothing but a pack of cards!’””, before she wakes from her dream (Lewis Carroll 115).

3.2.3 Sadness

Sadness, like disgust, is not as well-studied as some of the other emotions. There is vast literature on depression and grief, but even though these emotions are related to sadness, they are not sadness. Furthermore, as with contempt, there is no clear biological evidence yet that sadness is indeed a basic emotion in the sense that it is distinguishably different from other emotions. In fact, Barr-Zisowitz argues that sadness and anger have many likenesses, and proposes that the concept of ‘distress’ can be used to apply to both (Barr-Zisowitz 607), but

again, this issue is not relevant for the purposes of this paper. What *is* important to note about sadness, and what distinguishes it from most, if not all, of the other emotions, is that it is a response to an event that has already taken place (Barr-Zisowitz 608). Ekman further suggests that there are two distinct sides to a sad emotion: sadness and agony. Agony involves a sort of protest, where sadness is closer to resignation and hopelessness – that is, agony is active and sadness is passive (*Emotions Revealed* 84).

Research seems to indicate that ‘sadness impairs attention to tasks’ (Barr-Zisowitz 608) and that attention is focused inward rather than outward (though the opposite is also known to occur), and there seems to be widespread agreement that ‘sadness focuses the person on him-or herself’ (Barr-Zisowitz 609) – thus, it has been characterised as a ‘me’-emotion rather than an ‘it’-emotion, because the focus is on the self and what the self has not achieved, rather than on an external cause or frustration (ibid.). A compelling hypothesis that might explain this behaviour proposes that the self-focus in sadness provides the individual ‘with feedback on how well things are going’ (Barr-Zisowitz 609), and that the decreased outward attention serves to save energy, so the self can focus on solving the problem at hand and to motivate more attention to the pursuit of goals – in other words, to enhance its chances of survival and reproduction. Indeed, all psychological studies related to the function of sadness concur that ‘characteristically, sadness is seen as a response to a goal lost or not attained’ (ibid.). In this sense, it is a goal-related emotion in the same sense that anger is. The types of loss that trigger sadness support this view, such as rejection, loss of self-esteem after failure, loss of admiration or praise from a superior, loss of health, loss of body part or function, and, for some, loss of a treasured object (Ekman, *Emotions Revealed* 83). It also fits with Ekman’s proposed distinction between agony and sadness: agony would be a felt protest of the goal lost or not attained, while sadness would be a kind of resigned acceptance of the loss. However, it may not entirely explain the sadness we feel at the loss of a loved one, unless we count the valuable relationship in question as a goal. And doing so is not as odd as it may seem. Barr-Zisowitz, for example, mentions that sadness is also related to frustration of the drive for attachment (618) – that is, the attachment is the goal, and losing the attachment causes agony or sadness.

In *The Magician’s Nephew*, it is one of the worst kinds of losses: the potential loss of a parent. Digory’s mother is very ill. Though we are never told exactly what it is, we get the feeling that it is terminal. Digory knows it, too, and throughout the story his worry for his mother is always at the back of his mind. Towards the end of the story, Digory has brought an apple, the forbidden fruit, back to Aslan from the garden, and Aslan tells him that if he had stolen one of the fruits to cure his mother’s illness, as he had briefly considered doing, it would not have brought any of them joy. In response,

Digory could say nothing, for tears choked him and he gave up all hopes of saving his mother’s life; but at the same time he knew that the Lion knew what would have happened, and that there might be things more terrible even than losing someone you love by death (Lewis, “*The Magician’s Nephew*” 100).

It is a rather emotional but still passive response. The hopelessness and the acceptance of this outcome characterises the feeling as sadness rather than agony. Our drive for attachment – especially to our kin – is what may trigger this kind of intense sadness, in the reader as well as the character. As mentioned, we feel for

Digory because of his particularly prosocial behaviour, and thus we sympathise with him and his struggles. The reader is also aware that Digory is still a child, and thus still dependent on parental guidance, which heightens the feeling of sadness. *Harry Potter*, too, gives us a kin- and parent-related experience of sadness. About three-fourths into the story, Harry has discovered the Mirror of Erised, which shows the deepest desires of whoever is standing in front of it. While Ron sees himself gaining glory, Harry is surrounded by his family in the mirror, the family he has never met or known, and ‘he ha[s] a powerful kind of ache inside him, half joy, half terrible sadness’ (Rowling 153). They are there, and he can see them for the first time, but he will never be able to have a relationship with them. As with Digory, Harry is our prosocial protagonist, and the above scene likely evokes the emotion of sadness in the reader, as the reader sympathises with the loss of this important attachment and the inability to ever gain it. This sadness and longing keeps coming back to Harry at various points throughout the entire series. Parental guidance and a valuable attachment are both goals that we would have been adapted to be motivated towards maintaining, and the emotions related to the loss of them are experienced in both of the above examples.

An experience of sadness in *Peter Pan* is also related to the above. The Darling children have finally made their way home to their parents from Neverland, and as their mother discovers them in their bed, and their father comes in to share in the happiness, Peter Pan stands outside the window looking in: ‘He had had ecstasies innumerable that other children can never know; but he was looking through the window at the one joy from which he must be forever barred’ (Barrie 235). Peter is, as mentioned, a character we generally feel for, alongside Wendy. But even if we did not, even if, say, it was Hook who had this experience outside their window, our sadness is triggered, because it is such a strong motive in us, this drive for attachment, especially to our kin, that any who might be in this situation would likely get our sympathy. The reason for this could be that the exhibition of sadness about being alone and of wanting to belong to a family is an example of prosocial behaviour in itself, warming us to the character, even if he might have been formerly selfish. The silver lining is that Peter is very forgetful, and so he soon forgets the longing he feels in that moment.

I have mentioned elsewhere how *Alice* might evoke somewhat simpler emotions than some of the more complex children’s books, in order for the child reader to be able to understand the story. Therefore, the sadness we experience in *Alice* is also for what might seem a simpler reason (though for a child, this may be very sad indeed). Alice feels very sorry for herself and is at a complete loss several times when she first goes into the hole after the rabbit. Here, she first drinks from a bottle that makes her shrink, and then discovers that she has left the key to the small door she means to go through on the table that is much too high for her now. In response to her futile attempts to get up there, ‘the poor little thing sat down and cried’ (Lewis Carroll 13). She then discovers a small cake and eats it, now finding herself growing much taller – much too tall for the door once again, and ‘to get through was more hopeless than ever: she sat down and began to cry again’ (Lewis Carroll 16). Alice’s very simple goal is to get through the door and go into the garden beyond. She is continuously barred from obtaining this goal, which prompts her rather teary sadness. The implied reader sympathises with the prosocial Alice and wants her equally as much to obtain this goal of going through the door and see the garden behind it, and thus feels Alice’s sadness at being continually stuck and unable to see a way out of her situation.

In much the same way, Charlie Bucket has a relatively simple goal in *Charlie and the Chocolate Factory* of getting a golden ticket to Mr. Wonka's Chocolate Factory. Charlie's family is very poor and can only afford one chocolate bar for Charlie every year on his birthday. This fact adds a layer of complexity to his goal: the reader wants him to get the ticket because he is our protagonist, the prosocial character we root for, but even more so because he is a suffering protagonist, whose suffering we also feel, and who deserves some luck. His parents and grandparents try to tell him that he must not be too disappointed if he does not get a ticket – there are very few tickets, and there are so many chocolate bars around the world. Still, as he opens the bar and finds that there is no ticket, he smiles 'a small sad smile' at his family (Dahl 45), indicating a hopeless acceptance. The reader feels this sadness too, as we want him to obtain his goal of going to the factory. We feel he truly *deserves* this luck, and thus we are just as sad as he is when he does not find the ticket (right away – he does of course find one later in the story).

As mentioned, Ekman distinguishes between two forms of the same emotion: sadness and agony. For an example of agony, I turn to the third book in the *His Dark Materials* trilogy by Pullman, *The Amber Spyglass* (2000). Agony, if you remember, Ekman argues to be a felt (or expressed) protest of a goal lost or not attained. At the end of this final book, Will and Lyra, friends since the beginning of the second book, companions through a multitude of hardships, and newly fallen in love – and who are from two different worlds – are told that every window between all the worlds must be closed for Dust not to leak out. They realise what this means for their relationship and particularly Lyra has a violent, protesting reaction:

He thought she would die of her grief there and then. She flung herself into his arms and sobbed, clinging passionately to his shoulders, pressing her nails into his back and her face into his neck, and all he could hear was, "No – no – no ..." (Pullman, *The Amber Spyglass* 489)

There is a refusal to accept this loss in her reaction: clinging to Will as if not wanting to let him go, exclaiming 'no' over and over, in a denial of what is happening. The reader has been on Lyra's, and then Will's, side for three whole books, and has been feeling their growing relationship as much as the characters themselves. Both Lyra and the reader are protesting the permanent and unwilling loss of this valuable and strong attachment: the reader feels the same agony and is trying, along with the characters, to find a way around this unfair fate for a couple of pages, but must finally admit defeat. The agony then becomes the resigned acceptance of sadness as they say their final goodbyes.

3.2.4 Fear

Fear is one of the most well-studied of the emotions. As already mentioned in the introduction to negative emotions, we are biologically designed to be hyper-aware of cues of danger in our environment. Survival is one of the strongest motives underlying our behavioural systems, so it makes sense that protecting ourselves from danger is a top-priority, adaptation-wise. According to Öhman and Mineka, 'mammalian evolution has required the successful development of defense systems to cope with dangers that threatened to disrupt the transport of genes between generations' (483). A dead animal cannot reproduce. What this required was firstly, a perceptual system that would identify threats, and secondly, an automatically wired motor system that would

move the organism away from danger (Öhman and Mineka 483). As more sophisticated nervous systems developed, the effectiveness of this perceptual system could be expanded by inserting a motive state between the stimulus and the response – that is, the emotion of fear – which would then influence the reaction, for instance, whether to freeze, escape, or attack (ibid.). Perceptual systems, furthermore, are likely biased towards discovering threat, because false negatives ‘are more evolutionarily costly than false positives’, the former possibly being deadly, the latter merely resulting in wasted energy (Öhman 577), a bias that has resulted in us being rather fearful creatures.

Öhman and Mineka argue for an evolved fear module and propose it to be a ‘relatively independent behavioral, mental, and neural system’ in itself, the purpose of which is to solve adaptive problems related to potentially life-threatening situations (484). Öhman and Mineka’s theoretical structure of the fear module is comprised of four characteristics that are assumed to be shaped by evolutionary contingencies: selectivity regarding input; automaticity; encapsulation; and a specialised neural circuitry (485). In relation to automaticity, and in relation to the open program argument discussed earlier, they further emphasise that ‘it is important to realize that evolution frequently uses extensive experience as a means of shaping neural architecture’ (ibid.). Shaping neural architecture through experience helps the automaticity system – that is, through experience, we can quicker and better respond automatically to future situations. In other words, Öhman and Mineka seem to agree with Tooby and Cosmides’ input and organisation theory.

Potentially dangerous events can be signalled by cues in the environment and the contingency between the cues and such events can condition this motive state of fear to the cue, such that the cue itself can ‘recruit defensive responses in anticipation [of the event]’ (Öhman and Mineka 483). The relevant reactions to fear are escape and avoidance, which are associated with both somatic and autonomic bodily changes, preparing us to flee (Öhman 574) (or to hide, which can be argued to be a variation of fleeing). According to Ekman, what characterises all fear triggers is the threat of harm, whether physical or psychological (*Emotions Revealed* 152). Particularly encapsulated by the potential for psychological harm are situations and events related to our social nature, such as fears of rejection, conflict, criticism etc. They may not at first seem particularly threatening but are all essential to our chances of survival and reproduction, as emphasised by Dunbar earlier. As Öhman also notes, they are ‘situations of relevance for human evolution’ (575). Here, it might be important to raise the issue of anxiety as well. Research seems to agree that there is a difference between anxiety and fear – yet they are grouped and considered together, because they are indeed two sides of the same coin: they are both reactions to threatening stimuli. The difference, Öhman argues, is that anxiety is often ‘prestimulus’, or anticipatory, while fear is ‘poststimulus’, that is, it is elicited by defined fear stimuli (Öhman 574).

Another important point to make about the emotions fear and anxiety is that they capture *attention*. As mentioned in the beginning, we are designed to pay close attention to cues of danger. A threat of harm ‘focuses our attention, mobilizing us to cope with the danger’, and it can be hard to feel or think about anything else (Ekman, *Emotions Revealed* 157). Indeed, we are designed to pay close attention to anything that matters to our fitness. And the cues we have evolved to pay close attention to in our environment, in order to detect patterns of danger or other biologically important situations, are also cues we pay close attention to in fictional environments. Cues that have proven to signal dangerous events in our evolutionary past – termed phylogenetic fear-relevant stimuli – seem in particular to have preferential access to Mineka and Öhman’s proposed fear

module (498). That is why we, even having never met a bear, for example, are instinctively afraid of it because we register its predatory cues.

We see an example of this in *Northern Lights*, when Lyra meets the *panserbjørn* Iorek for the first time:

She felt a bolt of cold fear strike her, because he was so massive and so alien. She was gazing through the chain-link fence about forty yards from him, and she thought how he could clear the distance in a bound or two and sweep the wire aside like a cobweb, and she almost turned and ran away (Pullman, *Northern Lights* 179).

Here we also see the relevant reaction of flight in response to fear. It being fantasy, Iorek is not a ‘normal’ polar bear, but he has the same predatory features: size, strength and muscle, claws and teeth for tearing. Lyra does not turn and run away, because in this story, the bear is a thinking creature, with intelligence and language and will, but the interesting thing – and what the reader will likely feel as well – is that she and we are still afraid of this predator, still scared that it might suddenly leap at us (at Lyra, that is), because it is so ingrained in our nature, our fear module, that these features are cues of danger and a reason to run far away.

Another example of evolutionarily fear-relevant stimuli is seen in *Peter Pan*, as the Darling children arrive and fly over Neverland just as it is starting to get dark. The narrator tells us that ‘in the old days at home the Neverland had always begun to look a little dark and threatening by bedtime’, where black shadows would move about and beasts of prey would roar (Barrie 69). But at home there were night-lights and Nana to tell you it was make-believe – similar to reading a story in a safe environment, and to what the potential reader is experiencing when reading this story, too – now, the children are truly in Neverland, and there are no night-lights and no Nana, and they are starting to get very afraid of the island. Darkness makes us uneasy, because we do not see well in it. Noises and movements that we cannot identify and cannot know to be safe from quickly turn into cues of potential danger, such as the moving shadows and the roars that the children see and hear. The reader feels it too, as the narrator points out that it is no longer make-believe: the island starts to feel truly threatening, and we fear for the children and what may happen to them in the dark.

As already stated, Ekman characterises all fear triggers as (potential) threats of harm: that is, we perceive cues of things that might harm us in our environment. In *Charlie and the Chocolate Factory*, the children are one by one disappearing into the factory, after having eaten something they should not have. Mr. Wonka keeps assuring everyone that the children will be all right, but the Oompa-Loompas can be heard singing fearsome things every time someone disappears, such as this excerpt from the song about Augustus Gloop:

Slowly the wheels go round and round,
The cogs begin to grind and pound;
A hundred knives go slice, slice, slice;
We add some sugar, cream, and spice;
We boil him for a minute more
Until we’re absolutely sure
That all the greed and all the gall

Is boiled away for once and all (Dahl 105, italics in original).

The cues are the conflicting remarks made by Wonka and the Oompa-Loompas and of course the disappearance of the children. To the reader, this does not sound as if Augustus will be in one piece at the end of it, and neither does it to Charlie, because he asks: ““Are the Oompa-Loompas really joking, Grandpa?”” (Dahl 105). We might feel that the other children deserve it to some extent. For one, contempt furthers indifferent feelings towards them, but as mentioned in the introduction to the analysis, prosocial behaviour also includes the punishment of selfish individuals – so the reader likely approves of their fates. But this also heightens the fear that the same might happen to our protagonist, and the factory starts to feel more threatening.

We experience the fear of bodily harm in *Alice’s Adventures in Wonderland*, as well. Alice has by accident landed herself in the Queen’s garden and is participating in a game of croquet. She becomes more and more afraid of a dispute with the Queen, who seems in quite a temper and keeps ordering beheadings. As Alice notes to herself: ““They’re dreadfully fond of beheading people here”” (Lewis Carroll 77), and she starts to look around her for a way to escape, before the Queen can decide to order Alice’s own beheading. The reader shares in her growing fear, as the Queen seems rather unbalanced and we can see no reason she would not suddenly find fault with Alice, too. Beyond that, none of the creatures surrounding Alice seem to listen to reason, so we cannot expect that she can explain her way out of a possible sentence.

A well-known and often-felt variation of fear is anxiety. As mentioned, anxiety is anticipatory, and it can be triggered in two ways: one is as an undirected alarm, where you have unconsciously perceived clues that tell you something is wrong, but you do not know what it is (yet); the other is ‘interference with avoidance’ (that is, you are not ‘allowed’ to avoid the thing you fear) and is a more conscious form of anxiety (Öhman 588). An example of the second kind of trigger for anxiety is found in *The Philosopher’s Stone*, when Professor Snape asks to referee Harry’s next Quidditch match – this is significant after the events at the first match, where Harry, Ron, and Hermione supposedly saw Snape trying to jinx Harry and make him fall off his broom. All three are now convinced not only that he will make Gryffindor lose, but that he will try to harm Harry once again. The reader is of the same belief, and is likely agreeing with Hermione and Ron in this exchange:

‘Don’t play,’ said Hermione at once.

‘Say you’re ill,’ said Ron.

‘Pretend to break your leg,’ Hermione suggested.

‘*Really* break your leg,’ said Ron (Rowling 159).

But Harry cannot back out, cannot avoid the match, and thus his fear turns into anxiety: ‘As the match drew nearer, however, Harry became more and more nervous’ (Rowling 162). He furthermore keeps accidentally, or by Snape’s design, running into Snape, who seems to want to catch him on his own – another cue that seems to signal that he intends to hurt Harry. A potentially dangerous event is waiting ahead for Harry and the reader is as anxious as he is, because we cannot avoid it, and we cannot make *him* avoid it, nor prevent it in any other way, but must wait patiently for it to happen.

In *The Magician's Nephew*, we find an example of the other kind of anxiety trigger: the unconscious perception of cues that tell you something is not quite right. Digory and Polly have gone to the Wood between the Worlds and they decide to try one of the pools leading somewhere else. They land in a place with dull, red light ('not at all cheerful' (Lewis, "*The Magician's Nephew*" 31)) and a black-blue sky. Digory and Polly are not sure why, but they talk in whispers and keep holding hands. They have perceived cues in this odd world that make them uneasy, and, through the narrator, so have we, though we cannot explain exactly why a dark sky and a red light would create this sense. Further cues register as they move on – the rubble, the quiet, the black, empty windows, the cold. We are almost sure now that this is a sinister place and that something bad will happen, though there have been no definite cues to confirm this. Yet, we are anxious, and so are the children: they keep turning around, because 'they [are] afraid of somebody – or something – looking out of those windows at them' (Lewis, "*The Magician's Nephew*" 32), and Polly suggests that they leave. Something bad does indeed happen in this place, when they accidentally awaken the Witch, turning our anxiety into fear instead.

3.2.5 Disgust

The type of disgust we are probably most familiar with is the one Tybur et al. defines as *pathogen* disgust, an emotion they argue evolved to prompt the avoidance of disease-causing organisms (68). Pathogens move from current to future hosts through points of contact. Particularly useful exit and entry points for pathogens are the mouth, the skin, the anus, and the genitals. The counteradaptations humans need to prevent transmission must defend the key entry points and avoid exit points of other individuals and the substances that leave these points – yet maximum pathogen avoidance, that is, never eating, never having sex etc. would be counterproductive to enhancing survival and reproduction (Tybur et al. 68). Therefore, psychological mechanisms are needed to estimate the risk and weigh it against the possible benefits. Just as with fear (and, indeed, all the emotions, positive as well as negative), a perceptual system is needed – in this case, one that will recognise cues of pathogen presence in the environment, along with computational processes that influence the intensity of the disgust and a system that initiates avoidance responses (Tybur et al. 68).

Apart from pathogen disgust, Tybur et al. propose two other distinct domains of disgust: sexual and moral disgust (67). Sexual disgust, they argue, evolved to prompt the avoidance of potentially fitness-jeopardizing sexual partners, and that this was a particular modification of the pathogen disgust system (71). As this domain is not particularly relevant for children's literature, I will not elaborate further on the detailed mechanisms here. The third domain is of higher importance to the issue at hand: morality and disgust. One aspect of this is the moralising of actions that otherwise elicit pathogen or sexual disgust, such as paedophilia or taboos about food, but a more interesting aspect is the fact that people also 'report and display disgust toward moralized acts unrelated to pathogen threats or sexuality' (Tybur et al. 72-73). Morality itself is a complicated issue that would take up too much space here compared to its relevance, so its relation to disgust will have to do. In the social groups of the human species, violations of moral rules are condemned and punished, and Tybur et al. argue that whether individuals are endorsing or opposing certain rules is 'influenced by the expected impact of the rule on the endorser's fitness' (74). Their proposed explanation for moral disgust unrelated to pathogen or sexual encounters, then, is the selection pressure of 'condemnation coordination',

which means that individuals signal their condemnation to each other through facial, behavioural, or vocal expressions, and detect the same from others in return. This has a group benefit as well as a cost benefit: for example, reducing the risk of further conflict between endorsers and condemners (75).

According to Ekman, disgust is a feeling of aversion – even the thought of something repulsive brings out strong disgust. Disgust can be felt in relation to taste, smell, touch, thought, sight, or sound, but also, as mentioned, in relation to actions and appearance of people, or even ideas – in other words, you can be revolted by what a person does, for instance (*Emotions Revealed* 173). What marks the difference between sexual and pathogen disgust and moral disgust seems to be the ‘do not touch’ motivation, which does not seem to accompany moral disgust (Tybur et al. 76). Tybur et al. stress that a smell or sight or touch that elicits pathogen disgust can make us feel queasy and make us lose our appetite (70) – but such physiological reactions are not present in moral disgust. Comparing how you would feel if you had to eat a rotten apple to how you would feel if someone robbed a blind person on the street should illustrate this point clearly enough. It is possible that rejection in relation to moral disgust is a form of punishment rather than an avoidance response – in other words, social distancing rather than physical distancing (Tybur et al. 76). A final, important point to make is that kin elicit significantly less disgust than strangers, which means that cues to kinship should have a say in the regulation of our disgust response to a sick family member, for example (Tybur et al. 70). This is related to inclusive fitness: caring for the sick family member to ensure that shared genes survive is almost if not as important as ensuring one’s own survival by avoidance.

There are variations in different cultures, but there are also universals in what triggers disgust: for pathogen disgust it is e.g. bodily products that seem to be the most potent and the most universal triggers, such as feces, vomit, or blood (Ekman, *Emotions Revealed* 174), because of their possible relation to pathogens. An example of experiencing such pathogen disgust can be found in *The Philosopher’s Stone*. Harry, Ron, Neville, and Malfoy are serving detention with Hagrid, and they are tasked with looking for a wounded unicorn in The Forbidden Forest. Harry and Malfoy find the unicorn, dead, in a clearing, and they are about to approach when a hooded figure crawls towards the unicorn. It ‘lowered its head over the wound in the animal’s side, and began to drink its blood’ (Rowling 187). As pointed out in relation to *Northern Lights*, children’s books meant for more mature readers are often more complex in the ways they evoke emotions. The same is the case here: there is also an element of fear in this scene, and that seems to be the primary feeling Harry has, too. He does not yet know that the figure is Voldemort, so that is not where his fear stems from – rather, it can be argued that the disgust felt at seeing someone drink blood from a wound informs that fear. One who would do such a thing might be dangerous to be around. The reader’s disgust is perhaps more clearly felt than Harry’s seems to be, especially as the narrator tells us how, when the figure lifted its head, ‘unicorn blood was dribbling down its front’ (Rowling 187), providing us with a ghastly image that combines the disgust of eating/drinking from a dead animal and of letting bodily products (in this case blood) come into contact with the mouth, one of the key entry points for pathogens that we have evolved to protect through the emotion of disgust.

We come across a somewhat similar example in *Nothern Lights*. The *panserbjørn* Iorek Byrnison has, through Lyra’s cunning, managed to challenge the king, Iofur Raknison. Iorek tricks Iofur, and in one blow he tears the lower part of Iofur’s jaw clean off. This is a slightly disturbing element in itself, but then after Iofur was killed,

Iorek sliced open the dead king's unprotected chest, peeling the fur back to expose the narrow white and red ribs like the timbers of an upturned boat. Into the ribcage Iorek reached, and he plucked out Iofur's heart, red and steaming, and ate it there in front of Iofur's subjects (Pullman, *Northern Lights* 352).

Our pathogen disgust is triggered here, at the peeling back of the fur, the exposing of the ribs, the eating of the heart – in particular, when the heart is described as ‘red and steaming’. A part of this disgust can be argued to be due to the fact that he is eating the insides raw – humans cook and roast their meat to avoid any possible pathogens and eating raw meat can seem revolting to us. We of course know that bears do not cook their food, but the extra dimension in this scene is the fact that Iorek is not just a bear, but a talking and thinking bear, making him much like a human character in our minds – and therefore his actions more disturbing.

In *Peter Pan*, a trigger for pathogen disgust is actually used to describe something that is meant to be disgusting, but perhaps is not exactly so in itself: the pirate ship, Jolly Roger. The narrator tells us that the ship is ‘a rakish-looking [speedy-looking] craft foul to the hull, every beam in her detestable, like ground strewn with mangled feathers’ (Barrie 196, addition in original). The image of a ground strewn with mangled feathers triggers disgust in the reader, because it indicates a dead animal, and a dead animal is a possible source of pathogens and thus something we do not want to touch. This image is projected onto our imagined idea of the ship, which consequently becomes disgusting and something to be avoided. It is also an example of not seeing or being told of disgust in the characters, but feeling it as a reader, because the information is only given to us (though implicitly it is also the view of the characters).

An example of a mix between pathogen and moral disgust is seen in *The Magician's Nephew*, when Uncle Andrew tells of how he made and experimented with the magic rings. He tells Digory of how he bought guinea pigs to use the rings on, and how, while some of them ‘only’ died, ‘some exploded like little bombs’ instead (Lewis, “*The Magician's Nephew*” 21). We can hardly help imagining the tiny guinea pigs exploding when reading this scene, something that would likely include the spreading of bodily products in a violent burst, and thus that image triggers our pathogen disgust. But, as Digory also points out, “‘It was a jolly cruel thing to do’” (Lewis, “*The Magician's Nephew*” 21), and that triggers our moral disgust, particularly as we are told that Digory once had a guinea pig, which brings the idea of the guinea pig as a lovable pet into the equation. He is verbally condemning the act as morally wrong, and in this case the narrator is signalling this emotion to and coordinating it with the reader.

There is also an experience of moral disgust in *Alice's Adventures in Wonderland*, though not quite as serious as the one above, when Alice has come across the tea-party consisting of the Dormouse, the Mad Hatter, and the March Hare. They have a long conversation with some very confusing remarks here and there, and Alice is alternately puzzled and angry about what is said. The final straw comes when the Dormouse, while telling a story, asks Alice if she ever saw a drawing of a muchness:

“Really, now you ask me,” said Alice, very much confused, “I don't think—”

“Then you shouldn't talk,” said the Hatter.

This piece of rudeness was more than Alice could bear: she got up in great disgust, and walked off (Lewis Carroll 69).

Her walking off is a behavioural expression that signals the condemnation of *their* behaviour. Being rude might seem a small matter compared to exploding guinea pigs, but with all emotions there are differences in degree – and for less mature readers, it might be easier to understand disgust at rudeness rather than at more serious morally wrong acts.

In *Charlie and the Chocolate Factory*, moral disgust plays a big role in our perception and opinion of the four other children that get golden tickets to Wonka's factory, besides Charlie. Augustus Gloop is a very fat boy, whose mother lets him eat anything he wants anytime he likes. When they read about the Gloops in the paper, Grandma Josephine exclaims: ““What a revolting woman”” about Mrs. Gloop (Dahl 37). Veruca Salt is a very spoiled girl, who gets everything she wants if she screams and cries loudly enough. Grandma Georgina's response to the Salt family is that Veruca ““needs a really good spanking”” (Dahl 41). Violet Beauregarde is a rather rude girl who chews gum every waking hour and does not have a care for other people. Grandma Josephine says about *her* that she is a ““beastly girl”” and Grandma Georgina exclaims that she is despicable (Dahl 49, emphasis in original). The fourth child, Mike Teavee, watches TV all day long and has a particular love for violent shows. The two grandmothers agree that they cannot bear to listen to it (Dahl 51). There may be an element of contempt in this, as mentioned earlier, as we lose any amount of respect for these children and their parents due to their exceedingly selfish behaviour. But the moral disgust is evident from some of the word choices, such as ‘revolting’ and ‘beastly’, both words that speak to the emotion of disgust, of feeling a strong aversion towards something. The ‘good’ characters are coordinating with each other their condemnation of the behaviour of these other, ‘bad’ characters through their verbal exclamations, and the narrator is communicating this condemnation to, and thus coordinating it with, the reader, as well.

3.3 Vicarious Experience

The above analysis shows how and why we biologically and psychologically feel the given negative emotions when engaging with story, and what they are a reaction to – that is, how they work as ‘experience’. Literature evokes strong, *evolved* emotions through the depictions of a low WTR towards the character we feel for, for example, or a loss of something the character we are rooting for cares about, or something that would signal the presence of pathogens and so on. As mentioned in the introduction to the analysis, we sympathise with, and ‘volunteer affect’ for, the characters that exhibit prosocial behaviour. Thus, the emotions evoked in us are very much an author choice. The narrator tells the story to the reader, not to the character, and the information we get about the various characters and events is what may evoke certain emotions beyond what the character seems or is described to feel. It is important to keep in mind here what was emphasised earlier by Tooby and Cosmides: that storytelling engages emotion systems but disengages action systems. Thus, we may feel angry and wish for the WTR ratio felt towards a character to be increased, but we do not engage in angry behaviour against the character. This is of course related to decoupling and our ability to

recognise the situation as fictitious. In the words of William Flesch, we *know* that, for example, ‘we ourselves can’t reward or punish the character we want to see rewarded or punished, but we can cheer on the altruistic character who does’ (361).

As mentioned in an earlier section, the *emotional* response to vicarious experience is the key to the adaptive function of storytelling. Emotions guide our attention, and in the case of storytelling, they guide it towards information that may have adaptive value to us. If we recall, Ekman presumes that the primary function of emotions is to prepare and mobilise the organism to deal quickly with inter-organismic encounters. When engaging in stories, we respond emotionally as we would in a real situation, but as emphasised earlier, these particular emotional responses are modulated by higher cognitive functions that assure us that there is no real danger, no real violence, no real injustice etc. Thus, the organism – that is, the reader – is ‘prepared’ by its emotions to deal with the vicarious encounters, but its higher cognitive functions let it know that there is no reason to physically ‘deal’ with the fictional situation. The preparation, however, is what counts as experience. Tooby and Cosmides argue that the fictional information input we gain from simulated or imagined experiences ‘presents various constellations of situation-cues, unlocking [the relevant] responses, and making this value information available to systems that produce foresight, planning, and empathy’ (23). They believe that our minds preserve large amounts of information ‘whose truth is suspended, in decoupled form, ready to be tapped to make inferences (such as about what others think) or regulate behavior whenever the organism finds itself inside the scope of the conditions where such information applies’ (20). In other words, cue and response experience is ‘stored’ as instructions for the future guidance of actual response and behaviour. That stored experience includes both the real situations encountered during a life-time and the vicarious ones encountered through fictional storytelling, like the ones shown in the analysis above.

Chapter 4

4.1 Discussion

In this section, I will first discuss the strengths and limitations of an evolutionary approach to literature, and then I will dedicate some space to what we can use the insights gained above for, in practical terms. A limitation relevant for my particular topic is that no scholarly work has been done related to literary Darwinism and children’s literature yet. In this respect, I am on new ground, which almost always poses difficulties at some point in the process. But I will argue that the insights I have used, and that have previously been applied to several other literary areas, are just as applicable here and are highly relevant for how we understand the evolutionary aspect of children’s literature. Especially some of the points made by Clasen in relation to horror fiction are also relevant for negative emotions in general. Indeed, the appeal of an evolutionary approach based on a model of

human nature is that it can be applied to all literary works, from all time periods and of all genres. As Carroll states, ‘if Darwinism gives a true account of the human mind, and if the human mind produces all literary texts, all literary texts are susceptible to a Darwinian analysis’ (“Human Nature” 79). The main limitation of this approach in general is, of course, that literary Darwinism is a comparatively new field still. Apart from that, its reliance on the natural sciences also means that any headway in the field depends on breakthroughs in those fields first, and therefore, much work in evolutionary criticism is still rather speculative. Consequently, the evolutionary approach is currently on a level with other literary approaches, rather than being firmly on its way to encompass the entire literary field, like Carroll not only hopes but believes will eventually happen (*Reading Human Nature*). That being said, ‘Darwinian literary criticism is grounded in the large facts of human evolution and human biology’ (Joseph Carroll, “Human Nature” 103), and while its model of human nature is not comprehensive yet, there are many aspects that are hard to argue against. First and foremost, there is a certain appeal to the concept of ‘consilience’ – the unity of the sciences and the humanities, and the synthesising of knowledge from different specialised fields. There is a sound logic to the notion that everything we do is based in our evolved nature, even something as difficult to define as ‘art’. With the vast evidence of the natural sciences, it makes sense to think of the human being as an evolved whole, rather than a being split in two, its biological shell and its spiritual mind. I do not believe this insight diminishes the ‘magic’, if you will, of art. In fact, I believe the opposite. It makes it that more magical that there may be an evolutionary purpose to it; art helping us to survive and reproduce. If anything, this hypothesis *adds* to the extraordinary phenomenon that is art.

There is also an appeal to backing up a literary analysis with empirical research and to be able to show exactly why your argument is sound from an objective rather than subjective point of view. Empirical evidence can be used to construct a stable framework that can be applied in various ways to every single work of literature. This approach can help us examine how literary conventions function ‘within the economy of our needs and impulses’ (Joseph Carroll, *Literary Darwinism* 159), taking into account our evolutionary past *and* the individuality of literary style. The traditional study of literature is not meant to become obsolete. Methods like techniques of formal and historical analysis in the studies of genre and period, and terms such as ‘realism’, ‘symbolism’, ‘tragedy’, ‘comedy’ etc., are not redundant to the evolutionary perspective. Quite the opposite: evolutionary literary study must *incorporate* terms like these and provide a sociobiological *explanation* for e.g. techniques of narrative (Joseph Carroll, *Literary Darwinism* 84). Furthermore, the aim is to ‘reduce the multiplicity of surface phenomena to underlying regularities’ (Joseph Carroll, “An Evolutionary Paradigm” 128). In other words, to reduce the various themes, terms, and techniques in literature to representations of our underlying human nature and the variations thereof. To put it briefly, the goal is to connect the primary goals of our life-history, survival and reproduction, with nuances such as theme or style in a literary work (Joseph Carroll, “Human Nature” 78). In short, the appeal of this

approach is that we get the best of both worlds, while (hopefully, eventually) providing an exhaustive model of human nature – including its very prominent proclivity for art.

Emotions are integral to human experience, and they are, we can all hopefully agree, integral to our enjoyment of storytelling and the other arts. In my opinion, the evolutionary approach is highly relevant when wanting to investigate the emotions we feel when engaging in storytelling and the arts in general. As mentioned already in the introduction, strong feelings are usually involved when engaging in storytelling, regardless of its form, and this, at least, should prompt curiosity as to why this is the case. It is pretty much fact that we evolved emotions through natural selection for various adaptive purposes – those exact purposes and the exact design of the emotion systems are still debated, but it seems highly relevant to consult evolutionary psychology when investigating emotions in any way. Combined with insights from EP, the evolutionary approach provides a convincing explanation for why we feel such strong emotions when engaging in stories, and why they continue to hold our attention even when the emotions are unpleasant. When taking the purpose of evolved emotions into account, it is clear that they were designed to guide our attention towards what is biologically important.

The evolutionary approach thus also provides a model that links the long term of evolution to the short term of an author making choices about certain details (Boyd, *Origin of Stories* 322). In relation to emotions, we can explain why the author has included this or that detail, why it is written in this or that tone, why an action or a characteristic is described in this or that way – which is not just to inform the plot, but to evoke a certain emotion in the reader. The author's goal is to 'secure and maximize [the] audience's attention' (Boyd, *Origin of Stories* 323), and this is done by evoking emotions. In relation to my next point of discussion, regarding what may be 'appropriate' for children to read, Hunt notes that what is lacking from that particular discourse and the understanding of children's literature 'is a sense of perspective and an ability to perceive what books are actually doing and saying' (165), instead of what we, as adults, might imagine them to do or say to the child reader. I believe that an evolutionary approach to children's books would help shed a light on this issue, and inform adults – whether parents, teachers, or librarians – what they can expect their child to 'get' from a story.

Pullman's *His Dark Materials* in particular is relevant for this discussion. The series 'dismantles the Romantic myth of childhood innocence and erects in its place a narrative about experience' (540). There is no 'now you are innocent, now you are not' moment – rather it is a narrative that emphasises that with experience comes certain knowledge. Its popularity is perhaps a testament to the appeal of such a story, for children and adults alike. The third and final book in the trilogy was, for example, the first children's book to win the Whitbread Book of the Year Award in 2002 (539). Pullman's image of Dust turns out to correspond well with the maturation of organisational adaptations – or, to put it in more familiar words, the accumulation of experience – as it is attracted to 'consciousness'

and collects around children when they reach puberty and continues to accumulate around them in adulthood, a period where, arguably, their knowledge of and experience with the world reaches a new complexity.

Pullman's idea of Dust, I can almost say with certainty, did not originate in studies like the one I am engaging in. There is an underlying logic in the argument I have made here, which is intuitively present in many of us. Pullman states in an essay that 'intensity of feeling is what both fuels and rewards childhood play and reading alike' and that, through play and reading, 'we discover ... areas and depths of feeling it would be hard to reach otherwise' ("Imaginary Friends" 309), and thus shows the intuitive understanding of human nature that Carroll argues to be particularly present in authors ("Human Nature" 103). Pullman goes on to claim that the experiences he had with fiction built 'patterns of behaviour and expectation into [his] moral understanding' ("Imaginary Friends" 310), which ties in surprisingly well with what has been argued in this paper. In practical terms, what can we use such an insight for?

It may be a useful argument in the debate surrounding children's literature and censorship. According to Mickenberg and Vallone, 'the idea of innocence as a defining feature of modern childhood forms a basis for innumerable programs and policies affecting children, including censorship, which has historically been undertaken under the guise of protecting children' (15). Censorship of children's books is particularly evident in the challenging and banning of books from libraries and schools by local or state legislatures. As it says in an *Independent* article focusing on Banned Books Week in 2017, when we think about banned books, we might think about something along the lines of bomb-making instructions, whistle-blower memoirs, or perhaps something deemed taboo and inappropriate even for adults, such as Nabokov's *Lolita* (Usborne). 'But what is more common are incidents ... in which parents take exception to something found in a book their child has procured from school, and immediately try to get it withdrawn from circulation' (ibid.), in order to protect their children from the supposed bad influence the book in question will have on them. A further issue in relation to this is that children's literature is not only viewed as entertainment, but also as important to their overall education, and thus it is 'prey to a whole area of educational and psychological influences that other literatures escape' (Hunt 4). There have also been many examples of changed content in children's books, e.g. when translated from other languages and cultures, to 'protect' children from taboos about subjects such as death or sex (Hunt 16).

Inherent in the main argument of this paper is the fact that children and adults 'work' the same way: they are equipped with the same adaptations from nature's side, they receive input in the same way, and are designed *for* this input in the same way. As I pointed out in the storytelling section, a narrative needs certain elements in order to *be* a narrative – this is no less true for children's books than adults'. What makes them different is the simplicity of the writing style and the elements included, so that children can understand the story according to their maturity level. Hunt cites the

author Heinrich Hoffman as saying that ‘the child does not reason abstractedly’ (52), and this is an important point: tell them directly, and they do not necessarily learn, but let them experience, and they just might, because abstract reason is not needed – their mind takes care of the business unconsciously, all on its own. Author C.S. Lewis also discusses the inhibitions ‘being told’ brought him: in his view, ‘an obligation to feel can freeze feelings’ (“Sometimes” 58), and he believed that stories (in his case, fairy stories) can steal past those inhibitions and say ‘what’s to be said’ better than anyone telling it directly (ibid.).

As mentioned earlier, the idea of childhood innocence is a recent invention and is not ‘something inherent to the child’s being’ (Mickenberg and Vallone 15) – earlier, they were not shielded from the (sometimes harsh) realities of life, such as sex and death. Contrary to modern and popular belief, some characteristics of child behaviour may indicate that these harsh realities are in fact a natural part of what we term ‘childhood’. Pretend play, for example, is a large part of what we recognise as child behaviour, and while the word ‘play’ indicates fun and a lack of seriousness, it can in fact be viewed as the exact opposite. Gottschall argues that ‘children’s play is not escapist’, rather, ‘it confronts the problems of the human condition head on’ (*The Storytelling Animal* 32). And as Wood further argues, ‘adults’ construal of children’s play as “innocent” betray their ignorance (or amnesia) about children’s naked pursuit of power and prestige through play’ (543). If children’s play is not escapist, why should children’s literature be? That their pretend play involves the darker aspects of the human condition indicates that practicing it is innate, meaning there might be an adaptive function to it – which makes it an important activity. In fact, Wood argues that ‘innocence is “a kind of social death” because it denies children a part of their humanity’ (542). Humanity – human nature – is not ‘innocent’. There is no such thing in adaptationist terms. Wood also makes a note of distinguishing between innocence and moral virtue – childhoods are punctuated by innocent acts of cruelty: they are innocent, because there is no *intention* of being cruel, but ‘cruel nonetheless’ (544). This desire to keep children innocent might in fact keep them from becoming ‘conscious’ and therefore ‘fully moral beings’ (545). Recall that children and adults are different in degree, not in kind. Children are not bearers of a moral value that is lost when adulthood is reached. In fact, their morality can be argued to be less developed than that of adults, as it, like everything else, comes from experience. It is not uncommon to see a child walk over to another child and take whatever they are playing with right out of their hands, proclaiming ‘it is mine!’, and stalk off with it, leaving the other child crying behind. We do not see adults behaving in this manner – it is simply not acceptable behaviour, and they would be condemned for it by their social group, because they know better. Children (of a certain maturity) do not.

Paul Ringel, in an article for *The Atlantic*, puts particular emphasis on what is also the focus of this paper – the emotional experience of children’s books. He notes that librarians and teachers reject works that can be ‘emotionally inappropriate’ for children, and that the general wish of the adult is to

‘minimize children’s anxiety’ (Ringel). An evolutionary insight related to negative emotions is particularly relevant for this discussion, since it is generally themes and subjects related to various negative emotions that are most frequently challenged and banned. Concerned adults’ intentions are good, but perhaps misguided. We want to protect our children from all that is not positive and happy. That makes sense. But by keeping them from gaining experience with the more negative aspects of life, particularly in a secure and risk-free environment like the one fiction provides, we are arguably doing them a disservice. What we as adults may forget, is that childhood is not the dreamy fairyland we might imagine or remember ourselves (and, as we saw in the analysis, it is not so in children’s books, either).

Ringel includes a very relevant example in his article, where a librarian contacted an author of a children’s book whose protagonist had an older sibling with an addiction, and told him that ‘for now ... [she] just need[s] the 10 and 11-year-olds [*sic*] biggest worry to be about friendships, summer camps, and maybe their first pimple or two’, indicating that the topic of addiction was too emotionally mature for her readers, too serious, and therefore inappropriate (Ringel). This response arguably reflects what this particular librarian *wants* the children to worry about, rather than what they *do* worry about. As Hunt states, ‘we want to select what the children may or may not know, and at which stage in their development they may know it’ (169). The truth is that we have no such control, and that there will be children somewhere in the world who do have siblings grappling with addictions. Their worries will likely not be about pimples (or perhaps not *only* be about pimples). But even for well-cared-for, healthy, and well-fed children in happy families, there will be worries beyond the ones listed above. Childhood is, with these banned books or not, an anxiety-filled period of life, just as the rest will be – because, as I have noted earlier, we are hardwired to *be* anxious about what will come next. This will not change just because we read nothing but happy stories. There is no difference between adults and children in this respect, except in how much experience they have and thus what exactly they are anxious about. Books that engage negative emotions do not necessarily make us more anxious: rather, they could be argued to reflect the anxiety we already feel and give us experience that might come in handy later in life. Ideally, parents of the above kind would protect their children from this knowledge and these realities completely, until they are of a certain age. But what then? We just spring the realities of life on them out of the blue? Chances are they would not handle that well. We need practice and experience, from very early on, with the realities of the world we live in, practice and experience that will gradually widen and accumulate during our lifetime – otherwise it will be impossible for us to make sense of our environment, of our place in it, and of the people around us.

C.S. Lewis especially distinguishes between two meanings behind the notion of not wanting to frighten children. The first meaning is that we must not ‘do anything likely to give the child those haunting, disabling, pathological fears ... in fact, phobias’ (“On Three Ways” 47). This view seems

perfectly logical: giving children phobias is not likely to help them in any way, rather, it might inhibit them for the rest of their lives. The second meaning is that ‘we must try to keep out of [the child’s] mind the knowledge that he is born into a world of death, violence, wounds, adventure, heroism and cowardice, good and evil’ (ibid.), and thus we group these realities of life into a box titled ‘forbidden for children’. This seems less logical, as these aspects are (largely) unavoidable truths of life. Let us entertain the thought that maybe – just maybe – children are drawn to the ‘forbidden’, because knowledge of the forbidden has real adaptive value. (Keep in mind, once again, that the forbidden is not so for adults – in fact, it is mostly considered a natural part of adult life, or at least an occurrence that is not thought much of). As has been argued in this paper, our emotions are part of our motivational systems and serve to drive us towards input which has adaptive value. If children’s fascination drives them towards certain themes and subjects, should we not entertain the idea that perhaps this is not (always) a bad thing? That perhaps they are only doing what evolution designed them to do? Of course, nothing is black and white, and since our environment shapes us as much as our genetic inheritance does, what we are exposed to is not unimportant. The point is not necessarily to let children read horror fiction, or to make children’s literature that is modelled on adult horror fiction. Preferably, we would all protect our children from harm for the rest of their lives. This is, however, impossible. So, if we cannot do that, why not do the next best thing – allow them to gain the (non-dangerous) experience needed for them to cope with unpleasant and arguably dangerous situations themselves?

Chapter 5

5.1 Conclusion

I have shown how an evolutionary approach to human nature, to the human mind, and to our peculiar disposition for creating and consuming art can provide a framework for a literary analysis that takes into account our evolutionary history and thus can inform us not just of what underlying species-typical characteristics inform the elements of a given story, but also what a reader may take from it. More particularly, I have argued that we are motivated by our emotions to pay attention to story, because we gain adaptively valuable input from the low-risk, vicarious experience it provides.

I have shown how our ‘human nature’ can be boiled down to a species-typical behaviour that originates in cognitive behavioural systems, which guide us towards the primary organising principle in our behaviour, namely what is termed ‘life goals’. A life goal can be to carry on one’s genes by reproducing, for example, along with various other motives related to the life history of the human species, but also, as is the focus of this paper, the development and organisation of cognitive adaptations. As I have emphasised in relation to this, we are born with a fair deal of ‘pre-installed’ neurocognitive machinery, but we could never be born with such complex and specialised knowledge

as that which is expressed through e.g. our social skills and our ability to infer the reactions, beliefs, and intentions of the people around us – essential skills for the enhancement of fitness and reproduction in the hyper-social world of *Homo sapiens*. However, we *are* born with the basic circuitry needed for further development and organisation of such skills. The next thing needed is external input that will help this development, such as stories.

After arguing for the evolution of emotions as a guide for directing attention and behaviour towards that which has adaptive value for us, I have elaborated on the evolved purpose of each basic negative emotion (as defined by Ekman), and through this argued for the importance of gaining experience with each, particularly in a low-risk, low-energy, and vicarious setting. I have shown how negative emotions have been essential to survival and reproduction in our evolutionary past: how a bias towards detecting cues of danger or other unfavourable situations have indeed made us a negativity-focused species, but has also made us capable of responding adaptively when necessary. Reacting with anger to cues of a low WTR towards oneself, for example, guides our behaviour in a direction that will hopefully result in an increase of that WTR and thus of our fitness. I then proceeded to combine these hypotheses with an evolutionary literary analysis of the six chosen children's books, where I provided examples of the beforementioned emotions in these books, how they were described in characters and how they were evoked in readers, based on the assumption that the reader sympathises with the prosocial characters in a given story. I concluded that this evocation of emotions serves as experience that helps develop and organise the reader's cognitive adaptations and thus makes him or her better able to deal with and respond to such emotions and their related situations in the future.

I then proceeded to discuss the choice of an evolutionary approach to literature, and to present obstacles and limitations as well as advantages and benefits. In the theory section, I gave a brief introduction to childhood and children's literature, where I also emphasised that children and adults are different in degree rather than kind, and that children will benefit from the same experiences that adults will – the only difference being that they might need input of less complexity, not less gravity. I take up this point again in the discussion, where I argue for ways we can use the above insights in our practical approach to the production of children's literature as well as to inform our notions of what children should and should not read, in terms of what is appropriate. In relation to this, it would also have been interesting to approach this subject with a focus on genres and plots, and do an evolutionary literary analysis that could identify how the genres and plots that children are attracted to differ from the ones adults are more likely to read, and how this reflects the differences in biological and cognitive maturity.

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