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# Pain, Sadness, Aggression, and Joy: An Evolutionary Approach to Film Emotions

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**Abstract:** Based on film examples and evolutionary psychology, this article discusses why viewers are fascinated not only with funny and pleasure-evoking films, but also with sad and disgust-evoking ones. This article argues that although the basic emotional mechanisms are made to avoid negative experiences and approach pleasant ones, a series of adaptations modify such mechanisms. Goal-setting in narratives implies that a certain amount of negative experiences are gratifying challenges, and comic mechanisms make it possible to deal with negative social emotions such as shame. Innate adaptations make negative events fascinating because of the clear survival value, as when children are fascinated by stories about loss of parental attachment. Furthermore, it seems that the interest in tragic stories ending in death is an innate adaptation to reaffirm social attachment by the shared ritual of sadness, often linked to acceptance of group living and a tribal identity.

**Keywords:** attachment, cognitive film theory, coping and emotions, evolutionary psychology, hedonic valence, melodrama, sadness, tragedy

Why are viewers attracted to films that contain many negative experiences and endings? It seems counterintuitive that tragic stories can compete for our attention with stories that have a more upbeat content. The basic mechanisms underlying our experience with pleasure and displeasure, which psychologists call positive and negative hedonic valence, would seem to lead us to prefer beneficial and fitness-enhancing experiences and to avoid violent confrontation with harmful experiences. We are drawn to tasty food and attractive partners and retreat from enemies or bad tasting food. At the same time, however, we are fascinated by Fincher's disgust-evoking scenes in *Se7en* (1995), films with wicked men like Dracula, or sad stories like *The English Patient* (1996). Comedies are packed with scenes based on shame and embarrassment and many melodramas deal with the tragic loss of close relations. People are eaten in horror movies, and children's movies often include fearful situations and

painful temporary loss of attachment. The question of why we are drawn to painful experiences has intrigued scholars since Aristotle provided his famous theory of catharsis as an explanation for the fact that people are willing spectators of tragedies.

In this article I will argue that the interest in stressful, comic, or sad fiction can only be fully explained within an evolutionary and functional framework. Our attraction to fiction in general is fuelled by fascination with many different vital concerns for humans. Fiction consumption is rooted in play. Mammals playfully and hypothetically try activities that are vital for their survival to prepare for the possibility of having to deal with the real thing. An evolutionary approach presupposes that films activate many different emotions, each developed to serve a specific purpose.

The main idea in a psychological approach based on neuropsychological theory and evolutionary considerations is that emotions serve as motivators for actions that enhance our fitness. Fear, lust, love, sadness, aggression, and other emotions have been developed to support actions that are vital for survival. This approach differs from the psychoanalytic approach that often focuses on one emotion or drive—sexual desire. Psychoanalysis presupposes that rational behavior is in conflict with the drives. From an evolutionary angle, pleasure leads to urges that generally are fitness-enhancing. Emotions fuel our cognitive capacities to come up with solutions to vital concerns. Fiction films are simulations of how to deal with vital problems, whether they involve the problem of finding a partner in romantic films, coping with social conflict in comic fictions, or relating to loss and death in tragedies.

Different types of films rely on different aspects of the complex human mind. Even if viewers are attracted to positive experiences, existential relevance will motivate them to watch sad movies. I suggest that some film types, like action films, rely on coping and provide pleasure by mastering challenges. Others, like sad melodramas, defuse coping tendencies and create acceptance. Comedies also support acceptance, although by radically different means. Finally, I will show how films for children support the view that viewer interest is very much controlled by dealing with vital concerns, even if such topics temporarily evoke painful feelings.

### **Action Films and Video Games as a Training Ground for Coping**

The fundamental design of pleasure and pain is to approach what is fitness-enhancing and avoid what is harmful. However, simple mechanisms to avoid approach would only work for primitive organisms with a few hard-wired systems of response. A medium complex environment consists of pleasurable attractors as well as unpleasant and possibly harmful repellents. For instance, an animal or a human being wants to find food, but also wants to avoid becoming someone else's meal. To maneuver in a complex environment with stimuli

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that cause pleasant as well as unpleasant experiences demands more complex mental structures, unless the living being chooses to do nothing, which will not enhance fitness in the long run. Hedonic valence, the mechanism that determines whether a given experience has a positive or negative value or tone, relies on more complex adaptations and functions.

Brokering between negative and positive experiences are the central mechanisms of setting goals and making plans, thereby creating a hierarchy among the experiences. Goal setting is one of the central elements in basic story telling, if not the constituting feature. Indiana Jones wants the Ark and therefore accepts a series of negative events to achieve his goal. The hobbits suffer through many negative events to destroy the evil ring. Many young men confront dragons to win a princess. The negative experiences in such fictions must keep their negative valence, because otherwise we would not fear snakes or dragons. But the negative emotions are integrated into the positive goals in such a way that the negative events pose activating challenges. Just as mountain climbers suffer hardships and a very high risk of death to climb to the top of Mount Everest, so viewers should, to some degree, be motivated to be exposed to aversive stimuli. If Indiana Jones were not motivated by high order goals, his hardships in jungles and snake pits would not be quite as enjoyable. And if the police detectives in *Se7en* did not have important objectives, the disgusting phenomena would not contribute to overall interest.

If a person is confronted with a dangerous or disgusting creature, he or she can choose fight or flight. The emotional reaction and its hedonic valence reflect the person's evaluation of coping options and coping potentials. A person confronting a tiger in the wild might feel fear if equipped only with bare hands, fearful aggression if equipped with a spear, and playful aggression if equipped with a powerful all-destroying laser gun. The arousal triggered by a scene of a confrontation with a tiger does not have a fixed hedonic valence; the valence is calibrated relative to coping potentials and goals. It is also calibrated in relation to broader values and concerns. Heroes risk their lives to save damsels in distress, thus placing fear of danger lower than loyalty and romantic attachment.

A narrative is based on creating a hierarchy of valences that motivate action, integrating a series of sub-activities and goals into an overarching goal. Thus, the goal recalibrates the hedonic valence of the sub-activities in relation to that goal (see Tooby and Cosmides 2000). The recalibration of valence systems is not only linked to action films. In art films, physical coping is supplanted with a crisis situation in which the protagonist needs to recalibrate his or her value system (Grodal 2000). For example, in Ingmar Bergman's *Wild Strawberries* (1957), the old man is forced by destiny to re-evaluate his values.

The main outlay of the basic emotional machinery located in the limbic system is relatively old and simple, and the sophistication of emotions typical

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of humans (and primates) is related to a radical expansion of the neo-cortex, especially the frontal lobes (see Goldberg 2001). Such higher neocortical processes modify the basic and primitive limbic functions. Much of this expansion of the frontal lobe deals with how to control actions through a sophistication of responses. This can be done, for instance, by setting long term goals and by making hierarchies and compromises between different concerns and their emotional support. Central to many films, especially the so-called dramas, are deliberations that attempt to set priorities between different concerns.

Even if the arousal created by the confrontation with negative phenomena needs to be negative, it is likely that there are built-in mechanisms that elicit pleasure out of confrontations and motivate people to cope. Part of the arousal caused by a disgusting monster may be transformed to positively valenced emotions if the viewers simulate protagonists that have sufficient coping potentials. The pleasure of shooting down the vampires in *From Dusk Till Dawn* (1996) is that much greater because they are very disgusting. In this way, the arousal created by disgust can be transferred to the positive arousal created by aggressive coping. This makes functional sense because a simple system of hedonic valence in conjunction with approach/avoidance mechanisms would have created obstacles to efficient control. It may be vital to prepare mentally to boost the effort to deal with negative phenomena.

The idea that such mechanisms for mental boosting exist has gained support by some experiments involving video game players. The brains of video game players release large amounts of dopamine—a pleasure-creating neurotransmitter—during play that requires challenging motor control (see, e.g., M. J. Koeppe et al. 1998). The psychologist Niklas Ravaja and his colleagues (Ravaja et al. forthcoming) have shown that there is a difference in hedonic valence that depends upon whether an intermediary failure is part of an active coping situation or whether the player watches a taped representation of his own performance. In open coping situations even short-term failures may create positively valenced arousal in the video game player; whereas the arousal is negative when the player is seeing a replay of the failure to cope. Under those circumstances, the player has no active coping potentials.

The film equivalent to pleasure by coping would be that the viewer might have vicarious pleasures connected to protagonists in dire circumstances but with coping potentials. This modifies Zillmann's and Bryant's (1994) description of the pleasure connected to painful experiences in film. Zillmann argues that the pleasure is solely derived from the positive outcome: "Great enjoyment rides on the back of great distress" (452). This point of view, however, disregards the mental mechanisms that motivate agents, including viewers, to continue in a stressful environment. Part of the pleasure exists before arriving at goals, like the pleasure-producing dopamine release described by Koeppe et al. (1998). Achievement of big goals might be pleasant, but also may pro-

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vide a feeling of emptiness just as intense coping, even in adverse circumstances, may provide pleasure. Even if coping in films as in real life is goal-directed, part of the pleasure is derived from the process leading to the goal.

The nineteenth-century German psychologist Wilhelm Wundt argued that the relationship between arousal and pleasure could be described by the so-called Wundt curve. Increasing stimulation and arousal led to increasing pleasure to a point after which increasing stimulation would lead to decreasing pleasure and ultimately to un-pleasure. Berlyne (1971) has used Wundt's ideas to propose a bio-aesthetic "work out" theory of how aesthetic works stimulate the brain by dynamic variations of stimulus complexity. One also may get pleasure out of an increase of arousal followed by a quick decrease, the so-called arousal jag. Rubin (1994) has used "uses and gratification" theories on media consumption. Viewers use media products to regulate their level of arousal. Stressed people want calm programs whereas unstressed people want action. Thus, the relation between hedonic valence of parts and of goals is complex, because negative elements are also challenges. Young people, especially young men, often seek sensation through horror stories such as Quentin Tarantino's *Kill Bill* (2003 and 2004) to increase the level of challenge, whereas older people often avoid high levels of challenge.

### **Sad Melodramas and Tragedies as Expressions of Acceptance and Attachment**

Coping theories and arousal-as-challenge theories explain positive emotions of viewers in some types of fiction. Zillmann (1996) explains other aspects with a reappraisal theory that says that "all's well that ends well." However, because many tragedies have highly negative outcomes for likeable protagonists, this does not explain the fascination of tragic stories.

The mental function of tragedies is the absolute opposite of films aimed at coping. Tragedies deal with coming to terms with a failure to cope and acceptance of destiny, loss, and death. The emotion evoked by melodramas and tragedies is sadness, and sadness is characterized by a radical diminishing of coping (see Lazarus 1991). Crying and grief still possess elements of coping in their effort to repair the loss that typically is an attachment. Crying may have its roots in efforts by infants to attract attention. Grief includes elements of anger. College students watching a film about the shooting of John Kennedy showed sympathetic reactions (Averill 1968), an indication of a persistence of anger. Pure sadness is linked to a painful, passive acceptance that is supported by parasympathetic (anti-coping) reactions. This has been measured in children watching the death of Bambi's mother.

Even if tragedies are about death or the inevitability of death, they also integrate a series of other acceptance themes, like submission and awe. Zhang Yimou's *Hero* (2002) links the acceptance of death with an acknowledgement

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of hierarchy and the idea that society is more important than the individual (see Figure 1). I suggest that tragedies and melodramas are about coping with failure and death or coping through acceptance and submission. Negative endings in melodrama are often flagged early on, as in the telling of the tragic outcome at the beginning or telling a well-known story, like filming *Romeo + Juliet* (1996) or *Medea* (1988) (Grodal 1997). Viewers therefore may work on acceptance and coping throughout the film. Love tragedies like Baz Luhrmann's *Romeo + Juliet* or Zhang Yimou's *Hero* may boost the love attachment by linking the unconditional acceptance of the loved one to the acceptance of death as the absolute giving up of control and coping. Sadness and grief is, as pointed out by Bowlby (1969), a phase between attachment and detachment, and as such is "Janus-headed." Our sadness in reliving the Romeo and Juliet story emphasizes love attachment as well as a painful acceptance of separation.

James Averill (1968; see also Izard 1991) argues that grief is a biological reaction. Its function, he says, is an evolutionary adaptation to secure social cohesion in humans and primates, for whom group living is vital for survival, by making loss of attachment into a strongly negative biological reaction. He further argues, based on Konrad Lorenz's theories, that such strong bonds of attachment only exist in very aggressive species in which cooperation is vital. Sorrow and grief are central antagonists to aggressive coping by creating social cohesion. Burial rituals, universal among humans, define individuals as part of a community. Tragedies and melodramas often transform grief to common sadness, a ritual of shared negative attachment, and this might be an aspect of what Aristotle meant by catharsis. Thus *Romeo + Juliet* not only emphasizes the absoluteness of the love bond, but also the devastating consequences of the aggressive behaviors of the two rival clans and the need for social bonding. *Titanic* (1997) powerfully expresses love attachment through sadness, and the setting emphasizes the value of human bonding vis-à-vis the

Figure 1. The characters in Zhang Yimou's *Hero* show their heroism sacrificing their lives in submission to the social order.



diverse classes. There is a strong psychological reason for the way in which war and tragic love often are intertwined in sad melodramas.

In *Hero* the transformation of very aggressive coping into sad acceptance is part of creating a tribal identity that has priority over individual identity. The protagonists plan to kill the king of Qin as part of some revenge schemes. However, two of the protagonists decide to give up their plan and accept death. In the film, acceptance of a social hierarchy is important for peace and unity in China and acceptance of death is the ultimate act of submission. Submission to other beings is central to the reduction of aggression in the animal kingdom as well as among humans. The question of submission to dominance has, however, often been suppressed from public debate. This suppression is due to the abuse of the idea of submission in authoritarian and totalitarian societies, and to the conflict between egalitarian ideas and ideas of submission as a means of reducing aggression. The articulation of ideas of submission and acceptance in films and literature are, therefore, often bracketed by being portrayed in stories taking place in the past, especially in feudal settings. Acceptance is central in such a community, conveyed by means of sublime, passive feelings including awe. *Hero* excels in scenes focused on awe and sublime scenery aimed at evoking submissive abandonment.

Constituting a community among many people may be accomplished through the temporary removal of coping attitudes of individuals and the activation of passive acceptance that are linked to feelings of a common goal, common destiny, or some other form of shared identity. David Sloan Wilson (2002) has argued for the enhancing effects of fitness by allowing social imperatives to be backed up by metaphysical ideas that people subject themselves to, despite the lack of an objective basis. A central myth in Christianity, the acceptance of Jesus's death is used as a general argument for the community's submission to ego-limiting rules. In my analysis of *Gone With the Wind* (1939) (see Grodal 1997, 2000) I point out that passive melodramas of acceptance often evoke supra-individual agencies, as indicated in the title of the film; the wind, nature, and destiny rule. Throughout history, death rituals have been used to express social bonding, and sad melodramas are the film equivalent of burial ceremonies.

Even on an individual level, active coping might in some situations be a waste of precious energy. Stories of active, victorious coping can be balanced with stories of failure or even of acceptance to enhance fitness. It may be that the positive goal of tragedies and melodramas is acceptance and coming to terms with situations in which coping is impossible, costly, or leads to dire consequences. At the same time, melodramas are training experiences for empathy and models for calibrating the coping versus acceptance mechanisms. Many "weepies" intertwine the working out of loss with establishing close bonds within a female group (Kramer 2007). If acceptance enhances fitness to

***Tragedies and melodramas often transform grief to common sadness, a ritual of shared negative attachment.***

counterbalance active coping, I speculate that it might be backed up by some kind of satisfaction. Weeping is the only negative emotion that is based on the parasympathetic nervous system whose main function is to support relaxation, food intake, and sex, in contrast to coping that is supported by the sympathetic nervous system.

### **Comedies and Sad Melodramas are Different Ways of Diminishing Coping**

Laughter and other expressions of comic experiences have the effect of defusing a coping attitude. Laughter serves as a release for negative emotions caused by failure. When clowns fall or lose their pants, the resulting laughter may provide release from the shame caused by the lack of basic control. It also, however, may be due to cognitive failures, as in the problems of mistaken identity so loved in comedies, or failure to accomplish a project, as when Laurel and Hardy lose control. Thus, sad crying and mirthful laughter represent two different ways in which evolution has worked to solve the same problem—to control strong, negative emotional reactions to some events, although sadness and laughter have opposite hedonic valences. Both adaptations bring about a defusing of voluntary motor coping. The physical side is that in both crying and laughing, lungs and larynx exhale air, but in crying there is also a flow of tears. The mental side consists of processes that diminish the reality of the emotions and their objects so that painful coping reactions can be diminished or extinguished. The overlapping function of tears and laughter even leads to a temporary substitution. You may shed tears of happiness (Tan and Frijda 1999) and laugh hysterically because of negative events. Both Von Trier's comedies and sad melodramas have the same core of shame and embarrassment, but comedies and sad melodramas are constructed to elicit opposite emotional valences.

The function of laughter redefines the reality status (Grodal 1997, 2006) of goals and motivations. The goals and values are deemed unreal. In this psychological environment, real means "immediate goal for motor action," and unreal means "not immediate goal for motor action." Thus, the brain's felt evaluation of reality status does not correspond to the absolute values of reality. A dark landscape may be experienced as unreal because it impedes motor interaction (Grodal 2005) and in comedies, failure to cope in a successful way will elicit laughter that wipes out the goal and the pain associated with coping failures. Laughter activates nucleus accumbens—a limbic pleasure center—in order to wipe out the negative feelings that have caused arousal. Laughter is thus a kind of innate safety valve or painkiller.

Even if comic effects, as argued in Grodal (1997), have many causes, they are centrally evoked by a series of negative social emotions, like shame and embarrassment, which are transformed into experiences of acceptance and pleasure by innate mechanisms. Thus, comedies are safety valves for the in-

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creasing role of social cognition and social life as a source of negative emotions. Sadness and weeping caused by tragedies is linked to empathy and acceptance related to higher order existential and social goals, including social cohesion. Whereas action films are linked to very old and fundamental fight or flight mechanisms, comedies and tragedies are linked to problems that are especially prominent in evolved humans and some primates.

### **Playfulness as the Origin of Fiction and Its Role in Modifying Emotions**

Comic reactions and fiction about separation and death are special elements in mechanisms for a much more general appraisal of reality that modifies the strength, valences, and action tendencies of emotions. Such mechanisms include play and fiction, with play at the very root of the development that has led to our sophisticated cognitions and emotions. In a romantic perspective, fiction and play are the very opposite of reality, reason, and practical fitness. From an evolutionary perspective, however, fiction and play have been central elements in developing higher cognitive and emotional control. Even if some fictions are daydreams, the central evolutionary reason for the development of the human's taste for fictions, whether happy, sad, or exciting, is probably that such hypothetical activities enhance the ability to cope with events that are as relevant for us as our prehistoric ancestors.

The evolution of brains from reptiles to humans has taken place by the adding of new functions to existing brain structures in a patchwork fashion. Centers developed for analyzing visual input from the outside and pre-motor circuits used to prepare motor actions also are employed to support mental simulations like playing, planning, imagining, and dreaming. When planning or imagining we "recycle" our memories, our stored perceptual input, and the preparation for actions that take place in the pre-motor cortex. Such hypothetical activities must maintain the emotional valence of online perceptions. It is important that dangers provide some kind of negative emotions and that positive goals evoke some kind of positive emotions to inform the advanced decision-making processes. However, if the emotional experience was identical to that of an online experience, it would create serious confusion. Our emotional experiences of fear, for example, exist in many different modes.

The evolutionary origin of this capability to make hypotheses that we use when watching film, planning and creating is found in playing. One of the universal traits of young mammals is their ability to play. Steen and Owens (2001) have outlined how the central aspect of play simulates engagement in a hunt, where the players take up roles of predator and prey. To play at being chased or to chase is an innate program in mammals practiced by human children universally. To learn to avoid predators by simulating a hunt has clear fitness-enhancing qualities. It is better to train for the avoidance of a predator before a fatal meeting with the real thing and for predators to train for hunt-

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ing. The hunter must activate pretended aggression, whereas the prey must activate fear in order to run and to hide. To play predator/prey presupposes that the appropriate emotions are activated. For example, in the Japanese animated film, Isao Takahata's *Grave of the Fireflies* (1988), the older brother pretends to be a bear that hunts his little sister. All humans have built-in play/chase programs that evolved millions of year ago with the rise of mammals. Thus, just as tragedies provide simulations of loss, playing chase provides the simulation of aggression and fear. Major fiction genres seem to be based on innate adaptations and it is reasonable to believe that they are not only pastimes, but also serve vital functions.

Playing chase trains us for skills that are, or have been, essential for survival. These skills include dealing with situations that cause negative emotions such as being threatened, caught, and eaten. If the escape activities were not somehow related to an activation of real fear, the play probably would not have value as a learning ground. If it were not coupled at the same time to some kind of pleasure or fascination, there would be no motivation. Many fiction and television films deal with enhanced versions of playing hunter and hunted. The viewer's fascination is derived from a specific version of the mammalian hunter/prey game, although the fitness enhancing value of learning the activity is probably small for most city people in the twenty-first century. The valence of the activities is partly maintained, but at the same time bracketed as having a special status of playful reality. On the surface it may seem as if the guiding principle of the enjoyment of chase fiction is the sheer strength of arousal—a ride on Wundt curve roller coaster. But the mechanism can only be explained fully by its evolutionary origin as an adaptation.

Laughter is one of the most radical means of modifying the emotional impact of events. Laughter has developed in intimate relation to playing. As pointed out by Provine (2000), the mechanisms of tickle and laughter evolved to circumvent the non-self detectors on the body surface that normally put the body on defensive alert. The tickle mechanism is hardwired for changing the emotional valence of touch from negative to positive when touched by those with friendly, playful intentions. Comedies are a special kind of play in which humans may act out, test, and modify their social relations by using laughter to control the negative emotions at the root of most comic fictions. Comic fictions are at the same time a kind of social grooming, as indicated in the laugh tracks of sitcoms. Here, the play mode defuses part of the pain because it becomes shared in the mental equivalent of a group tickling.

To play is a kind of simulation that mostly takes place in a first-person perspective and that presupposes emotional blends, as when the people who are playfully chased experience fear mixed with pleasure. Whether viewers use a first- or third-person perspective is important for understanding what kind of emotions we feel when watching fiction. If we use a first-person simulation

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when watching a sad melodrama about losing a close relative, we probably will feel sadness and sorrow. If we use a third-person perspective, we may pity the poor film characters. There are good arguments for thinking that first-person simulation is an important part of the film experience (Grodal 2001), although it has been argued, notably by Carroll (1998) and others, that reactions are almost exclusively in a third-person perspective. It seems probable that viewers activate play-like simulations in a first-person perspective that triggers self-feelings (Panksepp 1999) as well as simulations of those in a third-person perspective. Vogeley and Newen (2002) have provided brain scan evidence on fiction consumptions that seems to indicate that the basic mode for experiencing fiction is a first-person simulation, although readers and viewers also use more abstract third-person simulations when consuming fiction.

An exclusively third-person theory of witnessing the experiences of film cannot account for the way in which films and film emotions are molded by the PECMA flow (Grodal 2006) from perception to motor action via coping simulations or coping by bailing out by means of acceptance or even submission. The strong involvement in melodramas and the tears shed are therefore probably not only caused by pity and empathy, but also by first-person sadness. However, even if intense films evoke strong emotions because of vivid sounds and images, viewers need some mechanism that suspends part of their belief in the fictions, just as playing rough and tumble presupposes that children will suspend part of their aggression. The consumption of fiction demands that evaluators of the reality status block part of the response to fiction and produce an emotional blend like that felt in chase play.

Mary Beth Oliver (1993) has sketched a theory of meta-emotions to explain the attraction to negatively valenced films. Meta-emotions take other emotions as their object. If viewers empathize with characters, their meta-emotional capabilities might cause them to feel pleasure because of their capability to be very good, empathic people. The idea of meta-emotions provides an interesting emphasis on the role of third-person emotions in fiction consumption and the importance of the viewer's experience of his or her own emotions in relation to the characters (Bartsch and Viehoff 2003). However, Oliver's explanation only considers a third-person perspective, not the way in which viewers also simulate in the first-person and feel sadness. People have consumed tragedies for millennia. This consumption is compatible with the claim of Averill (1968) and Izard (1991) that sorrow and grief are innate adaptations related to creating social cohesion and emphasizing the importance of attachment. The negative valence of grief is central to these functions. Thus, even if viewers feel good about their empathy, painful sorrow must also be a central aspect of the interest in tragedies. The interest must furthermore be explained as an adaptation, because the satisfaction from experiencing tragedies does not have the same kind of positive hedonic valence as successful action or love stories.

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Generally, meta-positions create distance, whereas tragedies and “weepies” rely on a very strong emotional involvement and closeness that point to activation of self-centers in older parts of the brain (Panksepp 1999). Meta-emotions may offer an aspect of being fascinated by “weepies,” but their value seems to be stronger in relation to art films than to tragedies and tragic melodramas. Thus, I propose to distinguish between meta-emotions, in which some emotions are elicited by observing other emotions, and emotional blends, in which weeping caused by the death of the heroine in the melodrama is blended and softened by the background feeling that this death is fictional. Furthermore, *Hero* exemplifies how the acceptance of death and acceptance of subjection to a tribal identity are blended with awe because sublime feelings like awe evoke acceptance and a decoupling of tendencies for action.

### **Films for Children as Examples of Fiction for Emotional Training**

From an evolutionary point of view it seems likely that relevance of central existential situations is important for human fascination in addition to the basic pleasure/displeasure system. To focus interest on such central existential situations by means of art is fitness-enhancing (Dissanayake 1995). It is reasonable to think that stories with content linked to high order goals central for survival should mobilize mental functions that override reactions of avoidance created by painful events, and integrate such negative experiences into larger narrative patterns. Genres like children’s film, action/adventure, love stories, horror stories, tragedies, and melodrama may be defined by their dominant emotions. But these emotions are intimately linked to central existential problems like attachment, coping, mating, and death.

How does the presence of vital existential concerns motivate viewers to watch stories with very unpleasant material? *Lassie Come Home* (1943), *Bambi* (1942), *E.T.* (1982), *Finding Nemo* (2003), *Free Willy* (1993), *101 Dalmations* (1996), *Snow White* (1937), *Spirited Away* (2001) or *Home Alone* (1990) all deal with painful situations in which a child or childlike being loses and then re-establishes contact with a parenting agency. We know from Bowlby’s *Attachment* (1980), and later studies, that attachment is a discrete emotional drive based on estrogen derivatives and that it cannot be conditioned. To maintain the contact between child and parental person takes a deep rooted biological urge that motivates children to watch stories about attachment problems. We know from Winnicott’s (1971) *Playing and Reality* that a series of quasi-innate programs symbolically cope with attachment and the possibility of loss of attachment. The theme of loss and re-establishment of contact between child and parent is often intertwined with variations of the hunter/prey schema. Nemo is caught and must try to escape (Figure 2); E.T. is hunted by scientists; Bambi and his mother and the Dalmatians are hunted by human villains. The central focus of children’s stories deals with vital mammalian

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*Figure 2. Films for children, such as Finding Nemo, activate and strengthen innate fears of becoming prey for some gruesome dented predators.*

concerns: to cope with attachment in jeopardy and to master the roles of hunter and prey.

Although the films mentioned above have happy endings, it is obvious that the stories evoke a series of very negative emotions. Evil witches that stand for a total negation of mother principles abound, like the many evil stepmothers. In *E.T.* Elliot suffers separation from E.T. in a situation where awe and sadness of separation are blended to evoke acceptance. What controls the success of films, besides the concrete craft and salience of the movie, is their emotional relevance for vital interests. These interests are backed up by an innate disposition that accepts dealing mentally with negatively valenced events for some time, if they are vital for survival. Many of the stories focus on the need to be careful, drawing attention to how the world is full of dangerous phenomena. This disposition thus goes in tandem with the way in which cognitive interest in stimuli has a relative autonomy vis-à-vis the pleasure/unpleasure system that controls coping mechanisms so that humans are not fully prisoners of the Freudian pleasure principle.

The link between the fictional portrayal of negative phenomena and high order goals is also very prominent in horror films that not only focus on the fear of predators, mostly dead predators, or “undeads” as they are often called, but also on disgust and fear of bodily contamination. Horror films seem to fuse schemes for the avoidance of predators with the relation to dead humans. Anthropologist Pascal Boyer (2001) has pointed out that death creates a problem of ambivalence for friends and relatives. On the one hand, dead people are corpses, and thus sources of life-threatening infection. Disgust of corpses is an innate defensive adaptation. On the other hand, memories of the spirit and liveliness of the deceased continue to exist in the brains of their friends and relatives. This spirit does not, according to universal folk psychology, die with the physical body but continues to exist, often as an evil spirit. The biting

in horror stories like the Dracula cycle or the zombie films and the focus on disgust through bones, bodies, and killing of spirits are difficult to explain without an evolutionary context in which teeth were the supreme lethal weapons, and in which contamination from bodies and fear of spirits of the dead were vital.

### **Existential Interest Motivates Film Viewing and Modifies the Impact of Hedonic Valence**

It is essential to be aroused by and interested in negative phenomena in order to be prepared to deal with, confront, or flee from them. Thus, the cognitive, emotional, and perceptual need to be fascinated by events and mentally approach them through curiosity do not quite mirror the behavioral needs of physically avoiding such events. Villains like Snow White's stepmother or Dracula may be perceptually, emotionally, and cognitively fascinating because such villains pose vital survival problems. It is adaptive to attend to dangerous negative phenomena. From an evolutionary perspective, to be fascinated by evil seems to support the obtainment of vital negative information, which, for survival, must have priority over positive information.

Psychologist Douglas Mook (1987) has argued that the hedonic response is modulated by three different systems. The first system monitors incoming stimuli, and evaluates how interesting they are. The damage of one part of the brain's structure, the hypothalamus, leads to a total lack of such interest so that activation of interest is controlled by the sensory arousal system. The second system monitors and produces pleasurable reactions. Damage to this system will cause everything to be unpleasant. The third system provides reactions of displeasure. Films with negative elements may create sensory arousal that will control attention and create interest irrespective of whether the arousal leads to pleasant or unpleasant experiences.

The negative valence is still, however, normally a guideline for action. If perceptual cognition is aroused totally independent of the pleasure/displeasure system related to survival, we might have perverse responses to snuff films and borderline films like *Kill Bill*. Tragedies and melodramas evoke sadness through negative valence. Snuff films evoke sadistic pleasure irrespective of hedonic valence. The sad screams of victims of rape or torture might thus be a turn on.

### **Conclusion**

I have argued that our interest in negative phenomena is supported by a series of different adaptations such as playful coping, comic reactions, and interest in sad fictions. An important adaptation is also our general mechanism for reducing effect by means of redefining the status of reality. Emotions take part in a series of different adaptations, although they interact and some-

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times conflict. Experiencing negative phenomena in genres aimed at active coping is different from experiencing negative phenomena in genres aimed at coping by sad acceptance and both are different from experiencing negative phenomena in comedies aimed at coping by laughter.

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