Catching Characters' Emotions: Emotional Contagion Responses to Narrative Fiction Film

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I. Introduction

The opening sequence of Steven Spielberg's *Saving Private Ryan* (1998) elicits powerful emotions in most spectators. Many of these emotions are generated by our understanding of what the soldiers portrayed in the film were doing and what its impact would be, our knowledge of how poor their odds of survival were, and our sympathy for them. Yet some of our affective responses to the sequence are less the result of sophisticated psychological processes than of automatic, involuntary reactions to what we are perceiving. As we watch and listen to what is happening on screen, we immediately begin to experience feelings that mirror those of the characters.

During the beginning of the Omaha Beach sequence, we see different groups of soldiers riding in amphibious landing crafts. The camera shows us several characters but does not focus on any one soldier in particular. There are no cut-away shots showing us what the characters see, and there is almost no dialogue to tell us about the characters' identities, relationships, thoughts, or feelings. In spite of our lack of information, we have an immediate emotional response to what we perceive. While the soldiers are still in the boats, we are presented with eight close-ups in a row of different soldiers' faces. Some of the characters express fear, some anticipation, some anxiety, and others depressed resignation. While watching them, most spectators end up experiencing the same sorts of feelings that the characters are experiencing.[1]

This kind of mimicry is a result of emotional contagion, an automatic and involuntary affective process that can occur when we observe others experiencing emotions. In this paper, I examine the role of emotional contagion in our affective engagement with narrative fiction film, focusing in particular on how spectator responses based on emotional contagion differ from those based on more sophisticated emotional processes. Cognitive film theory has produced a rich literature on spectators' emotional responses to narrative fiction films, but almost all of it has focused on sophisticated emotional processes involving the imagination or cognitive evaluations.[2] More primitive emotional processes and reactions, like emotional contagion, have received far less attention.

Emotional contagion is a significant feature of spectators' emotional engagement for at least two reasons. First, because emotional contagion requires direct sensory engagement and involves automatic processes, it is unique to our experience of audiovisual narratives and thus represents one way in which our emotional engagement with film narratives differs from our emotional engagement with literary narratives. Second, because emotional contagion responses do not involve beliefs or the imagination but are based on automatic and involuntary processes, spectators' experiences of emotional contagion will be virtually identical to real world experiences of emotional contagion.

I begin by briefly explaining emotional contagion and the processes involved in it. Next, I consider how film elicits emotional contagion. I then argue that spectator responses based on emotional contagion are unique and should be clearly distinguished from responses based on

• Emotional contagion in *Saving Private Ryan* (1998).

other emotional processes. Although cognitive theory has focused primarily on sophisticated emotional processes, Noël Carroll, Carl Plantinga, and Murray Smith have all examined emotional contagion and its role in spectators' emotional engagement. I draw on their work in this paper, elaborating some of its features and disagreeing with others. My main concern is to highlight the unique nature of emotional contagion responses, which I believe has been underemphasized.

II. Emotional Contagion

A Definition

Psychologists Elaine Hatfield, John Cacioppo, and Richard Rapson define emotional contagion as 'the tendency to automatically mimic and synchronize expressions, vocalizations, postures, and movements with those of another person, and, consequently, to converge emotionally'.[3] In other words, emotion is transmitted from one person to another; it is as though one individual 'catches' another's emotion. Philosopher Max Scheler describes this process as 'emotional infection'. In most cases of emotional contagion, the transfer of emotion is 'relatively automatic, unintentional, uncontrollable, and largely inaccessible to conversant awareness'.[4] Contagion happens so quickly that we are rarely fully aware of the process as it happens. This is not to say that we never realize that contagion has occurred but rather that the process itself is outside of our conscious control. Lauren Wispe explains that, 'emotional contagion involves an involuntary spread of feelings without any conscious awareness of where the feelings began in the first place'.[5]

Unlike more sophisticated emotional processes, such as empathy, emotional contagion occurs in numerous species, the vast majority of which are not thought to possess the capacity for self-knowledge. Stephanie Preston and Frans de Waal have recently hypothesized that emotional contagion developed before more complex emotional processes and that it involves fast, reflexive sub-cortical processes (directly from sensory cortices to thalamus to amygdala to response). Empathy, on the other hand, involves slower cortical processes (from thalamus to *cortex* to amygdala to response). If this hypothesis is correct, it helps to explain why emotional contagion is so much quicker and more automatic than related affective processes.[6]

Preston and de Waal's hypothesis that contagion does not involve the cortex implies that although contagion results in shared feelings, it does not in and of itself involve or lead to understanding of others or their emotions. This is an important point that needs to be emphasized. Scholars working on empathy and simulation often confuse or conflate empathy and contagion, which has led some to assume that contagion can contribute to emotional or empathic understanding. I argue against this view.[7] Emotional contagion leads to a synchrony between individuals but this synchrony is not sufficient for understanding. Moreover, emotional contagion involves little or no self-other differentiation. Subjects are typically unaware that their emotion has originated outside of themselves in a target individual. Even in rare cases where subjects are aware, there is no guarantee that they will have any insight into the causes or context of the target individual's emotional state.

One consequence of the gap between contagion and understanding is that not all cases of emotional engagement with film are educative. It is often assumed that emotional engagement fosters emotional understanding, and while this is certainly the case some of the time, it is not the case when that arousal is a result of emotional contagion.

Why and How Does Emotional Contagion Occur?

The main processes involved in contagion are motor mimicry and the activation and feedback from mimicry, and there is good reason to believe that both of these processes are likely to occur during the viewing of films. Empirical research in psychology has shown that people tend to automatically and continuously mimic the expressions, vocalizations, postures, movements, and instrumental behavior of individuals they observe. Incidents that have been found to reliably evoke such mimicry include pain, laughter, smiling, affection, embarrassment, discomfort, disgust, facing a thrown projectile, ducking away from being hit, stuttering, word-finding, and succeeding and failing at a timed task.[8]

Researchers studying emotional contagion in social-psychophysiology and psychology have focused primarily on facial mimicry. In a representative series of studies, Ulf Dimberg and his colleagues used EMG procedures to study individuals' responses to different facial expressions. They found that subjects' emotional experiences and facial expressions tend to mirror the changes in the emotional expressions of target individuals that they observe.[9] EMG response patterns to happy and angry faces, for example, differ in important ways. When observing happy faces, subjects typically experience increased muscular activity over the zygomaticus major region (the cheek muscle). When observing angry faces, however, muscular activity typically increases over the corrugator supercilii region (the brow).[10]

Mimicry alone is not enough to cause emotional contagion. But researchers have found that mimicry of facial expressions and feedback from this mimicry typically influence our subjective emotional experience and often result in autonomic nervous system activity associated with particular emotions.

Researchers in psychophysiology and social psychologists have conducted a number of experiments to test the facial feedback hypothesis, according to which an individual's emotional state will be affected by her facial expressions whether she is aware of the expressions or not. These experiments have shown that facial expressions do in fact influence and initiate specific emotions. So, for example, when subjects produce facial configurations closely resembling the expression universally associated with anger, they report experiencing anger and have a difficult time experiencing emotions incompatible with anger, such as joy or sadness.[11] These results occur even when subjects are unaware of the expression they are making. In other words, self-awareness is not a necessary condition for mimicry or its influencing of one's emotional state.

Another series of psychological experiments have found that in addition to affecting individuals' subjective emotional experiences, facial expressions also induce patterns of autonomic nervous system activity (e.g. changes in heart rate, left and right-hand temperatures, skin resistance, and forearm flexor muscles) associated with particular emotions.[12] Robert Levenson, Paul Ekman, and Wallace Friesen have found that getting subjects to configure their facial muscles into expressions associated with the six primary emotions of anger, disgust, fear, happiness, sadness, and surprise results in patterns of autonomic activity associated with these emotions.[13] There is also some evidence suggesting that the experience and perception of facial expressions associated with particular emotions involves distinct central nervous system activity.[14]

This research helps to explain how mimicking another's facial expressions of emotion can influence an individual's emotional state. First the imitator mimics another's facial expression. Making this facial expression then influences the imitator's subjective emotional experience and induces physiological changes characteristic of the emotional expression that she is mimicking. Consequently, people can end up 'catching' the emotions of those they observe.

III. Emotional Contagion versus Other Emotional Responses to Film

Film as an Elicitor of Emotional Contagion

So far I have been discussing emotional contagion as it occurs in real life interactions, but how does this relate to spectators' emotional responses? I propose that emotional contagion can occur when watching films in much the same way that it does in real life. The processes involved in emotional contagion are activated by direct sensory engagement. Films provide such engagement. In fact, many of the experiments conducted to study contagion, mimicry, and relevant feedback processes involve subjects viewing others' facial expressions on film.

In their research on motor mimicry and the experimental methods used to study mimicry, Janet Beavin Bavelas and her colleagues have used several types of elicitors, but videotaped episodes, documentary film clips, and television clips have been among the most important.[15] Experiments on facial efference (or expression) and emotional experience have also relied on audiovisual narratives; in their review of the empirical research, Pamela Adelman and R. B. Zajonc explain that one of the most typical external stimuli used in experiments on facial expression and emotion is film.[16] Robert Levenson discusses the use of film as an elicitor in experiments on autonomic specificity and emotion. Levenson explains that there are problems with all of the methods used for eliciting emotional and affective experience since it is difficult for experimenters to recreate the real life situations in which emotions occur (a problem of ecological validity) and still maintain tight experimental control. Nevertheless, in his categorization of the different types of elicitors – which includes directed facial actions, slides, films, relived emotions, staged manipulations, and dyadic interaction among intimates – he labels film as an elicitor that offers a high degree of experimental control and a medium degree of ecological validity.[17]

In spite of the use of film clips in the research on emotional contagion and emotional arousal more generally, the precise relationship between the elicitation of emotional experience by film and the elicitation of emotional experience by real world events is not yet clear. As Levenson suggests, this is an issue that is understudied. Nevertheless, the fact that researchers use our reactions to film as a model for understanding our reactions to real world stimuli suggests that emotional contagion works very similarly with both film characters and actual, present people.

Perhaps the main problem with film is that in some cases films are *more likely* to produce contagion responses than real world events. Through a variety of techniques, filmmakers are often able to guide and influence our perception of characters and their experiences. Carl Plantinga explains these techniques in his discussion of the 'scene of empathy'; a scene from a film that focuses on a character's face, is typically shot in close-up, and during which the pace of the narrative slows down and the character's interior emotional experience becomes the locus of attention. Plantinga identifies several key eliciting conditions of emotional contagion and empathy in such scenes. Perhaps most important is attention: filmmakers must focus spectators' attention on characters' facial expressions in order to elicit contagion responses. They can do this through the use of extreme close-ups, shallow focus, various point-of-view structures, and by using progressively closer shots of a character's face and expressions. These techniques do not work, however, unless the duration of the shot of the character's facial expression is long enough. Plantinga points out that the kinds of scenes that elicit emotional contagion include shots of characters' faces that are of a much longer duration than the average shot, which by 1981 was approximately ten seconds.[18]

Consider the opening scene of Quentin Tarantino's *Kill Bill Vol. 1* (2003), a scene that is likely to produce emotional contagion in the viewer. The first thing we see – before we know anything at all about the story or the characters – is a high angle close-up of a woman's face. We know nothing about this woman or her circumstances except what shows on her face:

she has been badly beaten, she struggles for breath, she trembles with fear and pain, and she is looking around, anxious and afraid. In spite of the absence of cues regarding the narrative situation, we cannot help but begin to mirror the woman's fear and anxiety, as the fixed camera stays on her face, cutting away only once and then quickly returning to the close-up of her face that continues uninterrupted for another seventy-seven seconds.

Regardless of what one thinks of Tarantino as a filmmaker, Robert Richardson as a cinematographer, Uma Thurman as an actress, or *Kill Bill Vol. 1* as a film, it is very difficult to watch this scene and not experience a strong and immediate affective response. This is partly due to the fact that our attention is focused on a close-up of the character's face, which unambiguously expresses fear, pain, and anxiety for a much longer period of time than a typical shot, especially one at the start of a film. As Plantinga explains, shots of a longer duration allow enough time for the activation of mimicry and feedback mechanisms. We cannot help but start to mimic some of what we see being experienced on the character's face.

I am suggesting that our affective response to this scene is primarily the result of emotional contagion, rather than a more cognitively sophisticated process. Because this is the film's opening scene and contains minimal dialogue and minimal visual information other than what the character's face expresses, we do not have enough information to engage in an imaginative project involving higher order processing or evaluations.

Emotional Contagion Versus Empathy and Criterial Prefocusing

I now want to consider how emotional contagion differs from other emotional processes that occur during our engagement with audiovisual fictions. The majority of the philosophical work on spectator emotion in cognitive film theory concerns emotional processes and responses more sophisticated than emotional contagion, such as empathy, sympathy, simulation, imaginative identification, and emotional responses triggered by cognitive evaluations of narrative events and meanings.[19] This work typically focuses either on the relationship between imagination and emotion, or on the cognitive aspects of emotion, such as beliefs, judgments, and evaluations.

Not all cognitive film theorists focus exclusively on sophisticated emotional processes. Noël Carroll, for example, addresses both moods and 'mirror reflexes' in two recent papers on the affective address of popular fiction.[20] Carroll argues that certain affective states that do not qualify as standard emotions have gone underappreciated. He explores the significance of moods, which he claims play an important role in spectators' psychological engagement with audiovisual fictions.

Carroll also addresses the role of emotional contagion in spectator psychology. On Carroll's view, there are many ways in which spectators relate to characters, though most spectator emotions can be explained by one of two processes. The first is sympathy, the dominant relationship that emerges between spectators and characters, with the spectators feeling care, concern or a pro-attitude toward the characters rather than the same emotions that the characters themselves feel. The second is criterial prefocusing, the process by which filmmakers foreground certain narrative events and experiences so that they will fit into familiar schemas that are likely to elicit an emotional response. Although Carroll considers sympathy and criterial prefocusing to be the primary causes of spectator emotion, he acknowledges that spectators also experience 'mirror reflexes', which is the term he uses to refer to what I am calling emotional contagion, facial mimicry, and feedback processes.[21]

Mirror reflexes, though not full-fledged emotions on Carroll's view, can still be an important part of spectators' affective experience of a film. More specifically, such reflexes can help to maintain the body's elevated level of excitement and can make available new information about the characters that can be incorporated into spectators' overall affective experience.

Carl Plantinga also discusses less sophisticated emotional processes, pointing out that although a defining feature of film is that it is a sensory means of communication that appeals directly to our senses of sight and hearing, this aspect of it has gone largely unexplored.[22] He further argues that 'scenes of empathy' do more than communicate characters' emotional experience; they also elicit, clarify, and strengthen spectators' affective responses.[23] They are able to do this in part because they can cause emotional contagion by producing affective mimicry and feedback processes.

Plantinga is one of the few theorists to discuss emotional contagion explicitly and to view it as a central feature of spectators' emotional engagement. I agree with much of what Plantinga says about emotional contagion. In my view, however, Plantinga conflates emotional contagion with empathy, suggesting that emotional contagion is a type of empathy or a part of empathy.[24]

Murray Smith also discusses emotional contagion, though he refers not to emotional contagion per se but to affective and motor mimicry, which he claims play a unique and important role in spectators' emotional engagement with film. Smith has a pluralistic account of spectator psychology, at the centre of which is what he calls 'the structure of sympathy', a complex model comprised of three distinct but related levels of engagement: recognition, alignment, and allegiance.[25] Like Plantinga, Smith considers affective and motor mimicry to be a type of empathy. He claims that they typically function within the structure of sympathy as comprehension mechanisms, but due to their involuntary nature, affective and motor mimicry can also function as a subsystem at odds with the structure of sympathy. When this happens, affective and motor mimicry can lead to affective responses that are incongruent with those caused by the three dominant levels of engagement.[26]

Carroll's, Plantinga's, and Smith's respective discussions of mirror reflexes, emotional contagion, and affective and motor mimicry help to explain the nature of these processes and to highlight their significance in the film viewing experience. Few, if any, other film theorists have considered emotional contagion so carefully. Nevertheless, in my view Plantinga's and Smith's characterization of emotional contagion as part of empathy or a type of empathy results in confusion regarding the nature of emotional contagion responses and the uniqueness of such responses. Although empathy and emotional contagion can and often do occur simultaneously, recent empirical research suggests that they are distinct processes that originate from different types of experience and typically result in different kinds of responses.[27] Due to the differences in how emotional contagion and empathy arise, empathy can occur in our engagement with literary narratives but emotional contagion cannot. Therefore, I argue that empathy and emotional contagion should be clearly distinguished and that making a careful distinction between the two processes will help us to understand more clearly the different ways in which film can arouse emotions.

Empathy is best understood as a complex and unique imaginative process involving both cognition and affect.[28] When a spectator empathizes with a character, she does more than just take on the character's emotional states; she also takes up the character's psychological perspective, which includes the character's cognitive sense of reality. The spectator imaginatively experiences it as her own, which means imagining that she believes what the character believes, thinks what the character thinks, and reasons the way the character reasons. While this happens, the spectator simultaneously adopts the character's emotional states.

The affective and cognitive dimensions of empathy are interconnected. They do not function independently of one another but interact and influence one other, re-creating the target individual's (the character in this case) overall psychological perspective. In empathy experiences, just as in real world experiences, beliefs and thoughts help to create and influence emotions, which help to create and influence

beliefs. This is part of what makes empathy so complex and dynamic.

Emotional contagion is a much less sophisticated process than empathy. Since it is largely involuntary and is based on automatic processes that are activated by direct sensory perception, it involves no thoughts, beliefs, or judgments. Moreover, emotional contagion responses are not generated by the activity of the imagination, and emotional contagion itself is not an imaginative process. In a sense, emotional contagion responses are more physiological than empathy responses. Contagion responses rely on direct sensory stimulation and subsequent physiological responses to that stimulation. Empathy responses, on the other hand, necessarily involve affect but also involve higher-order cognition and the imagination.

In my view, an accurate account of spectator psychology should differentiate empathic responses to characters from responses generated by emotional contagion. Having said that, I must acknowledge that empathy and emotional contagion are closely related processes, and that during an episode of engagement, it is often difficult to determine where one emotional process ends and another one begins. Plantinga makes this point as part of his argument for defining empathy broadly.[29] In typical cases of character engagement, multiple processes are taking place and many of them occur simultaneously. In fact, I think it is unusual for a spectator to experience emotional contagion alone, without some kind of empathy or sympathy also occurring. There are at least two reasons for this. First, narrative fiction films typically engage us by inviting us to empathize or sympathize with certain characters early on in a film, and filmmakers use multiple techniques to encourage this. Thus we are usually empathetically or sympathetically engaged to some degree from the beginning. Second, it is rare for the camera to focus on characters we do not feel some empathy or sympathy for, except in the case of villains toward whom we typically feel antipathy.

Nevertheless, empathy, sympathy, and emotional contagion are distinctive processes. They may often work together to create a complex experience of engagement but they have different triggers and affect our experience in different ways. It may seem as though I am complicating matters by arguing for more distinctions, but a clear model of spectator psychology needs to specify how different emotional and affective responses come about, and how they influence our experiences of film narratives, even when those processes occur simultaneously.

In his account of character engagement, Smith seems to appreciate the significance of these distinctions. Although he labels affective and motor mimicry as empathic phenomena, he is careful to distinguish them from emotional simulation, which he considers to be another type of empathic phenomenon but one that operates differently. Smith describes mimicry as 'an almost perceptual registering and reflexive simulation of the emotion of another person via facial and bodily clues'.[30] Emphasizing the involuntary nature of affective and motor mimicry, Smith explains that afferent and motor mimicry can lead to affective responses that diverge from both the structure of sympathy and from the responses generated by emotional simulation. This leads me to conclude that in spite of Smith's characterization of affective and motor mimicry as empathic phenomena, he appreciates the ways in which these processes differ from more sophisticated processes.

Another type of sophisticated emotional response that viewers often experience occurs as a result of what Carroll calls 'criterial prefocusing'. Carroll develops his model of criterial prefocusing to explain spectators' standard emotional responses. This model comprises two key elements: a criterially prefocused film text and concern for the characters or for the outcome of the narrative events.[31]

The concept of criterial prefocusing refers to how filmmakers foreground certain features when presenting narratives so that audience members easily subsume those features under certain categories or concepts related to specific emotions. Carroll accepts a version of the

judgment theory of emotion, according to which emotions necessarily include a judgment or belief, which causes some feeling state.[32] So, for example, if I believe that X has wronged me or mine, then I experience anger. The relevant cognitive state in this case is the belief that X has wronged me or mine, which corresponds to the emotional state anger.[33] Carroll argues that criterially prefocused texts depict events so that they fit these kinds of categories.

On Carroll's account, criterial prefocusing does much of the work of engaging spectator emotion but it is not enough to evoke an emotional response. The spectator must also experience some concern for the characters or for the outcome of the narrative. This is a necessary condition for emotional arousal because without some desire for the events to turn out in a particular way, the audience is likely to view the criterially prefocused moments in the film dispassionately.[34]

Spectators have a wide variety of emotional experiences during the viewing of a film. Those based on empathy (or related processes) and those generated by criterial prefocusing and concern for characters differ from contagion responses in that they necessarily involve thoughts, beliefs, judgments, or evaluations and thus higher-order cognitive processes. These types of emotional experiences are less automatic and more voluntary than emotional contagion. They result from a combination of sensory engagement, beliefs and judgments, and in some cases imagination. Emotional contagion, on the other hand, results from sensory engagement and subsequent mimicry and feedback; it requires no beliefs or judgments. One consequence is that emotional contagion responses may be less tied to particular beliefs and values and less under the control of individual viewers than the more sophisticated emotional responses. This helps to explain why, as Smith explains, responses based on affective mimicry responses are sometimes incongruent with a spectator's overall emotional response to a film.

Spectator response to the climactic scene of Jean Pierre Jeunet's *Alien Resurrection* (1997) represents an example of how emotional contagion can lead to this kind of ambivalent reaction. In this scene, Ripley (Sigourney Weaver) and a few other survivors are on a space shuttle, attempting to escape from the *Auriga*, an enormous spaceship that has been overtaken by murderous aliens. Ripley and the others soon discover that they are not alone on the shuttle; The offspring of the queen alien, that at one point had been growing inside of Ripley, has gotten on board. Ripley is forced to confront the creature in order to save the others. Unlike the other aliens in the film (and in the first three *Alien* films), this creature has certain human characteristics. Somehow, the queen alien has absorbed some of Ripley's DNA so its offspring is part alien and part human. In addition to its hybrid appearance, the creature also makes sounds that are much more characteristically human than those made by the other aliens. In spite of its human characteristics, the creature is hideous to behold; it is a gruesome hybrid of alien and human, with skin that is a pasty white color, a ghoulish face much of which resembles a skeleton, an unformed protruding flap of skin where a human nose would be, and slime dripping from its entire body, including its teeth. All of these characteristics make the creature disgusting.[35] It is not a sympathetic character, at least not in any ordinary sense, and we are not invited to empathize with the character, who threatens the film's remaining protagonists. Amazingly, we still end up experiencing emotional contagion in response to the creature.

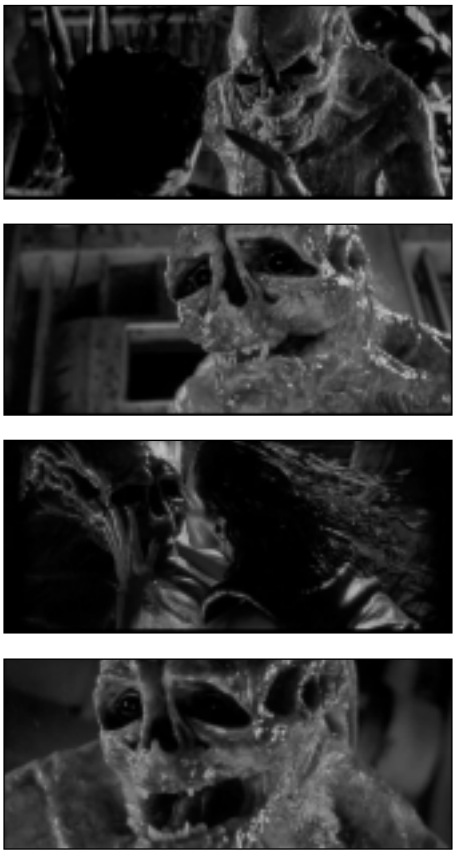
Ripley discovers the creature on board, after it has already killed Distephano (Raymond Cruz) and is menacingly examining the android Call (Wynona Ryder). The scene that follows has four parts and throughout all of them, we experience a mixture of emotions toward the creature, including disgust, fear, and sadness. In the first part of the scene, Ripley yells at the creature, demanding that it put Call down. We are then presented with a close-up of the creature's face, looking shamed and sad, like a reprimanded child. In the next part of the scene, Ripley embraces the creature, which clearly recognizes Ripley as its mother, and the two caress each

other for a few moments. Then Ripley uses some of her own blood, which is acidic, to burn a hole into a window, breaching the ship's hull. We quickly realize that by creating the hole in the window, Ripley has devised a way to kill the creature. The creature realizes this too, and in the third part of the scene we are presented with an extreme close-up of the creature's eyes, which express sadness, fear, and a feeling of betrayal. The creature looks at Ripley as if to say, 'How could you?'

Our response to the creature's reaction is ambivalent. On the one hand, we are disgusted by this hybrid monster and want it to be destroyed. On the other hand, its facial expressions of sadness and fear trigger a contagion response so that we also experience feelings of sadness, fear, and betrayal.

In the fourth and final part of the scene, the pressure from the hole in the ship sucks the creature onto the window, where it suffers a horrible death. This is a gruesome spectacle: the creature howls in pain and we watch and listen as the pressure rips the creature's body apart, little by little. As this is happening, we see more close-ups of the creature's face, grimacing in pain and looking distraught and terrified. During this scene, we experience a complex set of emotions. We are disgusted by the revolting sight of the alien's body being torn apart, we are satisfied that the final threat to the film's remaining protagonists is being destroyed, and yet we also experience feelings of fear and pain as part of an automatic contagion response to the creature's facial expressions.

Why do we respond this way to a grotesque monster? One reason is because of emotional contagion, which causes us to mirror the creature's expressions of terror and pain. As the creature screams and writhes in agony, we find ourselves cringing as we mimic some of its feelings. This happens because the mechanisms involved in contagion occur in direct response to the stimulus of the creature's facial expressions, regardless of what is happening in our larger project of emotional engagement with the film and its characters. Thus we can simultaneously feel antipathy toward a character and experience



• Emotional contagion in *Alien Resurrection* (1997): being menacing, being reprimanded, being caressed, and being afraid.

some of what the character is experiencing. In a way, we end up connected to the character, not because of empathy or sympathy, but because we have 'caught' some of its emotions. Emotional contagion is possible in this case because contagion responses are triggered not by our thoughts or evaluations of a character or his actions but by involuntary responses to what we perceive.[36]

In addition to evoking responses that are incongruent with our dominant affective experience, emotional contagion can produce affective responses to characters and narratives when there is minimal engagement and thus minimal affective arousal in general. The

spectator may not deeply engage for a number of reasons: the narrative may fail to draw the spectator in, formal aspects of the film may prevent the spectator from experiencing affective responses, or characters may elicit little sympathy or empathy. In such cases, actors' facial expressions can still produce experiences of emotional contagion, which do not rely on a more comprehensive cognitive engagement with the narrative. This may be one reason why we often find ourselves puzzled by a strong affective response to a film. Why are we so upset, we wonder, since we do not feel very wrapped up in a film? Emotional contagion responses may be the reason.

Smith argues that certain avant-garde and art films rely to an unusual degree on emotional contagion in order to elicit affective responses. These films provide close-ups of facial expressions and bodily gestures and movements, but suppress information regarding the narrative context (if there is one) and the sources of characters' emotions.[37] Such techniques usually inhibit empathy and sympathy, yet we can still experience affective responses to these films because of emotional contagion.

Another important difference between emotional contagion and more sophisticated emotional processes is that the latter often contribute to spectators' understanding and appreciation of characters, narrative, and thematic issues, while emotional contagion in and of itself does not. There has been confusion about this point, probably in part because of the way contagion has been conflated with empathy. Both Smith and Carroll argue that emotional contagion responses provide understanding about characters and narrative situations in films. Smith describes affective and motor mimicry as comprehension mechanisms that act as searchlights or probes in our construction of the narrative, and Carroll explains that mirror reflexes help us to understand characters and their emotions and internal states.[38] After experiencing emotional contagion, it is possible to reflect upon the experience and then make inferences, thereby learning something about the characters. However, this sort of process goes beyond emotional contagion, which on its own does not yield any understanding. Emotional contagion is not a deliberate or intellectual process but one that takes place involuntarily and unconsciously. If we choose to analyze our experience of emotional contagion, we may learn something, but the analysis of our contagion response is what is providing the understanding in this case, not the response itself.

IV. Conclusion

Philosophical work on spectator emotion tends to emphasize the educative potential of emotional reactions. While it is true that many emotional reactions to narrative films help to foster understanding, some of them do not. Emotional contagion is better understood as solely experiential than as instructive in any way.[39] To characterize it in terms of understanding risks over-intellectualizing it and its role in engagement, and misrepresenting this element of spectator's responses as more voluntary, deliberate, and self-aware than it actually is.

Perhaps the most important difference between emotional contagion and other emotional processes is that emotional contagion seems to be unique to our engagement with audiovisual fictions. Engagement with literary fictions can produce empathy, sympathy, simulation, and emotional responses such as those described by Carroll's criterial prefocusing model. In fact, much of the scholarly work on emotional engagement with narratives makes little or no distinction between our engagement with film and our engagement with literature. But our engagement with literature does not produce emotional contagion; it cannot, at least for texts that are not illustrated. Emotional contagion requires direct sensory input. Mimicry and afferent feedback are not produced by imaginative processes or evaluations of characters and narrative events.

This difference represents one respect in which our engagement with audiovisual fictions is affective, but less cognitive, than our emotional engagement with literary fictions. Whether this is a good thing or a bad thing is a subject for

another paper, but it is significant because it represents a difference between our experience of literature and our experience of film and it shows how our engagement with film more closely resembles our real world experience than our engagement with literature.

I now need to make some qualifications. I have argued that emotional contagion occurs during film viewing experiences and that it distinguishes our engagement with film narratives from our engagement with literary narratives. I am not suggesting, however, that emotional contagion is essential to film viewing experiences. It is possible to watch a film without experiencing emotional contagion. I am also not suggesting that emotional contagion is the primary emotional response that we have when watching films. Empathy, sympathy, and emotional responses such as those explained by Carroll's criterial prefocusing model are all as common and possibly even more common than emotional contagion.

More work needs to be done on the role of emotional contagion in our engagement with film narratives: we need to determine the extent of emotional contagion and its relationship to other emotional processes that occur during film viewing experiences. The latter issue is especially complicated and will have to be carefully considered in order for us to obtain a clear picture of spectator emotion in general. Nevertheless, I hope to have shown that emotional contagion is an important part of spectator experience and one worth examining more closely.[40]

Notes

1 In this paper, I do not address the numerous variables influencing an individual spectator's response. My focus is on standard emotional reactions and typical response patterns.

2 See, e.g., Gregory Currie, *Image and Mind: Film, Philosophy, and Cognitive Science* (Cambridge, Cambridge University Press, 1995); Alexander Neill, 'Empathy with (Film) Fiction', in David Bordwell and Noël Carroll (eds), *Post Theory: Reconstructing Film Studies* (Madison, University of Wisconsin Press, 1996); Noël Carroll, *The Philosophy of Horror: Paradoxes of the Heart* (New York, Routledge, 1990), and *Engaging the Moving Image* (New Haven, Yale University Press, 2003); and Susan Feagin, *Reading with Feeling—The Aesthetics of Appreciation* (Ithaca, NY, Cornell University Press, 1996). In this paper I focus exclusively on cognitive film theory and do not engage with film theory in the psychoanalytic tradition.

3 Elaine Hatfield, John T. Cacioppo, and Richard L. Rapson, 'Primitive Emotional Contagion', in Margaret S. Clark (ed.), *Emotion and Social Behavior* (Thousand Oaks, CA, Sage, 1992), pp. 151–77.

4 See Elaine Hatfield, John T. Cacioppo, and Richard L. Rapson, *Emotional Contagion* (Cambridge, Cambridge University Press, 1994), p. 5, and Janet Beavin Bavelas, Alex Black, and Charles R. Lemery, 'Motor Mimicry as Primitive Empathy', in Nancy Eisenberg and Janet Strayer (eds), *Empathy and its Development* (Cambridge, Cambridge University Press, 1987).

5 Lauren Wispe, *The Psychology of Sympathy* (New York, Plenum Press,1991), p. 7.

6 Stephanie Preston and Frans de Waal, 'Empathy: Its Ultimate and Proximate Bases', *Behavioral and Brain Sciences*, 25:1(2002), 1–21.

7 For a useful discussion of this issue, see Peter Goldie, *The Emotions: A Philosophical Exploration* (Oxford, Oxford University Press, 2000), pp. 189–94.

8 Bavelas *et. al*, 'Motor Mimicry as Primitive Empathy', p. 323.

9 Ulf Dimberg, 'Facial Reactions to Facial Expressions', *Psychophysiology*, 19:6 (1982), 643–7, 'Facial Electromyography and the Experience of Emotion', *Journal of Psychophysiology*, 2: 4 (1988), 277–82, and 'Facial Electromyography and Emotional Reactions', *Psychophysiology*, 27:5 (1990), 481–94; Ulf Dimberg and Monika Thunberg, 'Rapid Facial Reactions to Emotional Facial Expressions', *Scandinavian Journal of Psychology*, 39:1(1998), 39–46; and Ulf Dimberg, Monika Thunberg, and Kurt Elmehed, 'Unconscious Facial Reactions to Emotional Facial Expressions', *Psychological Science*, 11:1 (2000) 86–69.

10 These response patterns occur even when the target's facial expressions are being processed outside of subjects' awareness. See Dimberg and Thunberg, 'Rapid Facial Reactions'. A number of studies focusing on overt facial expressions have resulted in similar findings. See Hatfield *et al.*, *Emotional Contagion*, pp. 2—23), and Pamela K. Adelmann and R. B. Zajonc, 'Facial Efference and the Experience of Emotion', *Annual Review of Psychology*, 40:1(1989) 249–80.

11 Adelmann and Zajonc, 'Facial Efference and the Experience of Emotion'; Hatfield *et al.*, *Emotional Contagion*, pp. 53–62; and Robert W. Levenson, Paul Ekman, and Wallace V. Friesen, 'Voluntary Facial Action Generates Emotion-Specific Autonomic

Nervous System Activity', *Psychophysiology*, 27:4 (1990), 363–84. For a discussion of universal facial expressions and emotions, see Dacher Keltner and Paul Ekman, 'Facial Expression of Emotion', in Michael Lewis and Jeanette M. Haviland-Jones (eds), *Handbook of Emotions* 2nd edn (New York, Guilford Press, 2000), pp. 241–3.

12 For discussions of emotion-specific autonomic activity, see John T. Cacioppo, Gary G. Bernston, Jeff T. Larsen, Kirsten M. Poehlmann, and Tiffany A. Ito, 'The Psychophysiology of Emotion', in Lewis and Haviland-Jones (eds), *Handbook of Emotions* esp. pp. 179–84; and Keltner and Ekman, 'Facial Expression of Emotion', esp. pp. 238–9.

13 Levenson, Ekman, and Friesen, 'Voluntary Facial Action Generates Emotion-Specific Autonomic Nervous System Activity'.

14 Keltner and Ekman, 'Facial Expression of Emotion', p. 237; and Robert Levenson, 'Autonomic Specificity and Emotion', in R.J. Davidson, K.R. Scherer, and H. H. Goldsmith (eds), *Handbook of Affective Sciences* (New York, Oxford University Press, 2003), p. 222.

15 Bavelas *et al.*, 'Motor Mimicry as Primitive Empathy', esp. p. 323; and Janet Beavin Bavelas, Alex Black, Charles R. Lemery, and Jennifer Mullett, 'Experimental Methods for Studying Elementary Motor Mimicry', *Journal of Nonverbal Behavior*, 10:2 (1986): 102–19.

16 Adelman and Zajonc, 'Facial Efference and the Experience of Emotion', p. 258. Other typical elicitors include slides and electric shock (or the apparent threat of electric shock to someone).

17 Levenson, 'Autonomic Specificity and Emotion', pp. 216–18.

18 Carl Plantinga, 'The Scene of Empathy and the Human Face on Film', in Carl Plantinga and Greg M. Smith (eds), *Passionate Views: Film, Cognition, and Emotion* (Baltimore, MD, Johns Hopkins University Press, 1999), pp. 239–255. Plantinga also considers allegiance and narrative context to be eliciting conditions, but I think that these are more relevant for the evocation of empathy than of emotional contagion.

19 See note 2. Recently there have been a number of accounts of spectator emotion that draw on simulation theory, a theory originally developed in philosophy of mind as an alternative to theory theory, the dominant explanation of how we understand and predict others' mental states. According to simulation theory, we understand another's psychological states not by appeal to theoretical generalizations about the way people think and behave but rather by adopting the target individual's perspective by using our own minds to model the target's psychological activities. Major proponents of simulation theory or hybrid theories, which incorporate simulation theory, include Robert Gordon, Alvin Goldman, Gregory Currie, Ian Ravenscroft, and Paul Harris. For a recent formulation and defense of simulation theory, see Gregory Currie and Ian Ravenscroft, *Recreative Minds: Imagination in Philosophy and Psychology* (Oxford, Clarendon Press, 2002), pp. 49–70; and Gregory Currie, *Arts and Minds*, esp. pp. 166–8 & 176–82. For a recent critique of simulation theory, see Shaun Nichols and Stephen Stich, *Mindreading* (Oxford, Oxford University Press, 2003), pp. 131–42.

20 Noël Carroll, 'Art and Mood', and 'On the Ties That Bind: Characters, the Emotions, and Popular Fictions' in William Irwin and Jorge Garcia (eds), *Philosophy and the Interpretation of Popular Culture* (Lanhan, MD, Rowman and Littlefield, forthcoming).

21 Carroll, 'On the Ties That Bind', esp. section V.

22 Plantinga, 'The Scene of Empathy', p. 239.

23 *Ibid.,* p. 240.

24 *Ibid.*, pp. 245–8.

25 Murray Smith, *Engaging Characters: Fiction, Emotion, and the Cinema* (Oxford, Clarendon Press, 1995). See pp. 73–109, esp. pp. 98–100.

26 *Ibid.*, p. 81.

27 I discuss this at greater length elsewhere. See Amy Coplan, 'Empathic Engagement with Narrative Fictions', *Journal of Aesthetics and Art Criticism* 62:2 (2004), 141–52. See also Eisenberg and Strayer, 'Introduction to *Empathy and its Development*'; Nancy Eisenberg, 'Empathy and Sympathy'; Goldie, *The Emotions*, pp. 189–194; Jean Decety and Jessica A. Sommerville, 'Shared Representations Between Self and Other: A Social Cognitive Neuroscience View', *Trends in Cognitive Science*, 7:12 (2003); and Jean Decety and Philip L. Jackson, 'The Functional Architecture of Human Empathy', *Behavioral and Cognitive Neuroscience Reviews*, 3:2 (2004).

28 I believe that similar things are true of simulation, 'imagining from the inside,' and imaginative identification. Nevertheless , I want to be careful about equating simulation and empathy. Peter Goldie, Shaun Nichols, and Stephen Stich have challenged the view that simulation can be used as an explanation for empathy. Goldie argues that not all simulations will result in empathy, which is a much more complex process than certain simulation accounts of it suggest. See Peter Goldie, 'How We Think of Others' Emotions', *Mind and Language*, 14:4 (1999): 394–423, esp. 411–15. Stich and Nichols claim that the term 'simulation' should be retired because 'the diversity of among the theories, processes, and mechanisms to which advocates of simulation theory have attached the label 'simulation' have become so great that the term itself has become quite useless'. Stephen Stich and Shaun Nichols, 'Cognitive Penetrability, Rationality, and Restricted Simulation', *Mind and Language* 12:3–4 (1997), 299. For a discussion questioning

the plausibility of simulation theory as an explanation of empathy in particular, see Shaun Nichols, Stephen Stich, Alan Leslie, and David Klein, 'Varieties of Off-Line Simulation', in Peter Carruthers and Peter K. Smith (eds), *Theories of Theories of Mind* (Cambridge, Cambridge University Press, 2003), pp. 59–67.

29 Plantinga, 'The Scene of Empathy', pp. 245–7.

30 *Ibid*., p. 99.

31 Carroll writes:

> '. . .emotional involvement with a narrative depends upon the combination of a criterially prefocused text with pro and/or con attitudes about the ways in which the narrative situation can develop – that is, a combination of a conception of a situation with some relevant concerns, preferences, and desires. Together, these provide the necessary and sufficient conditions for an emotional response to the text to take hold in such a way that the reader, viewer, or listener becomes emotionally focused, that is, in such a way that the abiding emotional state fixes and shapes her attention.' (*Beyond Aesthetics*, p. 231).

32 Although Carroll accepts the judgment (or cognitive) theory of emotion as an accurate account of standard emotions, he argues that this theory cannot explain other affective responses, which are an important part of our affective engagement with fictions. He writes that 'it is time for philosophers of art to look beyond cognitive theories of emotions in order to broaden their appreciation of the affective life of art' ('Art and Mood', p. 523). Thus Carroll does not deny that the cognitive theory of emotion is useful and accurate; it simply cannot be used to tell the whole story about affective engagement.

33 Carroll, 'Film, Emotion, and Genre', pp. 27–8; *Beyond Aesthetics*, pp. 27–8, 233–5; and *Engaging the Moving Image*, pp. 64–6.

34 Carroll, 'Film, Emotion, and Genre', pp. 31–2. Much more can be said about Carroll's account. This is a brief overview.

35 For a discussion of monsters in horror fictions, their characteristics, and why they elicit disgust, see Carroll, *Philosophy of Horror*, pp. 12–58.

36 Smith discusses a less gruesome example: the ending of Alfred Hitchcock's *Saboteur,* during which the villain Fry (Norman Lloyd) dangles from the edge of the Statue of the Liberty before falling to his death. Smith, *Engaging Characters*, pp. 102–106. Smith explains that due to the way the scene is shot, with Fry's terrified expression shown in mediums, we are likely to experience affective mimicry in response to his situation. This is at odds with our dominant emotional response because we are otherwise happy that this villainous character is getting his due. In other words, we are not experiencing empathy or sympathy towards this character but rather antipathy, that is, until we perceive him hanging from the edge of the building, terrified.

37 *Ibid.,* p. 101.

38 Smith, *Engaging Characters*, p. 103; Carroll, 'On the Ties That Bind', section V.

39 For a useful discussion of the differences between emotional contagion and other emotional processes, including the fact that emotional contagion does not provide understanding, see Goldie, *The Emotions*, pp. 189–94.

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