

An emotion regulation account of the paradox of fiction

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Abstract

The paradox of fiction tackles how we can be considered as rational while having emotions towards fictional and thus non-existing events. I aim to show that the different philosophical positions on this issue can be reconciled within the emotion regulation framework. This approach refines the concept of emotion, defining it as a sequence of distinct regulated processes. I argue that the philosophical solutions that have been proposed to solve the paradox can be framed as different regulation mechanisms occurring at each stage of the emotion sequence. Based on these results, I propose an original and unifying solution to the paradox of fiction which relies on the notion of quasi-belief. On one hand, this solution solves the paradox of fiction through rejecting each proposition of the paradox at different stages of the emotion process. On the other hand, it explains through the notion of rational appraisal why the question of the existence of emotions towards fictional events is bound to the question of their rationality. The functional roles of emotion towards fictional events are thus discussed, showing how rationality shapes emotions towards fictional events.

Keywords: Paradox of fiction, Emotion, Metacognition, Emotion regulation, Quasi-belief

1. Introduction

We do not passively attend to fiction. Rather we often empathize and develop physiological reactions and psychological attitudes towards fictional characters. These psychological and physiological phenomena, such as crying at one character's death, share similarities with regular emotions. Nevertheless people attending to fiction know that these events are fictional and their own reactions have no influence on the events of the fiction. Such tension between our beliefs and our reactions towards fiction has been characterized as irrational by Radford, leading to what is known as the paradox of fiction (Radford 1975). Following Radford's formulation of the problem, the paradox has been discussed in the form of an inconsistent triad of prima facie plausible claims:

P1. We believe that fictional events are not real

P2. A necessary condition for an emotional response is a corresponding belief in the reality of the object of the emotional response

P3. We have genuine emotional reactions towards fictional events

To solve this paradox, philosophers have extensively focused on proving that one of the three propositions can be rejected, aiming to show that having emotions towards fiction while being rational is possible (the compatibility issue). Others have focused the discussion on characterizing the rationality of emotions towards fictional events (the rationality issue).

In this article, I take a different approach. I rely on a psychological theory about emotion, the emotion regulation framework (Gross and Thompson, 2007), to tackle the paradox of fiction. While most philosophers have focused on explaining how emotions towards fictional events could be elicited, I argue that Radford's original formulation of the paradox is more in line with an account in

terms of emotion regulation. More specifically, I argue that solutions that have been proposed to solve the paradox can be described as different emotion regulation mechanisms. Importantly, these mechanisms occur at different stages of the emotion regulation process, rendering solutions to the paradox compatible and complementary to understand the regulation process of emotions directed towards fictional events. An original solution which unifies these solutions is proposed in the last part of this article. This solution solves the compatibility issue through denying each proposition of the paradox at the different stages of the emotion regulation process. To do so, it relies on the notion of quasi-belief. A quasi-belief is a mental attitude embedded at a metacognitive level in a « validating frame », defining the condition of validity of the quasi-belief (Recanati 1997). During fiction, I propose that we hold the quasi-belief that : “fictional events are real” and a meta-belief that specifies that it is only inside this fiction that the content of the quasi-belief is true. Through quasi-belief, the evaluation of fictional events determining the emotion response is regulated through metacognitive control. This regulation is needed because the evaluation of fictional content at the rational level, called rational appraisal, can suppress the emotion response towards fictional events provided there is no rational justification for their existence, a regulation mechanism called emotion suppression. The emotion regulation framework explains thus why solving the compatibility issue, ie the existence of emotion towards fiction compatible with rationality, is intrinsically linked to the rationality issue, ie providing a justification for the presence of emotion towards fictional events. I will thus discuss the functional roles of emotion towards fictional events that provide rational ground for their rationality, shaping emotion processes towards fictional events accordingly.

2. The emotion regulation framework

The emotion regulation framework defines emotion as a regulation process. Three stages are part of this process : the situation, the appraisal and the response (Barrett et al., 2007; Gross 1998, see figure 1). The situation refers to “the psychologically relevant situation, which is often external and hence physically specifiable” (Gross and Thompson, 2007). In the case of emotions towards fictional events, the situation consists in the fictional events depicted in a specific context. For example, it can be a monstrous character appearing on the screen in the movie theater or reading the description of Anna Karenina’s misfortune while reading a novel. The fictional events happening in the situation are evaluated by the person attending to the movie or reading the book. This evaluation of the situation is the second stage called appraisal. In a most general sense, appraisal theories are describing how interpretations of the emotional situations can explain emotion response (Ellsworth and Scherer, 2003). For example, seeing a bear in the wild and identifying some characteristics like its size and its aggressive attitude will shape the emotion reactions or emotion response. The emotion response, the third stage of the emotion process, involves “changes in experiential, behavioral, and physiological response systems” (Gross and Thompson, 2007), like a raise of heart rhythm or running away. Such emotion response takes part in defining the situation, as, for example, running away in front of a bear takes the dangerous situation and the trigger of the emotion away. The emotion process is thus a dynamic loop : each stage serves as a basis for the next stage (represented as arrows in figure 1). I will argue that emotions towards fictional events are regulated at each stage of the emotion process. Solutions rejecting the different propositions of the paradox of fiction will be described in psychological terms as relating to distinct regulation mechanisms occurring at the different stages of the emotion regulation processes. Thus, my aim in this part is to show how these solutions are complementary in nature rather than competing since they refer to different aspects of the emotion regulation process.

Insert Figure 1

3. Solutions to the paradox as emotion regulation mechanisms applied at different stages

3.1. *Regulating at the situation stage : changing our attitude towards fiction*

I will first examine the possibility to solve the paradox of fiction through rejecting P1, ie the fact :

P1. We believe that fictional events are not real

A logical analysis leads to distinguish two different ways to reject P1, either rejecting the content of the belief (P1'b) or having such a belief (P1'a).

P1'a. We believe that fictional events are **real**

P1'b. We do **not** believe that fictional events are not real

We can believe that fictional events are real insofar as we be caught up in a movie as we “forget that Anna Karenina, Madame Bovary, Mercutio and so on are not real persons” (Radford 1975 :71, first solution). Our attitude to accept being caught up and treat fictional events or persons as real increases our propensity to be emotionally involved. This solution, that we believe that fictional events are real (P1'a), corresponds to *situation selection*, reflecting the process by which we “taking actions that make it more (or less) likely that we will be in a situation we expect will give rise to desirable (or undesirable) emotions” (Gross and Thompson, 2007). The strength of this phenomenon called immersion finds evidence as the feelings directed towards a fictional character can persist even after the fiction has ended or even be transferred onto the real actor or actress that has played the role. This confusion between reality and fiction has been used by Radford to criticize this position as it “turn(s) adults into children” (Radford 1975 :71). Another solution is thus explored that rather than believing that fictional events are real, we suspend our belief that during fiction, fictional events are not real.

To prevent the belief that fictional events are not real, scenic dispositions discussed by Radford such as “dim[ming] the lights and try[ing] to find good actors” (Radford 1975 :71, second solution) are used to reduce cues of fictionality such as the fact of being in a movie theater or that the action is staged. Such mechanism corresponds to *situation modification*, a regulation mechanism by which we make “active efforts to directly modify the situation so as to alter its emotional impact”. For example, “when a romantic interest comes over for dinner, [situation modification] may take the form of mood lighting, music, and the strategic excision of unflattering memorabilia” (Gross 1998). This form of regulation being applied to the fictional situation is expressed in P1’b, that “we do not believe that fictional events are not real”, has been discussed by Radford as a form of willing suspension of disbelief (Radford 1975:72, second solution). The cognitive access to the belief that “fictional events are not real” is prevented, reflecting “the strategic excision of unflattering memorabilia” (Gross 1998) that could cause “the 'illusion (to be) shattered” (Radford 1975 :72). Nevertheless, these solutions do not account for our emotion response because in both cases, they would predict that we treat fictional and real situations identically and as a matter of fact, “we do not try to get on the stage when, watching Romeo and Juliet, we see that Tybalt is going to kill Mercutio” (Radford 1975:71).

3.2. Regulation at the response stage : selecting the appropriate behavior

To overcome these issues raised by the rejection of P1, defenders of the simulation theory have proposed a particular way of believing relying on pretence. In this framework, two kind of beliefs are distinguished : a first class of beliefs is about the content of fictional events, a second class is about the description of these events are fictional. Distinguishing these two types of beliefs avoid to confuse pretended beliefs and beliefs about reality (Shaper 1971). Based on this framework, simulation theorists have defended that “we are not in fact really moved by (fictional events) but

only behave emotionally as if we were”, explaining why we do not act towards fictional events in the same way as towards real events (Shaper, 1978 : 32). This notion has been most famously discussed by Walton, coining the term of *quasi-emotions* to describe emotions experienced during fiction that rely on pretended beliefs in a so-called game of make-believe (Walton, 1990). Such solution consists in the rejection of P3, ie :

P3. We have genuine emotional reactions towards fictional events

Two ways of denying P3 can be adopted, either denying that we have genuine emotions during fiction (P3'a), or denying that these are directed towards fictional events (P3'b).

P3'a. We **do not** have **genuine** emotional reactions towards fictional events

P3'b. We have emotional reactions towards **real events**

The idea that there is difference in our emotion response towards fictional events and real-life events has been first discussed by Radford (Radford 1985, *sixth solution*). He noticed that real-life and fictional emotions share similarities as concerning someone's death in reality and fiction, but points that in “retrospect, our behaviour differs” and “the anguish at [Mercutio's] death is not perhaps as intense [as in the case of a real death]” (Radford 1975:77). This solution expressed in P3'a consists in a case of *response modulation*, a regulation mechanism that influences “physiological, experiential, or behavioral responses relatively directly” (Gross, 1998). One example is *expressive suppression*, which refers to “attempts to decrease ongoing emotion-expressive behavior” (Gross and Thompson, 2007). Formulated with the terms of the emotion regulation framework, *quasi-emotions* are emotions which response is regulated differently than in

real-life, resulting in a different emotion response. Indeed, even if we are saddened by Mercutio's death, regulation at the response stage allows that we do not intervene on stage during Mercutio's death as it would be the case in real life, allowing the performance to carry on.

Another solution is that emotions during fiction can be directed towards possible facts in reality evoked by the fictional events, and not fictional events as such. This solution has been described by Walton in following terms : “If Charles is a child, the movie may make him wonder whether there might not be real slimes or other exotic horrors *like* the one depicted in the movie, even if he fully realizes that the movie-slime itself is not real. Charles may well fear these suspected dangers; he might have nightmares about them for days afterwards” (Walton 1990). This solution, expressed in P3'b, accounts for the elicitation of genuine emotions during fiction because emotions are there directed towards real events. Nevertheless this does not explain that emotions during the fictional experience are mainly directed precisely towards fictional events. As noted by Radford, when we pity Anna Karenina, “we weep *for* her [Anna Karenina]” and “not feel pity for her state or fate, or her history or her situation, or even for others, i.e., for real persons who might have or even have had such a history.” (Radford 1975 :75, *fifth solution*). A possibility remains that allows emotions to be elicited by real events and being directed towards fictional events. This phenomenon, known as misattribution of arousal, describes the situation where our physiological arousal is incorrectly interpreted according to the available context (Schachter and Singer, 1962). For exemple, the pity evoked by a relative sharing the fate of Anna Karenina could be directed towards Anna Karenina. Nevertheless, in the simulation theory, pretence is grounded on our ability to distinguish events belonging from the fictional context and events happening “in reality”. Thus misattribution of arousal is in contradiction with a fundamental assumption of pretence and thus cannot be considered as a solution within the make-believe framework. A solution close to P3'b has been adopted by Currie with the “counterpart theory”, where events corresponding to the fictional

events in reality are triggering emotion towards fictional events (Currie 1990). This solution rejects P2 and does not rely on the pretence framework. To show how this solution takes place in the emotion regulation framework, I will thus investigate the rejection of P2 corresponding to the appraisal stage in the emotion process.

3.3. Regulation at the appraisal stage : interpreting fictional events

Säätelä used the existence of misattribution of arousal to argue that the make-believe framework was in fact unnecessary to explain emotions in fiction (Säätelä, 1994). Indeed, arousing stimuli, like a picture of a snake, can automatically elicit an emotion response without relying on conscious evaluation (LeDoux 2000). Such evaluation does not depend on the veracity or the reality of the stimulus, since a stick of wood or mere pictures of a snake can be sufficient to trigger such activity (LeDoux 2000). Thus this solution of the paradox of fiction rejects P2, ie that :

P2. A necessary condition for an emotional response is a corresponding belief in the reality of the object of the emotional response

Four alternative ways of denying P2, either rejecting the necessity condition (P2a), that beliefs are required (P2b), that beliefs are about the reality of the object of the emotional response (P2c) or that beliefs in the reality are about something else than the object of the emotion as such (P2d).

P2'a. A **non-necessary** condition for an emotion response is a corresponding belief in the reality of the object of the emotion response.

P2'b. A necessary condition for an emotion response is **something else than a belief** in the reality of the object of the emotion response.

P2'c. A necessary condition for an emotion response is a corresponding belief in the **possibility** of the object of the emotion response.

P2'd. A necessary condition for an emotion response is a corresponding belief in the reality of **something else than the object** of the emotion response.

The first two solutions are in accordance with non-cognitive theories of emotions. Defenders of non-cognivist theories of emotions argue that emotion elicitation do not involve beliefs and rely either on an « affective » or an « embodied » appraisal (Robinson 2005 and Prinz 2004, respectively). Embodied emotions describe emotions as response mechanisms that have evolved or have been learned in relation to situations. For Robinson, beliefs can play a role in emotion not in their elicitation, but only in their regulation. These solutions denies P2 through denying P2'a, arguing that beliefs are non-necessary for emotion response. Nonetheless, beliefs can modify the emotion expression, for example, whenever the awareness that the snake towards which my fear is directed is actually a stick of wood can lead to a decrease of the emotion response (Robinson 2005, 75–79). This case is an exemple of *cognitive change*, describing how belief update about the object emotion in the appraisal process can shape emotion response (Gross, 1998). Because fiction is a particular case of regulation for which the fact that events are not real is known *a priori*, this cognitive change should lead to the decrease of emotion towards fiction events. For exemple, *emotion suppression* describes how emotion reaction can be suppressed, as we will not run away if we see a stick of wood rather than a snake. If beliefs can alter emotion reaction as defended by Robinson, we should rationally display any or few emotion expression while reading a book or watching a movie since we know *a priori* that these events are merely fictional. Thus we are still left to explain why phenomena such as *expression suppression* are not happening when we have emotion expression towards fictional characters, compared “to other contexts where belief in the

reality of the suffering described or witnessed is necessary for the response” (Radford, 1975 : 72, *third solution*). One possibility is that such control is imperfect, and thus emotion response are incompletely regulated by rational appraisal. Nevertheless, emotion response is in contradiction in this case with rationality and makes emotion in fiction a case of irrational behavior, and the compatibility issue is not solved.

Another solution is that emotions towards fictional characters do not rely on beliefs but simply mental representations (Lamarque 1981), thoughts (Carroll 1990), or imagination (Smith 1995). These positions correspond to P2’b, ie that a necessary condition for an emotion response is not a corresponding belief in the reality of the object of the emotion response.

The independence from belief can be explained in the frame of emotion regulation through distinguishing different levels of processing within the appraisal process. In a simple form, it is constituted of three components: a perceptual process, a memory based association process and a reasoning process (Smith and Kirby, 2000). At the perceptual and associative memory level, evaluation does not distinguish between real and imaginary stimuli (Kosslyn 2001). Such ability requires metacognition at the rational level, a process called reality monitoring (Johnson & Raye, 1981). Thus, appraisal at these levels can trigger emotional reaction without involving beliefs and rationality. All three levels are usually being involved during emotion appraisal and thus we must account why rational appraisal in the fictional case does not cause downregulation of the emotion response towards fictional events.

A first possibility is to argue that the processing of an event like the appearance of a monster on screen is following a temporal sequence : first at the perceptual level, then at the memory-based associative level, and finally at the rational level. Thus, the emotion response would be triggered due to perceptual and memory-based associative processing before being downregulated by rational appraisal. Nevertheless, emotions should be in these case very brief. Moreover, fiction is a

particular case of regulation since the fact that fictional events are not real is known before the appearance of the stimuli and thus rational appraisal could inhibit emotion expression before any perceptual and memory-based associative processes takes place.

A second possibility is to consider that emotion response can be automatic such as in the case of a “startle reflex”, a process that triggers emotion reaction before any conscious appraisal of the situation, and thus difficult to downregulate. This possibility can apply for a fear episode following the sudden sight of monster on screen but can hardly account for complex emotions like feeling pity while reading Anna Karenina that rely on complex and conscious appraisal (see Walton’s critique of the “momentary-fear theory” for similar points (Walton, 1990)).

A third possibility is that the access for relevant information at the rational level is controlled during the appraisal of fictional events. This mechanism of emotion regulation is called attention deployment, a process that selects relevant cues in the situation to be perceptually or cognitively processed. In the regulation framework, *concentration* allows “to draw attention to emotion triggers” (Gross, 1998). It explains how perceptual or memory-based associative appraisal can happen without triggering rational appraisal for the same stimulus. If concentration operates at the perceptual level, simply perceived or imagined events can trigger the emotion response. It would nevertheless lead to ignore the fictionality of events because the rational appraisal is not accessed. This is in contradiction with the acceptance of P1 by such solutions and the fact that we believe that fictional events are not real. If concentration targets memory-based association processes, the emotion response will be shaped by memories of events evoked by the fictional event, for example by the thought of a relative having a similar fate as Anna Karenina. Nonetheless, concentration on exclusively memory-based association processes is in contradiction with the acceptance of P3, ie that our emotion are directed towards fictional events as such and not towards real events. Indeed, the appraisal will be focused on the available evidence being the thought of the real situation

evoked by the fictional events and thus the object of emotion will be these real events.

Still, a possible solution would be a situation of misattribution of arousal where concentration would occur at both perceptual and memory-based associative level without involving the rational level. Emotion would be directed towards fictional events while being elicited by real events. Since this solution does not endorse make-believe, such misattribution of arousal would not be in contradiction with other theoretical commitments. Nevertheless, emotions based on misattribution of arousal fail to be rational because the emotion response is unfitting compared to its object, since it is elicited by real events which are not the object of the emotion. The inadequacy between emotion response and their object is described as a first way through which emotions can be considered as irrational according to d'Arms and Jacobson (d'Arms & Jacobson, 2000). Positions that defend that beliefs are not necessary for the elicitation of emotion and do not rely on misattribution of arousal have been shown to be in contradiction with either P1 or P3, and thus fail to be rational as well. Hence, these solutions do not solve the compatibility issue because such emotions fail to be rational since they are either in contradiction with other propositions of the paradox or because they rely on misattribution of arousal.

There is other solutions that reject P2 while preserving rational appraisal. The last two solutions denying P2 are stating that what is required for an emotion response is a belief in the possibility of the object of the emotion response (P3'c) or in the reality of something else than the object of the emotion response (P3'd). These two solutions are preserving rational appraisal because they rely on beliefs. They are akin to the positions defended respectively by Lamarque to who the belief in the "mere possibility" of a fictional event is a necessary condition (Lamarque 1981) and by Currie to who the belief in a real event corresponding to the fictional event which is the object of the emotion is necessary (Currie 1990). Nevertheless, they do not provide justification why at the rational level, the possibility of fictional events or the existence of their counterpart in reality is a valid

justification for emotion towards fictional events. This question is crucial because emotion regulation is primarily expected to suppress the emotion response towards fictional events since our reactions do not affect the fictional plot. The lack of justification and rational ground for an emotion response is the second way through which emotions can be considered as irrational according to d'Arms and Jacobson (d'Arms & Jacobson, 2000). Because these solutions focus on emotion elicitation but not on the possibility of emotion regulation, they do not address the fact that *expression suppression* by rational appraisal is not always occurring during fiction can occur should be accounted for. In this case, solving the compatibility issue necessitates to solve the rationality issue.

Overall, all solutions describe some regulation mechanism occurring during fiction but are not successful to solve the paradox of fiction in isolation (see table 1). My aim will be in the last part to offer a synthetic solution to the paradox which accounts for the different regulation mechanisms described at each stage, and to detail the functional roles of emotions in fiction interpreted within the emotion regulation framework, justifying the presence of emotions and shaping emotion processes accordingly.

Insert table 1

4. Solving the paradox of fiction through integrating emotion regulation mechanisms

4.1 Quasi-belief as a synthetic solution for the compatibility issue

To provide a unifying solution to the paradox of fiction, I propose to apply the notion of quasi-belief to our attitude regarding fiction. This notion was introduced to solve the problem of apparently irrational beliefs (Sperber 1985). An example of apparently irrational belief is the Holy Trinity,

which describes a unique God as three persons (Sperber 1997). The belief that “fictional events are real” is also irrational because fictional events are by definition not real. A quasi-belief can be described a proposition embedded in a “validating frame”, defining the condition of its validity, characterized by a meta-belief (Recanati 1997). For exemple, the meta-belief that Holy Trinity is a divine miracle serves as an embedding belief for the belief in the Holy Trinity. I propose that during fiction, we have the quasi-belief that “fictional events are real”, and a meta-belief that defines the frame which limits the validity of this quasi-belief inside the fictional world.

First, quasi-belief accounts for the situation selection mechanism through which we develop a particular mental attitude towards fiction. This attitude is the quasi-belief that “(within fiction), fictional events are real” (P1’a). This requires nonetheless the suspension of the disbelief represented by the meta-belief that supports the distinction between beliefs within and outside the fiction. The context of an experience of a fiction involves most of the time percepts that belong to “outside” of fiction such as other people watching the play in a theater. The maintenance of the quasi-belief is in this situation unstable because such cues grab our attention and trigger the activation of the meta-belief that it is only within fiction that these events are real. Thus, in a movie theater, we “dim the lights” and recruit “good actors” to allow the maintenance of the quasi-belief in the reality of fictional events (P1’b) and allow emotion response to happen. Contrary to Radford’s claim this turns “adults into children”, we still possess the meta-belief that fictional events are true only within fiction. Such knowledge can be used whenever we are asked for exemple if we believe in the fiction or our emotions need to be regulated accordingly, for exemple to avoid getting on stage during a play or running away from the cinema theater.

How beliefs about fictional events and meta-beliefs interact to modulate the emotional response has been discussed with the notion of bracketing (Todd 2012). Through the voluntary engagement in fiction, emotions can be elicited by attending selectively to the fictional events. The

meta-belief defining the fictionality of the experience can nonetheless be “bracketed” during the cognitive evaluation and allows us to focus “our attention to our own epistemic relationship to [fictional events]” (Todd 2012). This mechanism is accounted for in the emotion regulation framework by *attentional deployment*. The mechanism of *concentration* allows to immerse ourselves in fiction while being able to modulate our behavior through rational regulation. If emotion needs to be regulated, for exemple to avoid getting on stage and disturbing the play, the meta-belief will be accessed through attention and this will trigger the rational appraisal (P2’a). For exemple, if Charles perceives a slime during a movie, the emotion response will be generated based on perceptual and memory-based appraisal and the quasi-belief that “there is a dangerous slime” (P2’b). The meaning of the quasi-belief will be framed as “(within this fiction), there is dangerous slime” at the rational level. This will lead to redefine the quasi-belief into a full-fledged belief through *cognitive change*, by which the meaning of the object of emotion is changed into “this is a *fictional* slime”. The belief in the possibility of fictional events (P2’c) or in the reality of corresponding events related to the fictional events (P2’d) can then serve as justification of the presence of the emotion (see 4.3 for a discussion of those points and the rationality issue). At the response stage, this mechanism leads to alter the emotion behavior through changing respectively either the emotion response (P3’a) or the object (P3’b). In the first case, this account is akin to solutions rejecting P3 like “quasi-emotions” because emotions are regulated based on different types of belief at a rational level, ie the belief that *fictional* events are possible events, which lead to a different emotion response than emotions directed towards real-life events. For exemple, we will not try to intervene on stage because the justification for the emotion is grounded on the rational appraisal of the mere possibility of its object. In the second case, the emotion response is directed towards real-events and justified on the basis that it evokes real-life events, and thus the fictional events are not addressed by the emotion response, and we will not try intervene on stage

accordingly.

To sum up, the emotion regulation framework offers a dynamic view on the resolution to the paradox of fiction. At the situation stage, P1 is rejected because we do not believe that fictional events are not real, but rather have a quasi-belief that fictional events are real and a meta-belief that this is valid only within fiction. At the appraisal stage, we are using concentration to develop our emotion reaction and the rational appraisal contextualises our emotion and calls for different ways of rational appraisal. At the response stage, P3 is rejected because the regulation of the emotion response by rational appraisal fundamentally changes the emotion response, either through changing the response itself or the object of the emotion.

4.2. Evidence in the favor of the emotion regulation framework

The emotion regulation framework for emotion towards fictional events has found recent empirical support (Sperduti et al., 2016). While people were viewing short movies labelled randomly either as “real” or “fictional”, the intensity of their emotion response was recorded through measuring the galvanic skin response and collecting subjective reports of the intensity of the emotion. While similar levels of physiological reaction are observed for both situations, “fictional” movies were judged subjectively to be less intense and this reduction was less severe if fictional movies were considered personally relevant (Sperduti et al, 2016). This suggests that for the same stimuli, emotion towards fictional and real events share similarities, notably in the automatic emotion response, but can be regulated at the subjective level in a graded way according to the “personal relevance” of fictional events for real life. These results have been interpreted as relying on the mechanism of cognitive reappraisal, involving “changes emotion’s meaning in a way to alter its emotional impact” (Gross and Thompson, 2007). As such, personal relevance could have changed either the object of the emotion or the appraisal of the possibility of the fictional events, leading to

up-regulation of the subjective component of the response. To investigate this question in further details, I tackle the rationality issue to demonstrate how the possibility of fictional events can serve as rational basis and shapes emotion response towards fictional events. Indeed, emotion regulation allows to solve the compatibility issue thanks to the flexibility of our metacognitive processes but calls for a solution of the rationality issue to justify that the possibility of fictional events or the reaction towards real events evoked linked to rational appraisal are shaping emotion response according to their functional roles in both situations and render emotion expression fitting to their object.

4.3. Emotion regulation and the rationality issue

To be rational, emotions must satisfy two senses of rationality (d'Arms & Jacobson, 2000). On one hand, emotions towards fictional events are rational if the emotional expression is "appropriate" to the content of fictional events. On the other hand, emotions in fiction are rational if they have a functional role that justify their presence.

Based on perceptual and memory appraisal, emotions are most often appropriate to their content, as we cry for Mercutio's Death or our blood pressure rises while watching a horror movie.

Nevertheless, some discrepancy can occur when for example due to bad acting in a B-movie, stimuli that should trigger fear actually cause laughter. I argue that in these cases, the fictional nature of the situation cannot be ignored through willing suspension of disbelief because cues linked to bad acting indicating its fictional nature are activating the meta-belief. In these cases, rational appraisal changes the meaning of emotions and they are not directed towards the fictional content, but rather the fictional experience *per se* and its associated expectations.

In this sense, fiction can offer experience emotions that can be informative about the functioning of our own cognitive mechanisms. Let's take the example of a viewer who is claustrophobic but had

never been in such an eliciting situation before. If she watches a movie involving a spelunking expedition and becomes anxious, she can learn that she is prone to this type of emotion reaction. Moreover, she can learn this in a safe environment without direct risk for her. Her knowledge of the fictionality of this event allows her to regulate rationally her emotional response accordingly. Through exercising our metacognitive abilities, we can get reflexively a knowledge about our own reactions to events and we can regulate these reactions without the same constraints of the equivalent situation in reality. Hence, the belief in the possibility of fictional events is a justification for developing an emotion response because it allows us to explore our own mental process and reactions without real-life risks. This functional role shapes through rational appraisal how the emotion response will be displayed. Indeed, fiction is a situation where the feeling is informative about our own processes but do not directly serves acting in the world, a function of emotion proposed as the “feeling as information” theory by Clore (Clore 1992). In fiction, the value of emotions is thus not be evaluated based on their consequences as actions but rather according to their informational value. Followingly, it predicts that the types of emotion response should involve more components directly involved in the feeling such as experiential and physiological changes rather than motor actions.

If the emotion is directed towards real events evoked by the fictional events, cognitive value can be found in the fictional experience because attending to fiction can help the understanding of the situation evoked by the fictional events. Hence, the situation of a relative who shares the fate of Anna Karenina can through the fictional experience be better understood. Relying on emotion regulation, fiction is an occasion to exercise and understand our own cognitive processes and real-life situations with different constraints than real-life events, which provides cognitive value and justification for the presence of emotion in fiction.

5. Conclusion

A conceptual analysis of the paradox of fiction explored how solutions proposed in the literature can be cast as different emotion regulation mechanisms occurring at each stage of the emotion sequence. All these mechanisms play a role in the possibility to experience emotion in the fiction, justifying the presence of several solutions to the paradox of fiction. Crucially, emotion regulation naturally links the compatibility issue to the rationality issue through the notion of rational appraisal. The distinction between the different levels of appraisal allows the complexity and flexibility of emotion regulation in the fictional context. To provide a simple and comprehensive account of how this regulation, I show how the notion of quasi-belief can solve the paradox of fiction in a dynamic manner, rejecting each proposition at different stages of the emotion process. This solution, contrary to previous solutions, highlights the cognitive flexibility offered by metacognitive skills which underpin the regulation of emotion response towards fictional events. This offers a picture of the emotion regulation operating in fictional situation and how it shapes the emotion process in a fundamentally different manner between fictional and real-life situations, leading to different emotion responses fulfilling different functional roles in fiction. The emotion regulation account details as such the specificity of emotions that we have towards fictional events.

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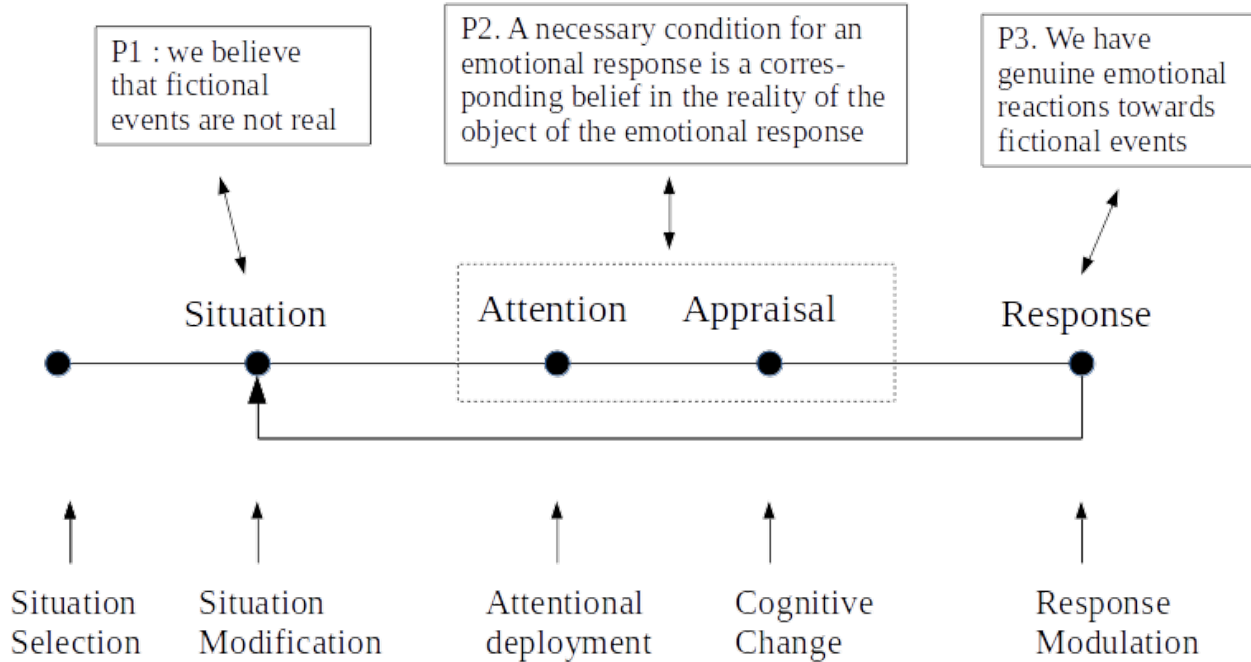


Figure 1. The emotion regulation framework and its relationship to the proposition of the paradox of fiction. On the bottom part, the different emotion regulation mechanisms and their correspondences to the stages of the modal model of emotions are added. Adapted from Gross & Thompson (2007)

Table 1. The paradox of emotion in the emotion regulation framework. On the left side, the correspondence between the modal model of emotion and emotion regulation are shown, as well as their relation to the cognitive and behavioral components of emotions (see Gross & Thompson 2007 for a review). They are mirrored in the different solutions discussed by Radford and the logical refutation of each different proposition of the paradox of fiction. As discussed, we reframed the denial of P3b as a case of cognitive appraisal at the memory and rational level.

Emotion sequence	Emotion regulation	Cognition & behavior	Radford's solution	Possible solutions	Theories about emotions in fiction
Situation	Situation selection	Approach/avoidance	Solution 1	P1'a	Illusion theory
	Situation modification	Modulation	Solution 2	P1'b	Suspension of disbelief
Attention/appraisal	Attentional deployment & Cognitive change	perception	Solution 4	P2'b	Thought theory
		memory	Solution 5	P3'd	Counterpart theory
		rational	Solution 3	P2'a & P2'c	Non-cognitivists, Mere possibility
Response	Response modulation	expression	Solution 6	P3'a	Simulation theory