Lost in Intensity: Is there an empirical solution to the quasi-emotions debate?

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Abstract: Contrary to the emotions we feel in everyday contexts, the emotions we feel for fictional characters do not seem to require a belief in the existence of their object. This observation has given birth to a famous philosophical paradox (the 'paradox of fiction'), and has led some philosophers to claim that the emotions we feel for fictional characters are not genuine emotions but rather 'quasi-emotions'. Since then, the existence of quasi-emotions has been a hotly debated issue. Recently, philosophers and psychologists have proposed to solve this debate by using empirical methods and experimentally studying differences (especially difference in intensity) between 'real' and 'fictional' emotions. In this paper, our goal is to assess the success of these attempts. We begin by surveying the existing empirical literature and stressing the methodological problems that plague most studies that might seem relevant to the debate, before focusing on recent studies that avoid this pitfall. We then argue that, due to conceptual problems, these studies fail to be relevant to the philosophical debate, and emphasise new directions for future empirical research on the topic.

One enduring debate in aesthetics bears on the nature of our emotional reactions towards fictional entities and events. As famously stressed by Colin

Radford, such emotions seem to differ from 'ordinary' (or 'genuine') emotions to the extent that they seem indifferent to the existence of their object. While ordinary emotions seem to require some belief in the existence of their object, emotions directed towards fictional entities seem indifferent to the absence of such beliefs.[1] Moreover, while we tend to condemn ordinary emotions that run contrary to our beliefs – e.g. we would blame adults who are afraid of vampires and cover their house in garlic – we have no such qualms about emotions directed towards fictional entities – e.g. it is okay to be afraid of Dracula while watching a movie. These observations have led some philosophers to argue that emotions directed towards fictional entities are not 'genuine' emotions, in the sense that they constitute a distinct class of affective phenomena, which some have dubbed 'quasi-emotions'.

Recently, in the rise of what has come to be known as 'experimental philosophy of aesthetics', some philosophers and psychologists have proposed to address these questions using experimental methods.[2] In this paper, our goal is to assess what has been achieved so far by empirical studies on emotional reactions towards fictional entities, how they relate to the philosophical debate on quasi-emotions, and how empirical approaches to this problem could be improved upon in the future.

In §1, we present the so-called 'paradox of fiction' and how it motivated Kendall Walton to introduce the notion of 'quasi-emotions'.[3] In §§2 and 3, we survey the existing empirical studies on the effect of the real/fictional distinction on emotional reactions and explore what empirical lessons we can draw from them. In §2, we highlight some methodological limitations of existing studies while, in §3, we present the results of two new studies and argue that it is still too early to draw conclusions about the impact of the real/fictional distinction on emotional responses. In §§4 and 5, we discuss the prospects of empirically solving the debate on quasi-emotions. In §4, we argue that the existing studies are mostly irrelevant to the current debate while, in §5, we try to imagine what a relevant empirical test of quasi-emotions theories could look like.

I. QUASI-EMOTIONS IN THE CONTEXT OF
THE PARADOX OF FICTION

The contemporary debate on the nature of our emotional reactions towards fictional entities started when Radford made the following observation: in everyday life, realising that the object of my emotions does not really exist generally makes this emotion disappear. Suppose Maria is terrified because she believes that a huge asteroid is going to collide the Earth. Learning that the asteroid is a hoax will make her fear disappear. Observations of this kind, which can easily be multiplied, motivate the following principle: we can only feel emotions towards entities we believe to exist. However, this seemingly trivial principle faces an equally trivial counter-example: we regularly feel

emotions towards entities we know not to exist, such as characters in novels or movies. Philosophers have taken the habit to express this 'paradox' in the form of the following trilemma:

1) We have [genuine] emotions concerning the situations of fictional characters.
2) To have [genuine] emotions concerning someone's situation we must believe the proposition that describes that situation.
3) We do not believe the propositions that describe the situations of fictional characters.[4]

These three propositions cannot be all true at the same time. Thus, we should reject (at least) one of them.

Nowadays, many philosophers consider this trilemma to be an old-fashioned and uninteresting way of presenting the paradox as most, if not all, emotions theorists reject the second proposition.[5] However, it has been argued that, even if the trilemma presentation can be easily discarded, this does not mean that there was no original puzzle to begin with.[6] In fact, one can identify two different puzzles hidden under the trilemma presentation.[7] The first is a metaphysical (or a descriptive) puzzle and can be formulated in the following way: how is it that the emotions we feel towards fictional characters are not as sensitive to the existence of their object as 'genuine' emotions directed towards real persons? This question suggests that the psychological mechanisms underlying emotions towards fictional characters are different enough from those underlying 'genuine' emotions to warrant further investigation: do they imply a kind of cognitive imagination, beliefs that p is the case 'in the fiction', a suspension of (dis)belief, etc.? The second puzzle, which is closer to Radford's original question, bears on a normative claim about the rationality of our emotions toward fictions.[8]

In this paper, we will focus only on the metaphysical puzzle and especially on one particular solution: accepting that we do not feel genuine emotions toward fictional characters – i.e. the rejection of (1) in the old-fashioned trilemma.

At first sight, this solution may seem preposterous: to most of us, it is clear that we feel *something* for fictional characters when we read novels or watch movies. It's not like we were faking it or pretending to have emotions. However, philosophers who reject the first statement do not deny that we feel *something*, they just argue that this 'something' is very different from what we feel for real objects. For example, Kendall Walton, who popularised this idea, did not deny that we often experience some muscle tension, clutches, pulse acceleration, and adrenalin flows while watching a horror movie. His claim was simply that these states do not qualify as genuine fear, but should rather be described as 'quasi-fear'.[9] This account is both famous and controversial in aesthetics and philosophy of mind, as it seems to reject common sense

to introduce a new category of mental states: 'quasi-emotions', which are supposed to be ontologically distinct from 'genuine' emotions.

I.a Quasi-emotions

It is important to distinguish two different ways of conceiving quasi-emotions in the philosophical literature:

(1) *Waltonian quasi-emotions*: According to the first view, defended by Walton, we genuinely experience muscle tension, pulse acceleration and gut feelings when we take part in a game of make-believe – which includes, for Walton, our engagement with fictions such as novel, movies, etc. These experiences are not entirely in our control, just as regular emotions, and constitute what Walton call 'quasi-emotions'.[10] Nonetheless, we use these feelings as props to propositionally imagine that we are afraid of a monster or sad for the death of Anna Karenina – just as we use images of a movie as a prop to feed up our game of make-believe that there is a monster.[11]

Gregory Currie, for his part, also defends the existence of quasi-emotions, but insists that the main difference between emotions and quasi-emotions concerns their grounding. The experience of a genuine emotion is grounded on beliefs and desires, whereas the experience of quasi-emotions is grounded on exercises of propositional imagination and desires (or imaginative desires):

> In general, for any emotional state characterisable in terms of beliefs and desires of certain kinds causing feelings of a certain kind, there will be a corresponding quasi-emotion in which make-belief takes over from belief.[12]

This parallel between structures explains the similarities as well as the differences between emotions and quasi-emotions. Make-belief in Currie's view is not an operator for a complex activity but a kind of psychological mode.[13] Thus, the relation between the content of a fiction and a quasi-emotion is more direct than in Walton's view: the spectator is directly quasi-afraid of Dracula, she need not, in addition, imagine being afraid.[14]

Currie is nevertheless more cautious than Walton regarding the claim that quasi-emotions are ontologically distinct from emotions. He indicates that quasi-emotions can be understood as a kind of emotions;[15] and in *Recreative Minds*, he seems to have abandoned the term 'quasi-emotion'.[16]

(2) *Meinongian quasi-emotions:* Quasi-emotions can alternatively come in another flavour. Following Alexius Meinong, Kevin Mulligan argues that when we do more than merely judging or entertaining a thought about an emotion and experience what it is like to feel it, we can call this phenomenon a 'quasi-emotion'.[17] For instance, we can simply remember that we were angry, or re-experience the phenomenology of our past episode of anger. In this second case, we would not say that we are angry, just like we would not say that we see an apple when we imagine it visually. Imagining being angry (or

imagining what is it like to be angry) is, thus, a sub-species of perceptual imagination.

Mulligan doesn't explicitly relate this phenomenon to the paradox of fiction, but Fabian Dorsch goes further in arguing that quasi-emotions so understood can solve the paradox of fiction.[18] According to Dorsch, to experience something akin to sadness in reading *Anna Karenina*, we just need to imagine the phenomenal experience of being sad and ascribe it to the death of Anna.[19]

A major distinction between the Waltonian and the Meinongian account is that the first is about the nature of emotions, the second about the nature of imagination. According to Walton, quasi-emotions are neither imagination nor emotion: they are physiological responses used in games of make-believe.[20] Similarly, for Currie, quasi-emotions are or are not sub-species of emotions triggered by an exercise of imagination. As opposed to this, on the Meinongian account, quasi-emotions are kinds of perceptual (objectual) imagination. Keeping this distinction in mind will prove important when it comes to assess the relevance of empirical studies to the debate surrounding quasi-emotions.

I.b   Rejecting quasi-emotions on empirical grounds?

So, what are the reasons to think that what we feel for fictional characters and entities should be considered 'quasi-emotions' rather than 'genuine' emotions? One main argument put forward by proponents of quasi-emotions is that there are striking differences between 'genuine' emotions and the ones we feel for fictional characters. First, what we feel for fictional characters does not seem to trigger the same kind of behaviour as everyday emotions: even if we report being afraid in front of a movie, we would not feel the need to flee the cinema.[21] Similarly, when a father pretends to be a monster, his child could fly away but the smile of enjoyment that we can read on his face indicates that his fear is not fully serious.[22]

Another piece of evidence in favour of quasi-emotions concerns the duration of what we feel for fictional characters. People can be deeply affected by the death of Anna while in the process of reading *Anna Karenina*, but this feeling won't continue to haunt them very long once the book is closed. By contrast, the death of existing people can have a lasting and continuous impact on our emotional condition.[23] On this basis, someone may be tempted to add that what we feel for fictional characters is typically less intense, or less vivid than genuine emotions. This lack of intensity constitutes, then, another argument in favour of quasi-emotions.[24] Thus, ultimately, the debate about the existence of quasi-emotions can be reformulated in the following way: are there differences between emotional responses towards fictional entities and emotional responses towards real entities, and are these differences important enough to warrant considering them as two different types of mental states?

To some, this question may appear as an empirical rather than a conceptual one. Facts about the nature, intensity and motivating power of psychological states are the standard object of psychological inquiry, and not

something that can be assessed using *a priori* methods. As such, it makes sense to consider that the existence of significant differences between everyday emotions and the emotions we feel for fictional characters should be the object of an empirical inquiry. This is why some philosophers have turned to experimental methods in the hope of making progress on the 'quasi-emotions' problem.

So far, these studies have mainly focused on differences in intensity between 'real' emotions (the object of which is considered to be real) and 'fictional' emotions (the object of which is considered fictional). In one crucial study, Sperduti et al. failed to detect any physiological difference between real and fictional emotions.[25] This lack of difference leads them to conclude that 'the fiction-directed emotions are physically robust [. . .] and can be seen as genuine emotions. The answer to the paradox of fiction should probably be sought not in emotion per se, but in factors and mechanisms modulating it'.[26] However, discussing the results of the very same study, Jérôme Pelletier concludes that these data constitute 'an incentive for labelling our affective responses to fictions quasi-emotions'.[27]

This disagreement highlights the difficulty of using empirical data to directly 'solve' the debate about quasi-emotions. While we are in sympathy with the idea that empirical experiments can clarify and support (or contradict) common-sense intuitions, we will argue that, as far as quasi-emotions are concerned, the current empirical experiments are not sufficient to settle the debate even though they provide us with new tracks for more fine-grained experimental designs and for novel solutions to other related puzzles. This is why, in this paper, our aim will be to survey the existing empirical literature before assessing its relevance to the philosophical debate on the existence of quasi-emotions.

II. WHAT DO THE EXPERIMENTS ACTUALLY SHOW? METHODOLOGICAL PROBLEMS IN THE STUDY OF 'FICTIONAL' EMOTIONS

As mentioned, going through the literature, one can find a handful of studies purporting to explore differences in emotional reactions to 'real' and 'fictional' stimuli – either because they are directly interested in this difference, or because they use it as a means to study another phenomenon, such as emotion regulation. All of these studies focus on the effect of the real/fictional distinction on the (phenomenal or physiological) intensity of emotional responses: the question is whether perceiving a stimulus as fictional (rather than real) will modulate the intensity of emotional responses.[28] On a first approach, one might think that all these studies are relevant to an empirical approach to the quasi-emotions problem. However, it turns out that very few of them are really useful, as most suffer from at least one of three major methodological problems.

II.a   Problem 1: faulty conceptualisation of what counts as fictional

Some studies fall short simply because their operationalisation of what counts as fictional is faulty. For example, Thalia Goldstein showed participants excerpts of popular fictional movies (e.g., *Love Story*) and either told them that the director or screenwriter based the plot on their personal experiences (reality), or that they had entirely made up the plot of the film (fiction).[29] As a result, Goldstein found no difference between 'real' and 'fictional' stimuli.[30] However, this approach is clearly problematic as the fact that movies are based on real events does not prevent them from being fictions and being considered as depicting fictional events. Sam knows that *Lawrence of Arabia* is a biopic based on real events, but he does not believe that he is watching the historical Lawrence. Rather, a good 'real' condition should show participants movies presented as documentaries, clearly aiming at depicting real events – rather than based on real events.

Moreover, popular (American) movies contain cinematographic conventions such as soundtrack, lighting, traveling, etc. These conventions tamper the results: even if participants were informed that these movies depict real events, the way they are filmed makes them immediately identifiable as *fiction.*

II.b   Problem 2: contents not matched across conditions

A second issue arises when studies do not present the same kind of content across conditions (what is 'real' and 'fictional'). Indeed, to know whether the sole fact of appraising a narrative as real or fictional is enough to change emotional intensity, it is important to rule out changes that might be due to differences in content. For example, LaMarre and Landreville found that participants were more likely to feel guilt, regret and shame about the Rwandan genocide when they were presented with a documentary about the genocide compared to a historical reconstruction of this same genocide.[31] However, the effect they observed might have nothing to do with the real/fictional distinction, and only with the content of each stimulus. There are, indeed, relevant aesthetical differences between documentaries and reconstitutions – starting with music, acting, editing, lighting, etc.

The same problem arises for Pouliot and Cowen's study purportedly showing the exact opposite, i.e. that fictions actually elicit more intense emotional reactions than documentaries: the stimuli presented in the 'documentary' and in the 'fiction' conditions were completely different.[32] However, determining the role of appraising a content as 'real' or 'fictional' requires the very same content to be presented as real (in one condition) and fictional (in the other condition).

II.c   Problem 3: instructions encouraging content reinterpretation rather than mode change

This leads us to our third problem: the way the difference between the two conditions is presented. Most studies contrasting 'real' with 'fictional' stimuli have been primarily interested in the study of cognitive reappraisal as a regulation strategy for emotional reactions, and not in the impact of the real/fictional distinction *per se*.[33] Typically, in those studies, a given stimulus is first presented to participants as depicting a real event, and then, in a second stage, participants are asked to reappraise it as depicting a fictional event. The results of these studies lend support to the idea that affective reactions to real stimuli and affective reactions to fictional stimuli can be distinguished: participants who were instructed to reappraise a given stimuli as fictional tended to have less intense affective reactions than those instructed to interpret the stimuli as real.

Though adequate to study the effect of cognitive reappraisal on emotions (which was the actual aim), the method employed in this study as well as numerous others may not deliver the kind of evidence defendants of quasi-emotions need. Indeed, their philosophical relevance is diminished by the instruction participants are given to reappraise the stimulus as fictional. In most cases, participants are instructed to reinterpret the stimulus not as a fictional depiction of a given scene, but as a real depiction of people pretending to be in a certain situation. For example, Oliveira and her colleagues presented participants with pictures of mutilated bodies.[34] In one condition (the real condition), participants first read a text about worldwide violence and were then instructed to keep in mind that these images represented 'real scenes'.[35] In the other condition (the 'fictional condition'), participants first read a text about the wonderful makeup tricks used to simulate injuries in films and were then instructed to always have in mind that these were 'cinema makeup productions', even if they looked 'very real' (ibid). Now, given the framing of the task, it is not clear that people in both conditions appraised the same content (a mutilated body) and only differed to the extent that they represented it as real or fictional. Rather, participants may have appraised two different contents represented as real: a real depiction of a mutilated body in the 'real' condition, and a real depiction of an actor pretending to be mutilated in the 'fictional' condition. If this is the case, then these studies only tell philosophers about the (trivial) fact that different contents will elicit different emotional reactions, but have nothing to say about the emotional impact of representing the same content as fictional opposed to real.[36]

In fact, these studies correspond more closely to Radford's original case – in which we learn that something we believe to be the case is actually a hoax – than to the way we generally engage with fictions.[37] A more adequate operationalisation of the real/fictional distinction should direct participants attention towards the difference in mode (a real report vs. a fictional narra-

tive) rather than towards the fact that objects in the fictional narratives are not in fact what they seem to be – which encourages content reappraisal.

II.d   Sperduti et al. experiment

We just highlighted three methodological limitations that render most of the studies about the effect of the real/fictional distinction on emotional reactions irrelevant to the question of quasi-emotions.[38]

In their study, Sperduti et al. presented participants with brief video clips (around 4-5 seconds, no sound) that were preceded by a 'REAL' or 'FICTIONAL' cue. Thus, across participants, the very same clips could be presented as 'REAL' or 'FICTIONAL', which fulfils the requirement for keeping content constant across condition. Moreover, during the instruction phase, the 'REAL' and 'FICTIONAL' labels were explained as follows: 'REAL' video clips were presented as excerpts of documentaries or amateur videos, while 'FICTIONAL' video clips were presented as excerpts from 'mockumentaries' (fictions shot in the same style as a documentary). Here again, the method avoids the pitfall of inviting participants to see the 'fictional' stimuli as 'real' representation of different objects – e.g. by saying that the persons in fictional videos are actors. The instructions are minimal and only emphasise the fictional nature of these representations.

Video clips were either (i) neutral, (ii) positive, or (iii) negative. Sperduti et al. (2016) observed that, for negative videos (but not for positive and neutral ones), presenting them as fictional led participants to report less intense emotional reactions, suggesting that appraising the same contents as real or fictional is enough to make a difference in the intensity of emotional reactions.[39] However, participants electrodermal activity was not significantly affected by the real/fictional distinction.

Sperduti et al. results are hard to interpret. On the one hand, the difference they observe in negative emotions reports seems to provide evidence in favour of a difference between emotions directed towards fictional entities and emotions directed towards real entities, the former being on average less intense than the latter – at least when it comes to negative emotions.[40]

Still, the fact that the difference was only observed for subjective reports and not for physiological measures leads Sperduti et al. to reach a conclusion that is reflected in the title of their paper (i.e. *The paradox of fiction: Emotional response toward fiction...*):

> Regarding the philosophical debate about the nature of emotion toward fiction our data seem to suggest that the fiction-directed emotions are physically robust, as witnessed by a physiological arousal comparable to real material, and can be seen as genuine emotions.[41]

One might think that Sperduti et al. are too quick in reaching this conclusion. After all, their study simply fails to observe a significant effect and there

is no easy step from this to the conclusion that there is a lack of effect. Given the existence of what statisticians call 'type-II errors' or 'false negatives', a reasonable inference from a null effect to an absence of effect would require several studies failing to observe a significant effect. But, as we will see, not all studies fail to observe such an effect.

III. CONFLICTING RESULTS: TWO OTHER STUDIES ON THE IMPACT OF THE REAL/FICTIONAL DISTINCTION ON EMOTIONAL REACTIONS

Coincidentally, at the same time Sperduti et al. were running their study, we were also running two very similar ones.[42] Though the results of our own studies agree with Sperduti et al. data on many points, there are also important differences that directly bear on their interpretation of their results.[43]

Despite wide similarities in design, one key difference between Sperduti et al.'s study and our own lies in the kind of stimuli we used. One possible reason for the absence of (significant) difference in physiological responses in Sperduti et al.'s study might simply be that their stimuli were too short and minimal (4 to 5 seconds, no sound, only image), and thus differed in deep and important ways from typical fictions, which give at least some time for audiences to immerse themselves in the story. By contrast, our studies used fewer but longer stimuli: (i) video clips that were about five minutes long, and (ii) texts that were about one page long.

Both video clips and texts were matched for content, as we wrote texts ourselves to match the content of video clips. Video clips were mostly excerpts from documentaries and amateur videos. Some were chosen to be *neutral* – e.g. people picking mushrooms, or playing chess – while others were chosen to be *sad* – e.g. people tending to their paralysed father, or soldiers talking about their experience in Iraq. While previous studies on the same topic have only used images or videos, we thought the introduction of texts would lead to a methodological improvement, for it is harder to reinterpret a fictional text in such way as to perceive it as a real representation of something else. Indeed, while someone watching a movie can always end up perceiving actors playing a role rather than the characters themselves – particularly when the actors are not convincing – it is hard to imagine a similar phenomenon in the case of texts. We thus thought that using texts in addition to videos would give one additional way of avoiding the problem of participants reinterpreting stimuli.

Despite this difference in stimuli, our operationalisation of the real/fictional distinction was very close to the one used by Sperduti et al. Video clips were presented as part of documentaries or amateur videos (in the 'real' condition) or as part of mockumentaries (in the 'fiction' condition). As for the texts, they were described as news articles (in the 'real' condition) or as fictions under the form of news articles (in the 'fictional' condition).

III.a   Summary of our first study

Our first study was purely correlational. We presented 46 participants (all women) with either videos ($N = 27$) or texts ($N = 19$), and told them that some stimuli would be 'real' while others would be 'fictional', but did not specify which ones were fictional or which ones were real. Rather, participants had to report their own perception of the reality/fictionality of each stimulus after seeing it. They were also asked to rate their negative feelings (including sadness) at the end of each stimulus. This allowed to look at whether participants' beliefs in their reality or fictionality would predict the intensity of participants' emotional reactions.

This first experiment also served as preparation for the second experiment as it allowed us to identify the 'saddest' part of each stimulus, for which we would register and analyse physiological reactions. Indeed, participants were asked to highlight the saddest parts of each stimulus – by pressing a key in the video condition, or literally highlighting the relevant passage with markers in the text condition.

Inferential tests run on participants sadness reports showed that our 'sad' stimuli (contrary to our 'neutral' stimuli) were indeed successful in inducing sadness. Because videos and texts did not differ in their ability to induce sadness, and videos were not perceived as more fictional than texts, all stimuli were lumped together for subsequent analyses. Focusing on sad stimuli, we tested for a correlation between participants' sadness reports (how sad they felt) and their fictionality reports – to which extent they considered the stimuli to be fictional. As predicted, a significant negative correlation was revealed ($r = $ -.337), reflecting that the more participants tended to perceive items as real, the more they reported feeling sad.

To put it otherwise: participants tended to report less sadness after film clips and texts they believed to be fictional, compared to film clips and texts they believed to be real. Because there were no instructions from the experimenters part to reappraise the stimuli in a way that would change the content of participants experience, these results lend support to the thesis that perceiving a stimulus as fictional triggers less intense emotions, at least for sad stimuli. However, because our results in this first study were only correlational, there was a possibility that the causal relationship between our two variables ran in the opposite direction: that experiencing more intense emotions led participants to consider the stimuli as more real and less fictional. To correct for this shortcoming, we directly manipulated participants perception of the stimuli as real or fictional in our second study.

III.b   Summary of our second study

Our second study was thus experimental, meaning that we directly manipulated participants perception of stimuli as 'real' or 'fictional' before observing the impact of this manipulation on participants' emotional reactions. To do so, we specified prior to the presentation of each stimulus whether this stimu-

lus was 'real' or 'fictional'. For both kinds of stimuli, multiple components of the emotional response were measured: the subjective experience (reported through scales), the physiological responses (heart rate, frequency of skin conductance) and motor expressions (corrugator activity).

For participants subjective reports, our analysis revealed a significant interaction between valence (whether stimuli were 'neutral' or 'sad') and context (whether stimuli were presented as 'real' or 'fictional'). More specifically, participants reported more sadness when the 'sad' stimuli were presented as real compared to fictional, which was not the case for the 'neutral' stimuli. Thus, presenting the very same stimuli (videos or texts) as 'fictional' rather than 'real' led participants to report lower levels of sadness. Moreover, this result extended to reports of negative affect in general.

But was this difference in subjective reports reflected in participants physiological responses? While we failed to find a significant effect of context, or a significant interaction between valence and context for measures of heart rate and corrugator activity, the analysis performed on skin conductance responses revealed a significant interaction between context and valence. This prompted us to directly test our hypothesis and to separately compare responses to 'real' and 'fictional' stimuli for the 'neutral' and 'sad' stimuli. In the case of video clips, we found a significant difference in skin conductance responses between the sad film clips presented as real and those presented as fictional. There was no such difference in the case of neutral film clips. More specifically, participants had significantly less skin conductance responses when viewing the sad movies presented as real compared to the sad movies presented as fictional, which is coherent with them reporting less sadness when movies are presented as fictional – lower skin conductance responses being a marker of more intense sadness.[44]

III.c   Discussion of our studies

Overall, our studies confirm and replicate Sperduti et al.'s results when it comes to participants subjective reports. Our first study shows that the more participants perceive sad stimuli (videos or text) as fictional, the less sadness and negative affect they report. Moreover, our second study shows that merely presenting a stimulus as 'fictional', compared to 'real', is enough for participants to report lesser sadness and negative affects.

Still, despite these effects, Sperduti et al. nevertheless concluded that there was no fundamental difference between emotions elicited by real narratives and emotions elicited by fictions, based on the fact that they did not observe a significant effect of their manipulation on physiological measures. However, in our second study, we found a significant effect of our manipulation on physiological responses: for sad videos, skin conductances frequency was higher when videos were presented as fictional. Of course, this might be a case of false positive – after all, we tested for three different physiological measures and found a significant effect for only one of them. Still, these results suggest

that it is premature to conclude that the real/fictional distinction has no effect on participants physiological reactions and thus even more premature to conclude on this basis that quasi-emotions are genuine emotions

IV. INTERPRETING THE RESULTS: WHAT IMPLICATIONS FOR THE PHILOSOPHICAL DEBATE?

What are the theoretical implications of these different results for the philosophical debate on the existence of quasi-emotions?

IV.a Implications for Waltonian quasi-emotions

As we have seen, Sperduti et al. conclude that their data plead against quasi-emotions. The argument that implicitly underlies their conclusion parallels Noël Carroll's objection to Walton's theory:

> But then how can we be saddened by the plight of Amos Barton, when we know that Amos Barton is fictional? Or must we give up the idea that we are saddened by Barton? Yet this seems counter-intuitive, *given the intensity of our feelings*.[45]

Both rejections of quasi-emotions rely on the same implicit argument, which can be summed up as follows:

> (a) Philosophical accounts of quasi-emotions imply the existence of a phenomenal/physiological difference in intensity between genuine emotions and quasi-emotions.
> (b) If there is no phenomenal/physiological difference in intensity between 'real' emotions and 'fictional' emotions, then it is more reasonable to think that 'fictional' emotions are genuine emotions rather than quasi-emotions.
> (c) There is no relevant phenomenal/physiological difference in intensity between 'real' emotions and 'fictional' emotions.
> (d) So, it is more reasonable to think that 'fictional' emotions are genuine emotions, rather than quasi-emotions.

Premise (c) is the empirical one: as we saw, the dearth of existing evidence and the presence of conflicting results make it difficult to consider this premise as empirically established. But what if it were? Would we be warranted in accepting conclusion (d)? Not necessarily, as premise (a) is also problematic. Indeed, according to Walton himself, there is no reason to think that quasi-emotions are necessarily less intense (phenomenologically or physiologically) than genuine emotions. Responding to Carroll's presentation, he writes:

> The intensity of one's feelings is no reason to insist that the correct description of one's experience has to be that of (literally) being saddened.[46]

Currie, for his part, argues that feelings elicited by belief and by imagination may be phenomenologically similar.[47] Moreover, both Currie and Walton consider that emotions and quasi-emotions can occur without phenomenology.[48] So, according to the very advocates of quasi-emotions, phenomenology (and presumably its associated physiology) cannot be used as a criterion to distinguish between genuine emotions and quasi-emotions. As a consequence, under a Waltonian conception of quasi-emotions, even if there was no observable difference in intensity between 'real' and 'fictional' emotions, we would not be warranted to conclude that there are no such things as quasi-emotions.

IV.b   Implications for Meinongian quasi-emotions

However, as we saw earlier, the Waltonian conception of quasi-emotions is not the only one. On the alternative Meinongian conception of quasi-emotions (thereafter 'M quasi-emotions'), according to which they are exercises of objectual/perceptual imagination, it seems that phenomenology (and its associated physiology) cannot be considered so easily as being orthogonal to our enjoyment of fictions. Regarding perceptual imagination, David Hume makes the following observation:

> [Memory and imagination] may mimic or copy the perception of the sense; but they never can entirely reach the force and vivacity of the original sentiment.[49]

This well-known principle states that, since imagination is a re-creation of a primary mental state, it cannot be as vivid as this primary state. Or, as emphasised by Mulligan, a simulation shares some, but not all features of the mental state it re-creates.[50]

We suspect that Sperduti et al.'s attack on quasi-emotions relies precisely on such a principle. In a nutshell, if quasi-emotions are sub-species of imagination and if there is (at least) no physiological difference between quasi-emotions and regular emotions, then advocates of quasi-emotions face the following dilemma: rejecting Humes principle or rejecting quasi-emotions.

One could argue that vividness is a fuzzy notion so that we cannot know if Humes use of 'vividness' in his *Enquiry* really refers to phenomenological/physiological vividness.[51] For instance, Dorsch considers the lack of action tendencies in quasi-emotions as a sign of low vividness.[52] In our opinion, this solution is contrived, considering that to imagine having an emotion is a kind of re-creation of perception, just like a visual mental image. These mental images are known to lack determinacy or to be occlusive, which are obvious phenomenal properties. If quasi-emotions are perception-like, it is likely that they resemble their siblings in the same way.

Thus, it seems that it makes sense to predict that M quasi-emotions will (on average) be less intense than genuine emotions. Does this mean that the results we have surveyed so far are relevant to the debate on the existence of M quasi-emotions – i.e. that Sperduti et al. results warrant rejecting the

existence of quasi-emotions understood in this way, while our results warrant accepting their existence?

Actually, this is not clear. Indeed, the results we have surveyed so far bear on (potential) differences in intensity between real and fictional emotions. The question is thus whether the results of these studies tells us something about M quasi-emotions. Let us suppose that, for the reason we just presented, M quasi-emotions are on average less intense than genuine emotions. Showing that there is no difference between genuine emotions and fictional emotions would indeed be a good reason to conclude that fictional emotions are not M quasi-emotions. But this would not be a good reason to conclude that M quasi-emotions do not exist. Indeed, in contrast to Waltonian quasi-emotions, Meinongian quasi-emotions are not conceptually tied to fiction (make-believe) or engagement with fiction: they may exist, despite playing no key role in our engagement with fiction – *pace* Fabian Dorsch.

Moreover, showing that there *is* a difference in intensity between real and fictional emotions (as we think we did) would not be enough to conclude that fictional emotions are M quasi-emotions. Indeed, there are good reasons to doubt that M quasi-emotions can capture our affective engagement with fictions.

In being caught up by a fiction, we do not seem to be able to decide to *not* feel an imaginative emotion toward the content of the fiction or to feel the phenomenology of happiness in front of a sad content.[53] Rather, 'the most plausible claim is that imagining experiencing an unjust situation, rather than imagining experiencing indignation, gives rise to [our] (genuine or quasi-) indignation'.[54] Thence, even if emotions for fictions seem, in our studies, phenomenologically and physiologically less vivid than emotions for real events all things considered, we still think that this is not an argument in favour of M quasi-emotions.

IV.c   Debating a truism in Aesthetics

Thus, it is not clear that empirical results about potential intensity differences between real and fictional emotions have much bearing on the philosophical debate on the existence of quasi-emotions – at best, they show that fictional emotions are not Meinongian quasi-emotions. But this does not mean that these studies should be discarded. Indeed, whether there is (on average) a difference in intensity between genuine and fictional emotions is a fascinating debate in itself. Contrary to Sperduti et al. hypothesis that emotions for fictions are *less intense* than emotions for real events, many aestheticians consider the rejection of this idea as a truism:[55]

> It is false, however, to suggest that there are systematic differences [. . .] between ordinary emotions and emotions directed to fictions. *Emotions can vary greatly in their intensity.*[56]

> The difference between the feelings I experience in responding to a fictional character or situation and those I experience in response to what I take to be actual cannot simply be understood in terms of intensity. What I feel for or about a fictional character may in fact be *more intense* than my feelings for or about the starving Ethiopians, or the Guatemalan refugees whose plight I hear about on radio or television.[57]

For example, an anonymous referee for this manuscript pointed out that sometimes the death of a character can affect us more than the death of a real person. As Oscar Wilde once wrote 'One of the greatest tragedies of my life is the death of Lucien de Rubempré. It is a grief from which I have never been able completely to rid myself.'[58]

By focusing on this kind of example, aestheticians presumably want to capture the following truism:

> (A) Emotions towards character/event known to be fictional can *in some circumstances* be equally intense as emotions towards people/events known to be non-fictional.

This variability in the intensity of our emotions towards fictional entities seems to be the reason why Currie, Walton, Carroll and even Dorsch consider that quasi-emotions may be similar in intensity to regular emotions, and why some philosophers consider the paradox of fiction to be intractable.[59]

However, one can accept that we can find some episodes of fictional emotions that are as intense (or even more intense) than some episodes of real emotions, but still endorse the following claim:

> (B) Emotions toward characters/events known to be fictional are *ceteris paribus* less intense than emotions towards people/events known to be non-fictional.[60]

Is it the case? This is the question that the studies we have surveyed in sections 2 and 3 have addressed, and our own results suggest that, at least for negative, low intensity emotions, there is an intensity gap between emotions for fiction and regular emotions. With more studies, especially on more intense emotions, we could reach a clearer verdict on this (apparent) truism in aesthetics, which constitutes an interesting issue in itself.

V. CAN THE QUASI-EMOTIONS DEBATE BE EMPIRICALLY ADDRESSED?

As we just showed, studying differences in intensity between real and fictional emotions is not likely to help us determine whether fictional emotions are genuine emotions. But can we imagine a way to empirically test whether fictional emotions are quasi-emotions? In this concluding section, we briefly discuss this possibility.

V.a   A key difference between genuine and quasi-emotions: action tendencies

If intensity is not the right criterion to distinguish genuine emotion from quasi-emotions, then what is? According to proponents of quasi-emotions, one key difference between genuine and quasi-emotions is their action tendencies.[61] As mentioned earlier, when a child flees his dad who pretends to be a monster, he is not afraid or even half afraid: the idea is that, if it were the case, 'we would expect him to have some inclination to act on his fear in the normal ways'.[62] But we don't expect the child to call the police or to run away for good.[63] Choosing action tendency as a criterion to distinguish between emotions and quasi-emotions makes sense, since many scholars consider action tendencies as a central feature of emotions.[64]

Thus, to come back to Waltons original example of a spectator watching a movie, the intensity of this spectator's feelings is irrelevant to determine whether what he is feeling 'genuine' or 'quasi'-fear: even if 'his muscles are tensed, he clutches his chair, his pulse quickens, his adrenaline flows' , as long as he does not have the tendency to flee the cinema or to attack the monster, we should not call these feelings 'fear'.[65] Why? Because genuine fear leads us to protect ourselves in running away or in dealing with danger.[66]

V.b   Methodological issues in the comparison of action tendencies

If differences in action tendencies constitute a key distinction between genuine and quasi-emotions, it seems that a good way of empirically testing the claim that fictional emotions are quasi-emotions would be to test whether there are differences in action tendencies (or motivational power) between real and fictional emotions.

However, although the idea is simple, its execution faces considerable difficulties. A first difficulty is that it is not enough to observe differences in motivational power between emotions we feel towards real people and emotions we feel towards fictional characters to conclude that fictional emotions are mere quasi-emotions that lack motivational power *precisely because they are not genuine emotions.* Indeed, there can be alternative explanations to the apparent lack of motivational power of fictional emotions.

A first alternative explanation is that the lack of motivating power is not explained by a distinction between '*real*' and '*fictional*' emotions, but by a distinction between '*direct*' and '*representational*' emotions, i.e. between emotions that are elicited by a direct interaction with their object, in contrast to emotions that are elicited by a representation of this object.[67] For example, Sam's reaction to watching a documentary on an ongoing war probably won't be the same as his reaction to being actually part of that war. It would make sense to flee in the latter case, but not in the former. However, both are 'real' emotions in the sense that, in both cases, Sam believes the object of her emotion to be real. Hence, in this case, the motivational difference between the two emotions has nothing to do with the real/fictional distinction (and

thus with one emotion being less genuine than the other): it is a matter of directly interacting with the object of our emotion vs. only interacting with a representation.

Of course, it is possible to exclude this kind of confounding factor by comparing *real* representation with *fictional* representation, which is exactly what the studies we surveyed have been doing. However, studies on this model would not be able to rule out a second alternative explanation: the impossibility to act on one's motivation. Indeed, seeing someone suffer typically elicits sympathy or compassion, which will translate in a motivation to help this person. But for this motivation to translate into behaviour (or even maybe to arise), we need to have some *ability* to help said person. If Maria reads about the sufferings of a real person who died a long time ago, she might experience a genuine emotion (because this emotion is about a real person), but this experience won't trigger any motivation (or at least any behaviour), simply because there is nothing she can do. Thus, one could argue that, even if we observed that (most) genuine emotions motivate us to act while most fictional emotions do not motivate us to act, this would not warrant concluding that these emotions are different: it might be that the difference between real and fictional emotions corresponds to that between real emotions towards objects we can act upon and real emotions towards objects we cannot act upon – e.g. because they no longer exist. This is a difference in our ability to act upon the objects of these emotions, rather than a difference in their intrinsic motivational power.

A second difficulty is to determine which action tendencies are relevant. Indeed, if one thinks about it, it seems obvious that fictional emotions can motivate us to act in one way or another. For example, watching a horror movie about scary vampires might motivate Sam to carefully close his door and check whether there is no one lurking around his house. Or reading a novel about the sufferings of (fictional) people in a third-world country might prompt him to send money to NGOs. However, these (trivial) observations have never been taken as definite proof that fictional emotions are genuine emotions and not quasi-emotions. It is because not all motivating power will do the trick. When quasi-emotions theorists argue that quasi-emotions lack motivating power, they do not claim that quasi-emotions play no causal role in our behaviour – an extremely implausible hypothesis. They claim something more precise – maybe that quasi-emotions lack the action tendencies that are *characteristic* of their genuine counterparts. For example, what distinguishes genuine fear from quasi-fear is not that quasi-fear has no causal impact on behaviour, but rather that quasi-fear lacks the action tendencies that are the *mark* of genuine fear, that is: fleeing or running away. However, this means that an experiment aiming at distinguishing genuine emotions from quasi-emotions on the basis of their action tendencies presupposes a conceptual inquiry into the relevant action tendencies. As long as this latter question is not solved, any empirical attempt seems premature.

However, assuming this second issue can be resolved (and there is no reason to think that it cannot), there might be ways to bypass the first issue. The first issue arises because, in most traditional fictions, we are unable to act upon the fictional characters and situations. But not all forms of fictions allow for the same degree of interaction: more and more, *interactive fictions* (such as video-games) allow us to act within the fiction. Such fictions might thus be a way to investigate whether fictional emotions lack motivational power, though comparing them directly to genuine emotions with perfectly matched experimental and control situations might prove difficult: indeed, as stressed earlier, we cannot directly compare them with situations in which one directly acts on the object of one's emotion. Rather, we need to find an equivalent in which participants have the possibility to act on a real object *through* a representation of that object.[68] One might for instance imagine something like a virtual-reality game in which characters the participant interact with are either completely fictional, or avatars from other players, and the participant is then given the possibility to help one of these characters. However, as soon as real players are involved, numerous ethical issues come into play.

VI. CONCLUSION

In this paper, our goal was to survey empirical studies that seem relevant to the philosophical debate on the paradox of fiction and the existence of quasi-emotions, and to assess their relevance for this debate. Overall, our assessment was quite negative. Not that these studies are methodologically flawed (some are, but not all). The worry is rather that they focus on a difference in intensity between real and fictional emotions that turns out to be inconsequential for the philosophical debate. A more relevant empirical test of the claim that fictional emotions are not genuine emotions should focus on the action tendencies and motivational power of these emotions, although several methodological issues stand in the way. For now, we can conclude that experimental approaches have not contributed to solve the paradox of fiction, which does not mean that they won't be able to make decisive contributions in the future.[69]

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NOTES

[1] Radford and Weston 1975.

[2] Cova, Garcia, and Liao 2015, 2018.

[3] Walton 1978.

[4] Currie 1990, 187.

[5] Stecker 2011.

[6] Cova and Teroni 2016.

[7] Cova and Teroni 2016.

[8] For a similar distinction, see Friend 2016; see also Langland-Hassan, forthcoming, chap.11 for a discussion.

[9] Walton 1978, 6; see also 1990, 196. As Stecker 2011, fn.2 observes, Walton agrees we can feel emotions without *believing* anything – so, he does not endorse (2) as such. But Walton does agree that there is something paradoxical about (quasi-)emotion for something we know not to exist. And, as he notices Walton 1978, 8, these cases cannot be reconducted to simple recalcitrant emotions. His quasi-emotions solution can thus be considered independently from the trilemma formulation.

[10] Walton 1978, 6; 1990, 196.

[11] Walton 1978, 14;1990, chap.7;1997, 43-45.

[12] Currie 1990, 198.

[13] Currie 1990, §1.5; §2.4.

[14] For a discussion of Walton's indirect view, see Moran 1994 and Dorsch 2011.

[15] Currie 1990, 212.

[16] Currie and Ravenscroft 2002.

[17] Meinong 1902, 55 et seq. and Mulligan 1999.

[18] Mulligan 1999, 63 and Dorsch 2011, 157.

[19] Dorsch 2011, 173-174.

[20] Walton 1997, 41.

[21] Walton 1978, 7; see also Currie 1990, 200.

[22] Walton 1978, 13; 1990, 242.

[23] As pointed out by an anonymous referee, there might be exceptions to this claim. We can find cases in which the death of a fictional character can affect us more deeply than the death of a real person. However, it seems reasonable to assume that (on average) the death of a person we *are attached to* will affect us more deeply and longer than the death of a fictional character *we are attached to*. Of course, it would be even better if we could

ground this assumption on empirical results, but we could not find any.

[24] In §4 we argue, against the empirical literature, that quasi-emotions theories do *not* imply or predict a difference in intensity between emotions and quasi-emotions.

[25] Sperduti et al. 2016.

[26] Sperduti et al. 2016, 58.

[27] Pelletier 2018, 135.

[28] Given that philosophical discussions have focused on phenomenology, one might wonder how physiological responses could be relevant to such debates. The answer is that, though conceptually distinct from phenomenology, physiological responses accompany emotional phenomenology and their intensity can be considered a good proxy for the phenomenological intensity of affective responses. It remains nevertheless possible to find physiological changes without awareness. Antonio Damasio is well known for having argued that even though emotions are brain and body modifications, most of them are unconscious. (Damasio 1994, chap.7). Conversely, some people argue that emotions can be felt without a change in our body/physiology (e.g., Mulligan 2009).

[29] Goldstein 2009.

[30] Goldstein 2009, 236.

[31] LaMarre and Landreville 2009.

[32] Pouliot and Cowen 2007.

[33] Oliveira et al. 2009; Mocaiber et al. 2011; Vrtička, Sander, and Vuilleumier 2011.

[34] Oliveira et al. 2009; see also Mocaiber et al., 2011.

[35] 2009:871.

[36] This limitation extends to other studies not directly concerned with emotional regulation (Mendelson and Papacharissi, 2007; Sperduti et al., 2017; Makowski et al., 2019)

[37] Radford 1975:68-9

[38] To our knowledge, the only study that escapes this difficulty is the one by Sperduti et al. (2016) that we mentioned in the introduction.

[39] Sperduti et al. (2016)

[40] Sperduti et al. (2016), 57

[41] 2016: 58

[42] Sennwald et al. 2020

[43]At the moment we are writing this paper, these studies have not yet been published. However, readers can find a full description of studies and results on the corresponding OSF registry: `https://osf.io/vpzth/`.

[44]Due to the short time it took participants to read the texts, it would have been imprudent to analyse and draw conclusions from the skin conductance data. In the future, this limitation could be avoided through the usage of longer texts and by controlling for the participants' reading pace.

[45]Carroll 1995:95, our emphasis.

[46]Walton 1997:44

[47]Currie 1990:197-8

[48]Currie (1990:199; Walton (1990:251

[49]Hume, 1739/2007: II,1

[50]Mulligan 1999. See Arcangeli 2018: 117 et seq. for an illuminating discussion.

[51]Neill 1993. See also Kind 2017 for a discussion of the elusive notion of vividness.

[52]Dorsch 2011:174. A referee pointed out that lack of action tendency does not prove that our feelings for fictions are M quasi-emotions. Indeed, we could perfectly endorse the view that we feel regular emotions based on belief that p 'in the fiction' which would also explain why we tend to stay in the cinema even while we are afraid. See, for instance, Livingston and Mele 1997.

[53]Carroll 1990:74

[54]Garcia 2012:392

[55]Sperduti et al. 2016:54

[56]Davies 2009:270, our emphasis

[57]Neill 1993:5, our emphasis

[58]Wilde 1891/2007: 927

[59]We thank Stacie Friend for having spelled this out to us.

[60]By contrast, if Sperduti et al. were correct, we should rather endorse the claim that (B') Emotions towards characters/events known to be fictional are ceteris paribus equally intense as emotions towards people/events known to be nonfictional. That would overlap with (A).

[61]Walton 1990:197)

[62]Walton 1990:198; 1978:8

[63]Currie 1990:205-6

[64]Deonna and Teroni 2012; Frijda 1986; Scarantino 2014.

[65]Walton 1978:6

[66]Tullmann and Buckwalter 2014

[67]See for example Matravers 2014

[68]Against this methodological requirement, one might argue that, in interactive fictions, people have the feeling of acting directly on fictional entities themselves, and not on a representation of these entities. This is an interesting question that deserves more theoretical and empirical research - see Garcia 2012 for an approach in terms of scope of the fictional operator.

[69]Acknowledgement: The full descriptions of the empirical studies conducted by Sennwald et al. 2019 can be found on the corresponding OSF registry: `https://osf.io/vpzth/`. We are grateful to the audience of *Thumos* at the University of Geneva for their precious help and comments. The paper has especially benefited from enlightening comments from anonymous referees of *Aesthetic Investigations*. Finally, we are indebted to Stacie Friend for her support and insightful suggestions.

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