Is the Film as Empowering as the Book? Studying Empowerment in A Monster Calls

Abstract:
The aim of the paper is to discuss A Monster Calls (2016) by J. A. Bayona, a film adaptation of Patrick Ness’s novel (2011) of the same title, based on an original idea by Siobhan Dowd, from the empowerment theory perspective. The author of the article indicates that there are some significant changes between the book and the motion picture, especially when it comes to the ways of empowering the protagonist and the works’ potential young audience. The results of this comparative study show that the film is more affectively empowering than the novel. This is mainly because in the book, Ness skillfully uses verbal narration (accompanied by Jim Kay’s illustrations), while in the film, Bayona takes advantage of the possibilities offered by the audiovisual medium, therefore providing the audience with artistic and psychological empowerments.

Key words:
A Monster Calls, adaptation, children’s and young adult film, children’s and young adult literature, empowerment, J. A. Bayona, Patrick Ness

Czy film daje taką samą siłę jak książka? Rozważania nad upodmiotowieniem w Siedmiu minutach po północy

Abstrakt:
Celem artykułu jest omówienie Siedmiu minut po północy (2016) J. A. Bayony, filmowej adaptacji powieści Patricka Nessa (2011) pod tym samym tytułem opartej na oryginalnym pomysłie Siobhan Dowd, z perspektywy teorii upodmiotowienia. Autorka artykułu wskazuje, że między książką a filmem istnieją pewne istotne różnice, zwłaszcza w zakresie upodmiotowienia bohatera i potencjalnej młodej publiczności. Wyniki tej analizy porównawczej pokazują, że film ma większy potencjał afektywnego upodmiotowienia niż powieść. Wynika to głównie z faktu,
In my opinion, the author plays an essential role in children’s and young adult literature and, more broadly, culture by shaping his/her implied readers’ or viewers’ ideology, personality, and life. When this leads to positive effects, we can say that the author has been able to empower and not disempower his/her audiences. Furthermore, due to the assumed sensitivity of the target group of children’s and young adult books, films, TV series, etc., it is – I argue – the task of the author to do his/her best to provide as much positivity as possible and lead the recipients to empowerment. In this paper, I use the idea of empowerment to analyse the film *A Monster Calls* (Atienza, Horwits, King, & Bayona, 2017), a cinematic adaptation of Patrick Ness’s (2011) novel of the same title. This film features some changes in relation to the original work and in the article, I would like to demonstrate whether these changes might lead to empowerment and how.

I first came across this concept in Elisheva Sadan’s (1997/2004) book *Empowerment and Community Planning* when I was working on my MA thesis. In this monograph, Sadan talks about how it is possible for social minorities to find their voice and subjectivity. The process of empowerment can sometimes be accelerated with the help of ‘an empowering professional’ who plays the role of a leader in the community. Having been inspired by Sadan’s theory, I have studied empowerment in children’s and young adult literature in my academic research. My co-authored paper, “Empowerment in *A Monster Calls* by Patrick Ness” (Farnia & Pourgiv, 2017), contains a discussion on how the writer of the title has been able to empower his implied readers. This article was partially based on a chapter from my PhD dissertation (Farnia, 2017) in which I have examined how a writer can choose to empower or disempower his/her implied readers. After studying and comparing six contemporary Iranian and English young adult novels, I came upon a model for analysing empowerment in fiction.
A Monster Calls, written by Ness basing on the original idea by Siobhan Dowd, who died before creating the story, is a reflective young adult novel that has won several awards, including the Carnegie and Greenaway Medals for both Ness’s writing and illustrations by Jim Kay (Jones, 2012), and I think that most of these accolades were bestowed due to the book’s empowering nature. This popular and critically-acclaimed literary work can be seen as “[…] a novel of bereavement in which a monster plays the role of a helper in order to ease [the young protagonist] through the process of healing” (Farnia & Pourgiv, 2017, p. 42). Based on the studied employment of empowerment in A Monster Calls, a model has been proposed (see Figure 1) which encompasses “four kinds of empowerment, which comprise conceptual and textual aspects of a text” (p. 43).

In the novel by Ness, we come across all four kinds of empowerment: literary, linguistic, psychological, and social, which were specifically explained in our paper (Farnia & Pourgiv, 2017, pp. 43–48). It can be claimed that A Monster Calls is a problem and a fantasy novel and because of this, it is possible to find these varied types of empowerment in the book. In this literary work, the monster plays an essential role in Conor’s empowerment. It is the creature’s presence that changes the genre from the realist novel to a fantasy one – and, as Jessica R. McCort (2016) puts it, fantasy has the power to “translate” the frightening realities of life into “manageable” fears (p. 14). Considering the theme of

1 As Pourgiv and I (2017) put it, Key’s illustrations “[…] add to the poignancy of the emotions and thoughts of the reading process” (pp. 41–42). For the detailed analysis of the work of Kay, which I do not discuss in this paper, see, for instance, Sasada (2013).
the novel, it is possible to state that this book is also a didactic one. As Kevin Sun (2018) concludes, *A Monster Calls* is an example of ‘suitable’ didactic fiction, as it shows “[…] how children can defeat real dragons” (p. 14). It is the empowered Conor who is able to ‘defeat’ his inner ‘dragon’ and come to terms with his mother’s death. Ness’s novel has been studied using the model presented above, with all these positive messages and elements taken under consideration. However, in this paper, I am going to propose a model of empowerment for the book’s film adaptation to see how the first model is changed. Therefore, I will examine the new empowering aspects and review the already considered empowering elements briefly.

**Empowerment in *A Monster Calls***

Patrick Ness, the author of *A Monster Calls*, wrote the screenplay for the film adaptation with the same title, which was directed by J. A. Bayona and released in 2017. The story is similar to that of the novel: Conor (Lewis MacDougall) wakes up at 12:07 from his nightmare and is visited by a yew tree which changes into a monster practically every night. The monster (Liam Neeson) says that he would tell the boy three stories and it is Conor who would tell the fourth one which is expected to be the true account of his own nightmare. Conor’s mother, Lizzie (Felicity Jones), is dying of cancer. To help out, his grandmother (Sigourney Weaver) comes to pay them a visit but as Conor and her do not get along well, he does not like to have her in the house. Because Lizzie’s health is failing, Conor is forced to stay at his grandmother’s and Lizzie is taken to hospital for further treatment. At school, Conor is bullied by Harry (James Melville) but hates to ask for help or protest as he abhors being looked upon as pitiful. Little by little, however, we learn that the monster’s stories do Conor some good as he manages to confess the truth about his nightmare at the end of the film. He confesses that in the nightmare he lets his mother go and this is what he feels guilty about. But the monster comforts him by saying that what matters is what he does, not what he thinks. Thus, at Lizzie’s deathbed, he tells her that he does not want her to go and in this way is able to accept her death. This experience improves his relationship with his grandmother, and she lets him stay in Lizzie’s childhood room where he finds her drawings of the monster and his stories (Atienza, Horwits, King, & Bayona, 2017). The film after its release has been quite successful and I think much of its success is due to the empowerment conveyed to the audience. In this part of the paper, I would like to discuss how this empowerment is achieved.
Drawing upon Benjamin Bloom’s (1956) learning objectives in educational psychology, I have divided the kinds of empowerment into three categories, i.e. ‘affective,’ ‘cognitive,’ and ‘psychomotor’ (Farnia, 2017). This would make the categorisation of empowering elements somewhat less complicated. As I have not found any psychomotor empowering skills, the model of empowerment proposed for the film adaptation of *A Monster Calls* would be as presented in Figure 2.

![FIGURE 2. A model of empowerment for the film *A Monster Calls*](image)

When the skills in the example have been cognitively empowering, I have put them in the ‘cognitive’ category. However, in the event of a sign of emotion, I have included them in the affective side of the model. Therefore, I have ‘psychological empowerment’ in both the cognitive and the affective categories. I have considered the critical thinking and cognitive effects of storytelling as cognitively empowering and the emotional empowering effects as belonging to the affective side.

Peter A. Facione (1992/2015) elaborates and distinguishes between six skills of critical thinking: ‘interpretation,’ ‘analysis,’ ‘evaluation,’ ‘inference,’ ‘explanation,’ and ‘self-regulation.’ Throughout the film, as well as the novel, we can find ‘interpretation,’ ‘analysis,’ ‘evaluation,’ ‘inference,’ and ‘explanation’ skills. Facione defines the ‘interpretation’ skill as the ability “to comprehend and express the meaning or significance of a wide variety of experiences, situations, data, events, judgments, conventions, beliefs, rules, procedures, or criteria” (p. 5). When the monster comments on this idea that there is no totally evil and no totally good person, he is actually using this skill to guide Conor.
(Atienza, Horwits, King, & Bayona, 2017). Analysis is “to identify the intended and actual inferential relationships among statements, questions, concepts, descriptions, or other forms of representation intended to express belief, judgment, experiences, reasons, information, or opinions” (Facione, 1992/2015, p. 5). I think that during the progression of the four tales, the monster helps Conor analyse the reality of life and human beings: “How can a prince be a murderer and be loved by his people? How can an apothecary be evil-tempered but right-thinking? How can invisible men make themselves more lonely by being seen?” (Atienza, Horwits, King, & Bayona, 2017).

While analysing the stories and his own verity, I think Conor uses the ‘evaluation’ skill as well. According to Facione (1992/2015), ‘evaluation’ is: “to assess the credibility of statements or other representations which are accounts or descriptions of a person’s perception, experience, situation, judgment, belief, or opinion…” (p. 6). That is why he questions the monster a great deal and wants him to explain why the stories end like they do. We have ‘inference’ which is related to drawing conclusions; “to identify and secure elements needed to draw reasonable conclusions; to form conjectures and hypotheses” (p. 6). I think by hearing all the three stories and telling his own story, Conor manages to come to the conclusion that his feelings are the most natural and human. The monster helps Conor put the pieces of the puzzle together so that he has the entire picture of human existence and is able to come to terms with Lizzie’s death.

Last but not least, ‘explanation’ is the ability to express one’s self: “to state and to justify that reasoning in terms of the evidential, conceptual, methodological, criteriologial, and contextual considerations upon which one’s results were based; and to present one’s reasoning in the form of cogent arguments” (Facione, 1992/2015, p. 6). I think when Conor is at his mother’s bed and confesses his true feelings to her, he is using ‘explanation.’ Or when he is trying to justify the idea of believing, which is half the cure. That said, we realise that the monster’s ‘storytelling’ has some cognitive empowerment for Conor.

In literary empowerment, I would like to talk about ‘decentration’ and ‘literary elements’ which might help guide the viewer towards empowerment. By nature, children develop ‘centration,’ however, as Morteza Khosronejad (2004) explains, one of the main objectives of children’s literature is to help develop ‘decentration’ in children. There are some critics who have focused on ‘decentration’ in children’s literature, however, it is not the main focus of this paper. I will only mention the decentration techniques we find it the film adapta-

---

2 To learn more about decentration techniques, see Khosronejad (2004); Moradpour (2016), and Farnia (2017).
Is the Film as Empowering as the Book? Studying Empowerment in *A Monster Calls*

As we can see with the novel, we can trace the pattern ‘home-away-home’ in at least two points: the first and the second story. It is as if the monster carries Conor off in order to tell his story and “Conor gets involved so much in each story that it is as if he lives through them” (Farnia & Pourgiv, 2017, p. 44).

Furthermore, just as in the novel, in the film we have no direct mention of Lizzie’s cancer. From the very beginning we see the signs: Conor making breakfast and doing the washing alone. There is, however, a one-second pause on Lizzie’s medicine when Conor is taking something from the medicine cabinet. As Conor is dressing up to get ready for school, we also hear Lizzie coughing. These ‘gaps’ are filled when we see Conor’s grandmother bringing some wigs for Lizzie to wear and hear Conor talking about the treatments Lizzie gets regularly (Atienza, Horwits, King, & Bayona, 2017).

We have the element of ‘surprise’ in the way the monster finishes the first two stories: he saves the witch and destroys the parson’s house. These endings would be as surprising for the viewer as they are for Conor and, therefore, they would help the viewer decenter from the film and analyse the message for him/herself. In addition, the presence of these stories in the plot of the film could be counted as the ‘embedded narrative’ and this leads to decentration (Farnia & Pourgiv, 2017, p. 44). There is also at least one humorous point which would lead to decentration. At the beginning of the first story, the monster says that long ago there was a kingdom in this land. This surprises Conor and he says: “Here? We don’t even have a Tesco!” (Atienza, Horwits, King, & Bayona, 2017). The name of this well-known British retailer is a touch of humour for the alert viewer. In the novel, Conor says: “We don’t even have a McDonald’s!” (Ness, 2011, p. 62). In both cases, we have decentration.

In ‘literary elements,’ I would like to talk about the genre and the plot. Because of the presence of the monster, this motion picture, as well as the novel, is a crossover narrative; i.e. it combines realism and fantasy. This is interesting because in the film adaptation, we actually see the monster, and this makes it very real. Thus, it would be possible to talk about the ‘liminal space’; a setting between imagination and reality which according to Maria Nikolajeva (2010, p. 151) is empowering. And if we consider the plot, we have Conor’s quest which is “how to deal with his mother’s ailment and the fear of loss” (Farnia & Pourgiv, 2017, p. 45).

In ‘linguistic empowerment,’ I would like to discuss ‘enriching vocabulary’ and ‘critical reading.’ With the words like ‘apothecary’ and some idioms such as ‘worst things happen at sea,’ we can state that this film adaptation as well as the novel enriches viewers and readers linguistically (Farnia & Pourgiv, 2017, p. 44). Furthermore, I think in this motion picture, the interaction
of involvement and subjectivity could lead the viewer to critical reading. The film involves the viewer as it makes use of several engaging techniques: Conor is a youth struggling with his mother’s illness and the presence of the monster coming alive to pay him visits to heal him are all involving elements. The film’s special effects also have a great share in this. However, there are some decen-
-
trations – I discussed them above – which would move the viewer’s attention away for a while and make him or her think about what happened or what is being said. This subjectivity is essential in leading the viewer towards a critical reading of the film.

As Robyn McCullum (2018) comments: “As a repetition, an adaptation may serve to affirm and reinforce cultural assumptions associated with the pretext and hence ensure its status as cultural capital, that is, as telling a story and embodying values and ideas that a society sees as having cultural worth. Thus, the impulse to tell a story over and over in different media, across different cultures may be an expression of a need to assert basic ideologies and values” (p. 2). I think this can be the case with *A Monster Calls* and its film adaptation. Ness and Bayona act as empowering professionals and through their act of filmmaking, they have been able to empower their audiences, as the ‘ideologies’ and ‘values’ they promulgate in this film are profound – as they were in the book. I would like to classify these values and ideologies stated in the film as ‘social empowerment.’ Sadan (2004) takes ‘precise formulation of values’ and ‘giving information and knowledge’ as empowering tactics that the empowering professionals should make use of to empower their community members. The same things happen in this film when we discover some values and fragments of information. For instance:

- “Belief is half of all healing. Belief in the cure, belief in the future that awaits. Your belief is valuable, so you must be careful where you put it and in whom.” (Atienza, Horwits, King, & Bayona, 2017)
- “Because humans are complicated beasts.” (Atienza, Horwits, King, & Bayona, 2017)
- “Stories are wild creatures, Conor O’Malley. When you let them loose, who knows what havoc they may wreak?” (Atienza, Horwits, King, & Bayona, 2017)

In the affective side, we talk about artistic and psychological empower-
-
ments. Unlike the novel’s character, in the film, Conor has a gift for drawing (López Díez, 2019, p. 48) and expresses his thoughts and feelings skilfully with his pencil. He draws the monster as he has seen him and uses different techniques of drawing and colouring. There are many close-ups of Conor’s pencil
Is the Film as Empowering as the Book? Studying Empowerment in A Monster Calls

on the paper – and this makes for some impressive effects. In my opinion, this idea could help the viewer with artistic empowerment. As identification occurs throughout the story, the viewer could consider Conor as a model and so this concept of drawing and art is introduced to the audience indirectly. Storytelling also improves creativity and imagination. When we take it as a form of art, we can declare that the ideas of drawing and storytelling in this film could help the viewer gain a certain artistic empowerment. Additionally, we can say of this book and its film adaptation that they can have a great psychological impact on their audiences. Chloé Buckley (2014) sees the novel as an example of “psychological Gothic” (p. 254) and Giskin Day (2012) considers it to be “[…] an important addition to the canon of fictional pathography” (p. 115). The same can be said about the film and consequently, we can find some psychological empowerment in it too.

For example, we can advocate the idea that drawing one’s fears or aspirations can be of great help for people with trauma (Klammer, n.d.). Conor is talented in drawing and we see him draw the monster frequently. The monster plays the role of his absent father and it is by relying on the creature that the boy manages to cope with the loss of his mother. Just like a loving father, the monster accompanies Conor in the hardest moment of his life; as if his presence gives Conor some courage to go on and confess the truth to his mother. In addition, and interestingly enough, at the end of the film, when Conor is looking at Lizzie’s drawings, he finds a painting that shows a little girl sitting on the shoulder of the monster. He realises that she has also been visited by this unusual companion and that, apparently, the place she felt the safest was the monster’s shoulder; it is as if the little girl feels strong and empowered there. All these assumptions would explain Lizzie’s interest and love for the yew tree. Thus, I have added drawing as a subcategory for psychological empowerment.

I think the same can be said of telling stories. The monster first makes Conor listen to his first story and then asks the boy to join him to finish the second story (destroying the parson’s house), and in the third story, Conor becomes the main character – as if it is his own story: the story of an invisible man. As Nicolette Jones (2012) most appropriately puts it: “He’s [Conor is] first an observer, then a participant, then a hero, then he tells his own story.” It is the final step, however, that leads the protagonist to psychological empowerment. According to Ellin Greene and Janice M. Del Negro (2010), “[w]hen we tell [stories], we show our willingness to be vulnerable, to expose our deepest feelings, our values” (p. 42). This is what the monster wants Conor to do to help him through his quest – if we take Conor’s acceptance of Lizzie’s death as a quest (Farnia, 2017). Thus, by considering drawing and storytelling, it is possible
to state that Bayona and Ness, as the creators of the film, have made catharsis possible for Conor and the implied viewer.

Similarly, we have Conor and his nightmare. Lewis MacDougall who plays Conor is a talented young actor and from the very beginning of the film is able to share his feelings with the audience; when he is awakened by his nightmare, he is sweating and panting, and there are tears in his eyes. Throughout the film, we see many potentially touching and moving scenes: when he is watching King Kong’s fall with open eyes; when he is smashing his grandmother’s furniture and after, when he realises what he has actually done; when he refuses to talk about his nightmare and tell the truth; and, finally, when he is at Lizzie’s deathbed. Such scenes can awaken the audience’s feelings and emotions when its members identify themselves with Conor. One can feel what the main character feels and how this facilitates the process of empowerment. As the protagonist listens to the monster’s stories and is made to tell his own story, Conor and the audience learn that it is natural for humans to wish the end of their pain. This would lead us – the viewers – to catharsis. For children and young adults (and even adults), this catharsis can be experienced not by facing these problems in real life but by knowing how that feels and purging the inner fears and feelings.³

Overall, I think due to the visual narrative, the affective side of empowerment is much more tangible in the film than in the book – even if we consider Kay’s illustrations, though they do not accompany the text in all the editions of this work.⁴

Conclusion

In this paper, I have tried to show how an adaptation can have more empowering ideas than a textual version of a story. One can claim that Bayona’s film is

³ More on this topic, in the context of the book, see, for instance, Farnia and Pourgiv (2017), Sasada (2013), and Taylor (2010).
⁴ I avoided any reference to the music of this film as it is not a part of my research interest. However, I think in this film, one cannot ignore the effect of the background music and even the silence in conveying the affection. For instance, just after Conor has let his mother go in his nightmare, after all the shouting and struggling, suddenly we have silence. This silence awakens the attention of the viewer even more and adds to the suspense until Conor confesses his true thoughts. In the same way, the light background music especially during Lizzie’s deathbed scene is full of pathos which is appropriate for a scene like this. Thus, the music is in accord with the visual narrative and offers greater importance to the affective side of empowerment making it even more tangible.
more empowering from an affective point of view, as it makes a great use of the possibilities offered by the audiovisual medium. In his novel, Patrick Ness is skilful in his verbal narration and Jim Kay’s illustrations have indeed inspired the film monster’s image. However, it is in the cinematic adaptation that we can see the traces of artistic empowerments. The screenplay was written by Ness but the elements that he has added to his story can potentially make viewers more involved in the film and thus this narrative becomes more empowering. McCallum (2018) believes that film adaptations of contemporary works of literary fiction “may prolong the shelf life of a novel” (p. 2). This is good news for those who look forward to improving children’s and young adult literature and the empowerment of its audience.

References

Atienza, B., Horwits, M., King, J. (Producers), & Bayona, J. A. (Director). (2016). A monster calls [Motion picture]. Spain, United Kingdom, & United States: Universal Pictures & Entertainment One Films.

Bloom, B. S. (Ed.). (1956). Taxonomy of educational objectives. Book 1: Cognitive domain. New York, NY: David McKay.

Buckley, C. (2014). Gothic and the child reader, 1850–present. In G. Byron & D. Townsend (Eds.), The Gothic world (pp. 254–263). London & New York, NY: Routledge.

Day, G. (2012). Good grief: Bereavement literature for young adults and A Monster Calls. Medical Humanities, 38(2), 115–119. https://doi.org/10.1136/medhum-2012-010260.

Facione, P. A. (2015). Critical thinking: What it is and why it counts. Insight Assessment. Retrieved from https://www.insightassessment.com/About-Us/Measured-Reasons/pdf-file/Critical-Thinking-What-It-Is-and-Why-It-Counts-PDF/(language)/eng-US. (Original work published 1992).

Farnia, F. (2017). A comparative study of the model of empowerment in six selected Iranian and English young adult novels. Unpublished PhD thesis, The International Division, Shiraz University, Shiraz, Iran.

Farnia, F., & Pourgiv, F. (2017). Empowerment in A Monster Calls by Patrick Ness. LiBRI, 6(2), 41–49.

Greene, E., & Del Negro, J. M. (2010). Storytelling: Art and technique (4th ed.). Santa Barbara, CA: Libraries Unlimited.

Jones, N. (2012, June 14). A Monster Calls: Patrick Ness and Jim Kay talk about their Carnegie and Greenaway wins. The Telegraph. Retrieved from https://www.telegraph.co.uk/culture/books/9331493/A-Monster-Calls-Patrick-Ness-and-Jim-Kay-talk-about-their-Carnegie-and-Greenaway-wins.html.
Khosronejad, M. (2004). *Mšūmiyat Va Tajrubih: Darāmādi Bar Falsafīy Adabīyat-i Kūdak*. Tehran: Markaz Publication.

Klammer, S. (n.d.). 100 art therapy exercises – the 2019 updated list. *Expressive Art Inspirations*. Retrieved from https://intuitivecreativity.typepad.com/expressiveartinspirations/100-art-therapy-exercises.html.

López Díez, J. (2018). J. A. Bayona’s ecstatic truth. *International Journal of Film and Media Arts*, 3(1), 40–55.

McCort, J. R. (2016). Introduction: Why horror? (Or, the importance of being frightened). In J. R. McCort (Ed.), *Reading in the dark: Horror in children's literature and culture* (pp. 3–36). Jackson, MS: University Press of Mississippi.

McCullum, R. (2018). *Screen adaptations and the politics of childhood: Transforming children’s literature into film*. London: Palgrave MacMillan.

Moradpour, N. (2016). Shigardhā-Yi Tamarkuzzudāyy Dar Qiṣṣihā-I Īrānī Bi Kushishī Injavi Yi Shirāzī. *Iranian Children’s Literature Studies*, 6(2), 139–164.

Ness, P. (2011). *A monster calls: Inspired by an idea from Siobhan Dowd*. New York, NY: Candlewick.

Nikolajeva, M. (2010). *Power, voice and subjectivity in literature for young readers*. New York, NY & London: Routledge.

Sadan, E. 2004. *Empowerment and community planning* (R. Flantz, trans.). Retrieved from http://www.mpow.org/elisheva_sadan_empowerment.pdf. (Original work published 1997).

Sasada, H. (2013). The portrayal of monsters in illustrated children’s books: Catharsis in *A Monster Calls*. *Bulletin of Seisen University*, 61, 67–79.

Sun, K. (2018). Real dragons: Monster symbolism in Maurice Sendak’s *Outside Over There*, Neil Gaiman’s *Coraline*, and Patrick Ness’ *A Monster Calls*. *The Looking Glass*, 21(1), 10–14.

Taylor, M. A. (2010). *The monster chronicles: The role of children’s stories featuring monsters in managing childhood fears and promoting empowerment*. Unpublished master’s thesis, Faculty of Creative Industries, Queensland University of Technology, Brisbane, Australia. Retrieved from https://eprints.qut.edu.au/37305/1/Michelle_Taylor_Thesis.pdf.