



Enriching the reading experience with dramatic soundtracks

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15 June 2011

Abstract

The goal of this research was to analyze to what extent applying dramatic soundtracks to a short story enrich the reading experience on an E-reader. This is an opportunity to give reading a new face allowed by the capabilities of the digital nature of eBooks and E-readers. The set up tested for imagery, transportation and attention through a questionnaire. Additionally arousal was measured with the help of GSR sensors. The results did not show a clear enrichment of the experience. The soundtracks were distracting at some points and complementing at others. The opportunity of dramatic soundtracks in eBooks is still a valid proposition which rests on the proper implementation.

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Introduction

The ability to immerse the reader into a story and stir up emotions is still the responsibility of the author. The past has seen development in writing styles, genres but it stayed as a skill of structuring words, stayed in the medium of the written language. The beauty about reading is that the written language is a framework which the reader has to fill in with their own images. No one is telling the reader how to imagine the story. But with new technologies come new opportunities that can give rise to new reading paradigms.

E-readers are becoming a true competitor to paper based books [1] [2]. This technology has improved immensely over the past years [3]. The introduction of e-ink and higher resolution screens makes it less tiring to read on screen based devices. Their size and weight is as big or smaller than paper based books. The main advantage of e-readers is that they can hold hundreds of books in one place, without taking up any shelf space. Another practical advantage is the huge database of books provided by websites like Amazon accessible worldwide with just an internet connection.

The development of e-readers has focused on adding practical functionality like skipping to a specific page or being able to highlight text. The digital nature of eBooks and the hardware capabilities of an e-reader allow to give reading a new meaning. This paper tries to explore the capabilities of e-readers to enrich the reading experience on an emotional level.

The research done in this paper is based on the observation that e-readers are the perfect platform to enable playing dramatic soundtracks which are synchronized to the appropriate passage. It is the digital nature of e-books, e-readers and the opportunities it brings with it, as well as the opportunity for a business. The process of adding soundtracks to e-books can be divided into stages. The first one is the tagging of the book to indicate where and what type of soundtrack should be played. There are different possibilities of this step. Either the author can do that since he/she knows the story and what the passage should convey. So the author could collaborate with profes-

sional composers to design the soundtracks for the book. Another option would be to tag the book with moods the passages are conveying and leave the choice of soundtracks to an external party. This external party could be the application which browses through the music database online with the same tags as the desired passage. It could also be a previous reader of this book that happens to know what would sound good with a passage. This would add another dimension to reading where the reading experience could be shared. The soundtrack is chosen depending how the reader felt when reading a passage. The second stage is what control over the soundtrack does the reader have? Does the book come with the soundtracks already which means the book will have to be more expensive. Or does the reader see suggestions for soundtracks while reading and can decide at that moment if he/she is willing to pay for the song. Another possibility is that the book gives suggestion from the readers own library of music for specific passages. The last stage is the control of the playing soundtrack. How much control should there be. Where is the balance between staying in the flow of the story and controlling the soundtrack? How should the interface look like to be hidden and easily accessible at the same time? Before diving into the design of such a system the goal is to see if this is even worth a while. This research entails to discover to what extent playing a dramatic soundtrack enrich the reading experience on an e-reader.

Background

Audio books are one of the earlier examples of trying to change the act of reading. Instead of reading yourself, a recording of someone reading the book is listened to. These can be used if reading is not a preferred activity or if reading is not possible but listening to audio is, for example on a bike. The use of sound simply replaces the act of reading. This context does not use sound for extra dramatic purposes.

Another examples of the reading experience being augmented is the mixed reality book [4] this interactive book allows the reader to access digital information projected onto and outside a physical book with the help of augmented reality glasses. Not only is there more visual information which enriches the experience but also sound in the form of

realistic sounds which complement the events in the story. This example uses new developments in technology to give reading a whole new feel. This context is directed for the children's market where dynamic images and visual story telling is appreciated.

Another example describing an attempt to enhance the reading experience is Sonified RSVP (Rapid Serial Visual Presentation) where the text is displayed one word at a time in a quick succession on a mobile device [5]. Nomic auditory icons which are short duration realistic sounds were played when the fitting text appeared on the screen. The result was a more immersed reading experience rather than enriching the excitement felt. The author gives a hypothesis that the use of dramatic soundtracks could increase the excitement. The results do not directly relate to the research proposed in this paper because RSVP is significantly different way to visualize a text than the static text on e-readers.

It seems there have been successful attempts to enhance the reading experience with realistic sounds that directly representing the events in the text which would make a sound in real life. There is a lack of research towards the effect of dramatic soundtracks on the reading experience. This is surprising since TV, in particular movies, is a medium used to tell stories, which has been using soundtracks for dramatic effect since its begging. Initially it was used to hide the sound of the projector but soon it became a desired modality which complemented the moving pictures. [6]

There is no doubt that whether music is used in movies or by itself, it has the power to evoke emotions [7]. It is interesting to realize that music both represents emotions in a movie and elicits them in the audience at the same time [6]. It has also been proven that music in combination with pictures evoke stronger emotions then by themselves [7]. The question is if the same holds for music in combination with reading.

Until now, there was talk about enriching the reading experience but this is a broad term that needs a more concrete representation. A study used a validated questionnaire to test the imagery, transportation into the narrative and attention of a participant reading a text [8]. These three scales correspond to factors that play a role in enriching the reading experience.

The purpose of this research is twofold. One is to explore the value of

dramatic soundtracks during reading as a source to enrich the experience. If there is a positive reaction to this type of soundtrack then the second goal is to provide guidelines and suggestions for anyone that wants to implement dramatic soundtracks into e-books.

The hypothesis is that the reading experience accompanied by the soundtrack will show an increase on all three scales as well as induce higher arousal, seen on the GSR signal.

“Music heightens the sense of reality of or absorption in film, perhaps by augmenting arousal, and increasing attention to the entire film context and inattention to everything else.” [6]

Method

Two short stories were downloaded from the internet. They were chosen on the basis of similar length, readability, containing passages that portray one specific mood that can be accompanied with a complementing soundtrack and difference in genre. The readability was measured with the Flesh index [9]. One story, called “End of days” [10](see Appendix A), was about a meteor flying past the earth causing mass destruction by natural disasters striking all over the world. The story is told from a third person perspective following the main character as he deals with the mass destruction and being one of the few survivors. It is very much an action story with a short dramatic/sad part in the middle. The second story, called “Fatal love” [11] (see Appendix B), is about a young adult schizophrenic girl that does not know she is schizophrenic. she is lonely, with both her parents dead, and now her boyfriend dumping her she reflects on her life, finds some positive energy but then the police shows up at her doorstep asking her about her boyfriend which turns out to have been killed recently. Her murderous side comes out and kills one of the cops and gets killed by the other. The story starts sad then changes to a happier/energetic scene and then the scene turns to an aggressive action.

The reason for testing two stories was to control to what extent genre and preference of the story affect the results.

The soundtracks were chosen by reading the story and examining what mood different passages portrayed. According to this, movies of similar genre were associated with and soundtracks chosen. Every potential soundtrack was tested by having it played in the background

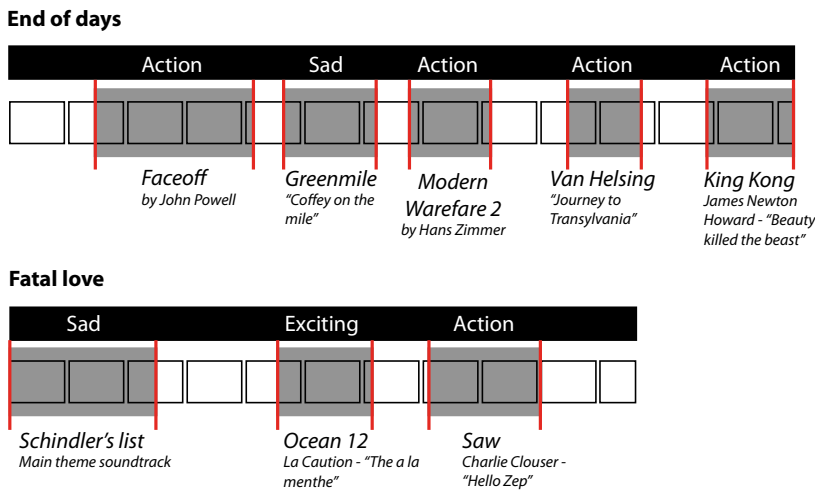


Fig. 1

while reading the passage it should belong to. The soundtrack which complemented the passage the best and was long enough to consider slow readers was picked. Figure 1 shows where in the stories the soundtracks were placed, what type of passage it is and which movie the soundtrack is from (including its title if possible).

The effect of the soundtrack on three scales, imagery, transportation and attention were measured with a questionnaire given to the participant after each story. Arousal was also measured with GSR sensors since it is an important factor in the reading experience.

Participants

All 7 subjects (see Appendix C) were Dutch industrial design master students (holding a bachelor diploma) including one being a PhD student. The ages varied from 23 to 27 years, with six being male and one female. One of the participants did not read novels and the others varied from reading between 0.1 and 2 hours per week to one reading between 4.1 and 6 hours a week. The type of genres the participants preferred to read varied, from general statements like fiction or non-fiction to more specific like crime and biographies. The most popular reading location among the participants was their bed, with some reading in their living room, garden or on the train. Most subjects described their level of understanding the English language on an expert level with a couple having an intermediate level and read novels in English. Nearly all participants had little experience with e-readers.

Apparatus

An Ipad was used as an e-reader containing an application specially made for this test, holding two short stories. A GSR sensor was used, connected to an amplifier design to allow connecting sensors measuring physiological responses, which in turn was connected through a USB cable to a desktop computer. On this computer was the ASA

(Advanced Source Analysis) software used to record the GSR signal. Mat lab software was also used later on to draw graphs of the GSR data exported from ASA. The iPad was connected wirelessly to a laptop that had external speakers connected to it. Excel was used to plot charts of the results and to perform statistical analysis. The GSR graphs were enhanced with the help of Excel and Illustrator, to visualize where the soundtracks were playing.

Procedure

The testing took place at the faculty of Industrial design at the Eindhoven university of technology in a biofeedback laboratory. During the test only the participant and the supervisor were present in the room. It was relatively quite with the window closed to keep outside noise to a minimum. The



Fig. 2

participant was asked to sit down in a comfortable chair pointed towards the window, with the back to all the computers to avoid possible distractions for the participant, as shown in Figure 2. To the right side of the chair was a coffee table with the signal amplifier and the GSR sensor connected to it. The speakers were situated behind the sitting participant at ears height, one speaker on each side of the chair about a meter away from the participants head. The participant was asked to sit down and place the GSR sensor on the tip of the index and ring finger. The participant was told that they will get two different short stories to read, with one of them having sound accompanying it and that they would be asked to fill in a short questionnaire (see Appendix D) after each story. First the supervisor checked if the GSR sensors were working properly and then the participant was given the iPad with the title of the story displayed. The participant was instructed to tap the right side of the screen in order to switch to the next page while reading. The participant was asked to say when the first page was switched to in order for the supervisor to know when to start recording. While the participant was reading, the laptop con-

nected to the iPad recorded the time it took for each page to be read and the moment in time the soundtrack started to play and finish. The application timed how long it takes the participant to read one page to have an idea of the average reading speed. This data was used by the application to approximate the passage the participant is reading in order to start playing the soundtrack at the desired moment. At the end of the test the participant was asked to fill in a questionnaire with personal information, including questions about reading behavior (see Appendix E).

Results

The questionnaire consisted of a number of questions related to the same subscale; imagery, transportation and attention. The responses for questions relating to each subscale were averaged out per participant. The average score for each subscale among all participants in the same condition (N = 3 or 4 per condition) was averaged out, shown in Figure 3. This chart gives an overview of the general perception of

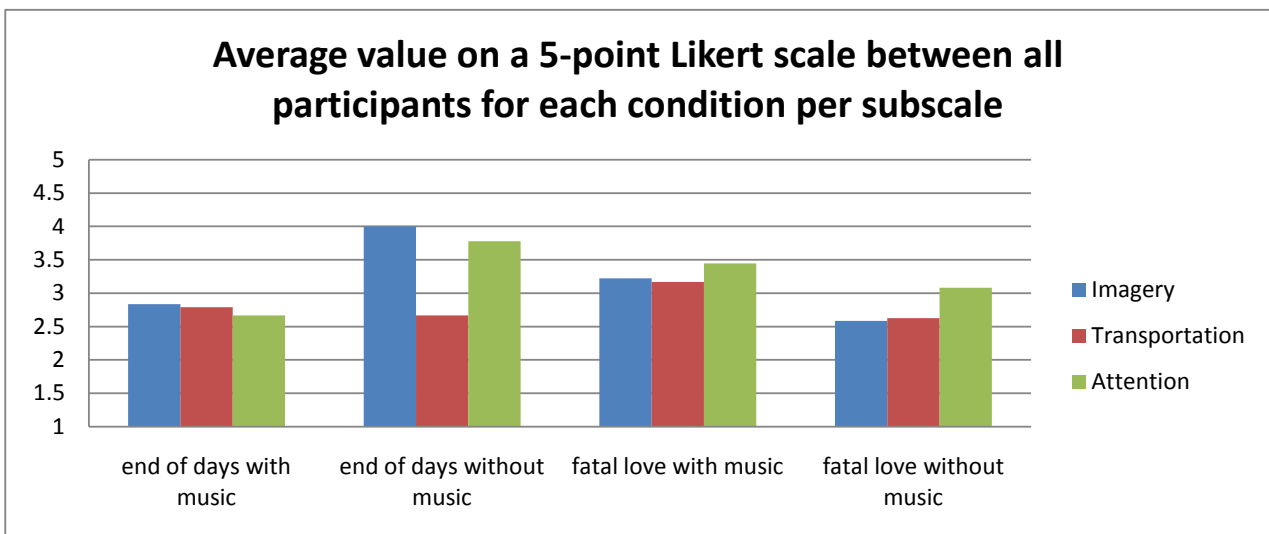


Fig. 3

each subscale per condition. Comparing the score per condition indicates what effect the different conditions had on the three subscales. The most noticeable difference is the increase in Imagery and attention for the “End of days” without soundtrack condition compared to the one with the soundtrack.

Figure 4 shows the average score of all participants per control question. This overview was useful to try to understand what could have influenced the results of the imagery, transportation and attention

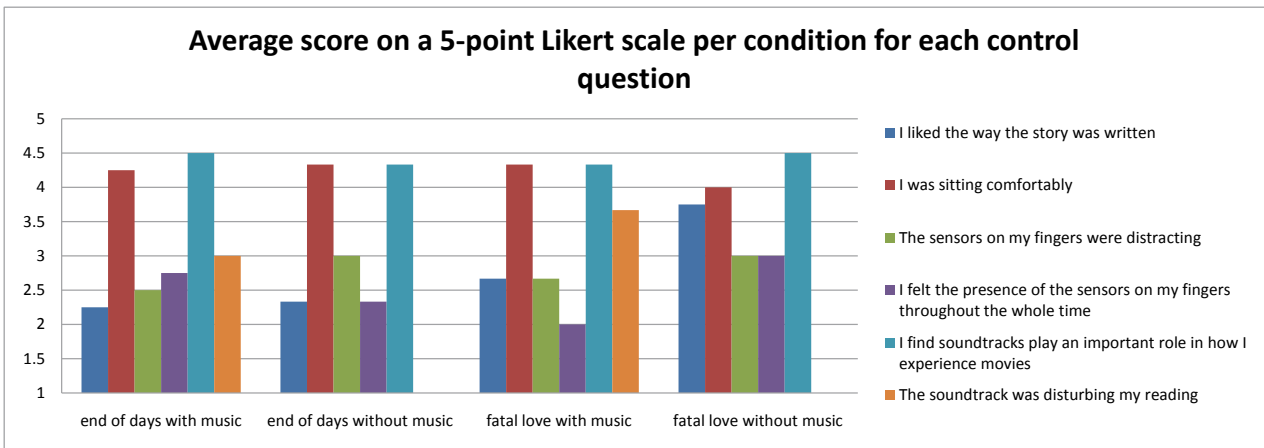


Fig. 4

questionnaire.

A two sample t-test was conducted to compare each subscale (imagery, transportation and attention) between with soundtrack and without soundtrack conditions of the same story. The t-test results for the “End of days” story were: Imagery ($p = 0.28$), Transportation ($p=0.38$), Attention ($p=0.22$).

The results show that for all three subscales there was no significant difference between condition with and without soundtrack.

The results of the t-test for the “Fatal love” story are as follows: Imagery ($p = 0.01$), transportation ($p=0.33$), attention ($p=0.25$). Only imagery shows a significant difference between conditions with and without soundtrack but the other two are not significantly different.

Figure 5 and Figure 6 are examples of the way the results of the GSR

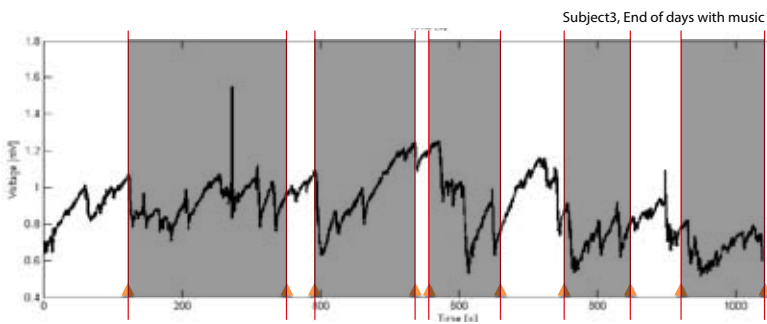


Fig. 5

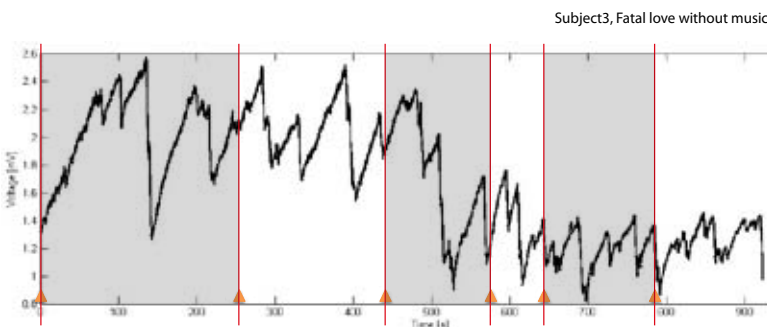


Fig. 6

measurements were visualized to help during the within subject and between subject analysis. For the within subject analysis the participants which had the same conditions were grouped together. This resulted in two groups, with one group reading “End of days” with the soundtrack and “Fatal love” without the soundtrack (see Appendix F) and the second group the opposite. This allowed to easier see if there is a difference in arousal between reading with and without sound for each subject for the two groups. For the in-between analysis the graphs were clustered first of all by story, and within

that cluster, the graphs representing the condition with soundtrack were placed on one side and the without soundtrack condition on the opposite side (see Appendix G). The purpose of these graphs was to test if the effect of soundtracks on reading can be concluded from objective data like physiological arousal. Comparing the pattern of graphs below each other helped to see similarities in the same condition that might confirm the effect of soundtrack on arousal and comparing the left side with the right side helped see differences in pattern that show to what extent the soundtrack influenced the arousal.

The within subject analysis shows no clear indication of the soundtrack having any effect on arousal per participant. The reason for testing with two stories

For the in-between subject analysis there were no noticeable similarities in the pattern of the same conditions making it unclear if arousal was effected by the soundtrack or the lack of soundtrack. There was also no clear difference in the pattern between the conditions of with and without soundtrack which does not provide a clear effect of soundtracks on arousal.

In all four conditions, the GSR signal of each participant contained moments of higher arousal but which were at different moments in time.

The signal varied a lot between participants which made it harder to analyze. Some were fluctuating little where as others fluctuated a lot.

Discussion

The goal of this research was to show to what extent playing a fitting soundtrack can enrich the reading experience, focusing on measuring imagery, transportation attention and arousal. The hypothesis was that the reading experience complemented by the soundtrack will have higher responses on the 5-point Likert scale on all three measures, compared to the same story without the soundtrack. In terms of arousal, there should be a clear pattern in the signal showing a higher arousal rate in passages accompanied with soundtracks then without.

The questionnaire results and arousal measurements do not confirm the hypothesis of soundtracks having an enriching role during reading. The results show that the way the soundtracks where used

throughout this test set up, they distracted more times than positively enriched the reading experience. But there were moments where the soundtracks did positively enrich the reading experience as mentioned by the extra remarks given by the participants.

The t test does show that the higher value for imagery in “Fatal love” with soundtrack is significant. This is a lonely result which confirms the hypothesis for one subscale for one story. It was mentioned that “End of days” is easier to imagine because it has a typical movie type of story. The previous experience with such movies makes it easier to imagine. This suggests that the soundtrack has less value if the scene is already clear. This fits with another statement made by one of the participants that one soundtrack emphasized the passage too much.

One of the main factors that contributed to the negative experience was the mismatch between the mood of the soundtrack and passage. The transition into the soundtrack not being timed perfectly and slowly introduced caused distractions as well. On top of that, some of the soundtracks started too sudden and finished abruptly distracting the reader.

The imagery, transportation and attention scales were appropriate for the set up. They represented well the essence of a reading experience. What could have given more depth to the research was to ask the reader to judge on the 5-point Likert scale how well each soundtrack fit its passage. This data was mentioned by some when interviewed for extra remarks but these answers were vague and not comparable. Preferably every soundtrack should be rated on its match to the passage right after the soundtrack finished, in order to get the most recent impression out of the reader. This creates a problem because doing so would disrupt the reading experience, taking the reader out of the story, intruding on the overall reading experience that is being tested for.

It is not clear to what extent liking the content, the way the story is written, influences the three subscales. The overall rating of the three subscales for “Fatal love” with soundtrack is higher than the one without but the rating of liking the way the story is written is higher for the condition without sound then with. These are counterintuitive results. This is an interesting result worth exploring in future work.

The extra remarks given by the participants and the responses to the question “the soundtrack was disturbing the reading” indicates a subtle mismatch of the soundtrack with the passage can have a lasting

negative effect on the reading experience.

The biggest issue with the objective measurements was the wide variation in the pattern which makes it impossible to draw conclusions. It is unclear if it is normal for the GSR among the participants to vary so much or if the sensors were not placed correctly (too tight or too loose). The activity performed by the participants before being tested could have influenced the GSR, for example having biked caused sweating and the body did not have enough time to get back to its natural state. Another setback of the sensors is that a movement performed by any limb was reflected in the data adding noise. Taking a deep breath was also registered by the sensors although having nothing to do with arousal. The participant was not asked to keep their hand still because that would impose their natural way of reading, adding a new variable which could influence the results.

The noticeable difference in Figure 3 of increase in Imagery and attention could indicate that the soundtrack was more distracting in “End of days” than “Fatal love”. But that does not fit the result in Figure 4 where the soundtrack is rated as more distracting in “Fatal love” than in “End of days”. The problem with this comparison is that no participants read both stories with sound.

The low number of participants plays a big role in the undefined results. Every extra participant could change the results dramatically. The reason for the counterintuitive results mentioned earlier could be because of an imbalance of opposing participants.

Future work

Although the results do not indicate the reading experience was enriched, it also does not indicate that it completely ruins the experience. Sound has been proven to enrich the experience [12] but with ambient sounds rather than dramatic soundtracks. The Listen reader gave control over the sounds in an unobtrusive way, allowing the reader to stay immersed in their reading while being able to evoke the sounds at the desired moment. This unobtrusive control should be the focus point of the next study. Giving more control to the user will get rid of the enforcing nature of the current set up which contributed to the negative experience.

Many participants stated that the music not being continuous caused

distractions, by the sudden change from silent to loud, and vice versa. It is interesting to note that it was mentioned that the lack of music emphasized the silence which was also distracting. There is something about sudden changes in the environment that causes distractions, gets the reader out of the story. This suggests that next time, the soundtrack should be designed to play throughout the whole story as done with the Listen reader.

The loudness of the music is very important. The user should have full control over that property. On the other hand, with a soundtrack playing throughout the whole story, the volume should vary automatically, playing softer during passages that are less dramatic.

This set up mainly focused on using soundtracks to emphasize the mood of the passage. The ability to build up tension with music was less addressed and should be implemented in the next set up. The reason why this is harder to implement is because of the difference in reading speed. A movie is designed to be watched at a specific speed by everyone. The soundtrack is specially adapted to fit that speed. If one were to speed up the image but leave the soundtrack as it is, the music would soon desynchronize, losing its expressiveness and power to complement the movie.

Not only should the choice of soundtracks be facilitated by an expert, film composer, but the soundtrack has to be designed to self adapt towards the reading speed of the reader. One suggestion would be to divide the soundtrack into short samples that can be looped. This way every reader would have the buildup of the soundtrack synchronized with the story avoiding mismatch of soundtrack and passage.

The opportunity of adding dramatic soundtracks to e-books is still alive and is worth a while to explore further by implementing an interface which gives control to the reader in a unobtrusive way and maybe even choice of soundtracks.

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Appendix A

End of Days

CHAPTER 1

Santa Veza, California

Date: May 21, 2047

Adam Cross walked into his favorite coffee shop wearing his black jacket suit and tie with a white button shirt, matching black pants and shoes. The coffee shop was right across the street from his work place, Walter Rennock Publishing Company. The coffee shop was always busy and had people with computers always writing something. As Adam walked, in he took no notice to the TV reports and ordered an espresso with extra foam and looked at the TV.

“Julie Wu, reporting from the Mt. Newnon Astrological Observatory outside of Santa Veza where scientists believe that this comet, the Kyvichsky-Loomer Comet may be more devastating then previously anticipated. Here is Dr. Sergei Kyvichsky with further details.” Said the Asian-American reporter.

A middle-aged Russian man took the screen, “We believe that this particular comet may be made up of a highly magnetized element that may irritate the earth’s core. This irritation may or may not interfere with today’s society.” Said the man. A news reporter raised his hand and Kyvichsky pointed at him.

“Damian Trumann, Chicago Press, what do you mean by ‘interfere with today’s society?’” Asked the reporter.

“Well, the most this magnetic element will probably do is cause a few minor earthquakes and one major one, but that’s about it. At least that’s the worst case scenario.” Said the Russian man.

The waitress gave Adam his coffee. Adam picked it up and left a two dollar tip and walked out the door. He took a sip of coffee; it felt warm as it rolled down his throat. He then looked at his watch, accidentally spilling coffee on his wrist. As the hot coffee burned his wrist he dropped the cup and it which broke when it hit the ground. As Adam wiped off his wrist of the hot coffee, he noticed everyone around him was looking towards the sky and decided to see what was so important.

The sky was red and looked like it was set ablaze by the passing comet, He pulled out his solar phone to try and get a picture of it but suddenly a black speck appeared behind the trail of the comet, it seemed to slowly grow larger and larger. Suddenly it seemed to catch fire. The sound of breaking glass filled the city as the burning object smashed through the skyline before slamming into the street in front of Adam. Cars flew into the air as others swerved and burst into flames.

Adam turned on his phone to look at the news from around the globe as people gathered around the object. Adam switched to Tokyo, an elderly male Japanese reporter was reporting with an English dubbing. He was standing in a scene of chaos in Tokyo. The city was being hit by a freak meteor shower. People were running and screaming in panic. Cars were crashing and swerving to avoid fleeing people and stores were being looted.

“I am Hotoyama Hirokura, reporting for Japanese World News. As you look behind me you can see that Tokyo is being hit by meteors the size of basketballs and cars.” The reporter fingered his earpiece and said, “We are getting word that Mount Fuji has just erupted. Not only that, but several 300-foot-high tsunamis have struck northern and southern Japan. Many coastal cities including Osaka, Hiroshima, Fukuoka, Nagoya, Kyoto, Kobe, and Sapporo have been completely submerged. The rest of Japan’s cities have received major damage and countless loss of life from multiple earthquakes and sudden meteor showers.”

The picture changed to footage of tsunamis, meteor showers and earthquakes hitting Japan’s major cities.

“Preliminary estimates put the death toll in Japan between 23.9 to 37.2 million, with that number rising rapidly.”

Adam looked around and saw all the television screens read EAS. People were raiding and looting stores of every-

thing edible. Adam switched to CNN on his phone. The news went to a black newscaster in a devastated Washington D.C.

“This is Edward Durring and I am standing in downtown Washington D.C. where a massive hurricane with winds in excess of 300-miles-per-hour has devastated the city. Much of Washington is in ruins and most of the city has been submerged due to a 100-foot-high storm surge. President Obama, First Lady Michelle Obama, the White House cabinet and staff, and all of Congress were taken to a secure location shortly before the hurricane hit and are safe. Up to 7,000 people are feared dead with over 12,000 injured and over 13,000 missing. The death toll is rising at an alarming rate.”

Adam started rapidly changing the channel. What he saw was unbelievable.

Berlin had been hit by three huge F5 tornadoes. Hong Kong had been devastated by a meteor shower and tsunami. London was being hit by 150-mile-per-hour gales. San Francisco had been hit with an earthquake so strong, the city had literally been split in half. Sydney, Rio de Janeiro, Bombay, Shanghai, and several other low-lying coastal cities were literally sinking into the sea. A previously unknown volcano had erupted right in downtown Moscow. A freak snowstorm had buried the cities of Montreal and Toronto under 40 feet of snow.

When he reached the Santa Veza News, Julie Wu, the Asian reporter, was still reporting from the observatory.

“This is Channel 12 News anchorwoman Julie Wu from the Mt. Newnon Observatory. Dr. Kyvichsky has just announced that the comet is made up of a more highly compacted substance than previously thought. This comet may not hit the planet’s surface but the sheer existence of it in the Earth’s atmosphere is causing global chaos. As we speak meteors are striking the planet’s surface, earthquakes are tearing the planet open, freak weather conditions are hitting the planet and tsunamis are hitting all nearby ocean cities. Dr. Kyvichsky, what do you think will happen next?”

Before they could say anything the solar phone cut to static and everything seemed to stop. A high-pitched sound heard by all nearby people and Adam looked into the streets, wondering what it could be. Suddenly a car flipped onto another as a manhole flew into the air and destroying another car. Hot steam flew from the sewers as people panicked and ran. Adam ran towards a subway tunnel and was about to run in when he saw scorched corpses. A man slowly walked out of the tunnel with his skin horribly burned and bubbling, then he collapsed on the stairs as smoke flew from the subway and suddenly people all around, including Adam, fell unconscious simultaneously.

CHAPTER 2

The smell of smoke was in the air; Adam was lying on his back in a daze as water trickled onto his face. He was lying in the subway system of Santa Veza. He got up, his head ringing terribly. He saw a train derailed and crushed by fallen concrete and there was a smell that reminded him of overcooked chicken. He knew what that smell was. He looked down to see crusted lava and melted steel. He was standing on a half melted slab of concrete from the streets.

He began to walk on the crusted lava. Being surprised by gas pockets that broke through, he saw the inside of the train. It was filled with charred corpses and burned belongings, It almost brought a tear to his eye and he continued down the subway tunnel, seeing the bodies of dead maintenance workers and broken walls on the subway. The lights above him sparked and fell and most of the tunnel was dark and creepy.

He reached the end of the tunnel and looked out and saw that buildings as tall of the clouds now lay in ruined rubble, cars lying upside down in the streets, buried in rubble or burning. Street lights flickered red and the streets torn apart and he heard a noise coming from his solar phone.

“This is an Emergency Alert System message to all known survivors. The world is in ruins. Armed forces are started a national investigation of survival. If you are alive, come to Saint Louis, Missouri, where allied forces will take all survivors to a location where they can live their lives.” Adam saw that his solar phone’s screen was slightly cracked but the image was still able to be seen clearly, He put his solar phone away.

Adam climbed the rubble of what was once the Walter Rennock Publishing Company and saw that the city was almost been completely destroyed. All low-lying suburbs were now completely submerged and all of the marvelous

skyscrapers now blocked roads and were nothing but rubble. The only sound that could be heard was the sound of car alarms, electricity buzzing and the sound of rubble falling.

Adam reached into his book bag and grabbed some water. 'This is the only thing I have left to survive on.' He thought to himself when he heard the sound of footsteps. Adam turned around to see three men; one was wearing a torn suit and bare feet. The other two were wearing shirts with undone ties and torn jeans with boots, each holding a metal bar in their hands.

"Water?" One asked.

"Yeah." Replied Adam.

"Give it to me!" Shouted the man.

"No way! I need this." Said Adam.

"We have been looking for food and water all day, now give us that water!" He shouted.

"I said no, now get your own!" Said Adam as he took a sip.

"Gladly, get him!" Shouted the man, the other two ran towards Adam.

Adam ran down the destroyed building as the two other men threw concrete and steel at him. Adam reached the bottom but the three other survivors were close behind him. Adam looked around and saw a large crack in a skyscraper roof which lay on the road. Adam dashed towards it quickly.

The inside of the skyscraper was an iron nightmare. Sharp pieces of metal dangled from the ceiling and dust poured into the skyscraper. Adam ran for it as the two guys broke through the hole with their iron bars. Adam ran through the twisted metal death trap, cutting his arm and hand, as the guys followed right behind him. Panicked, Adam ran and lost his balance and slid on a pile of rubble.

"Well, well, well, looks like we've got you surrounded. Now give us that water!" Shouted the man. Adam knew he couldn't get out of this, and then he noticed that they were standing in front of a window.

"Okay, it's all yours." Said Adam as he tossed the water bottle. The three jumped for it like dogs for a bone. The glass window cracked and shattered under their combined weight and they fell into the deep unknown darkness below.

Adam looked down and saw it was like a canyon except a river of lava was far down. He heard the building buckle and decided to get out of there before it was too late.

He saw a large opening and got out of the skyscraper, the light was bright, and the city seemed more devastated. He sighed deeply, just glad to be alive, and then his solar phone crackled to life again. "This is...Julie Wu at the Newnon Observatory...Please, if anyone is out there...help... Vanessa...if you can hear me, help." The phone then went back to silence. "I can't get to Mt. Newnon on foot, it's fifty miles from here." He said to himself. He lay back against the wall of the skyscraper and took a deep breath. He noticed something, a sign that read Murphy's Mechanics.

As Adam got closer to the still standing structure, he heard the sound of flames and the buzz of electrical wiring. He opened the garage door and saw the inside of the garage there was a vehicle on fire and covered in rubble from the collapsed roof. Then he saw a truck. It had a few dents and covered in dust, but besides that it was perfectly useable. He opened the door and looked in the visor and the keys fell into his lap.

He put the keys in the ignition and the engine sputtered, he tried again, and the engine still sputtered, he tried one more time and it sputtered to life and the engine hummed. He slowly drove out of the garage. As he looked around he saw nothing but dead bodies and cars either in flames or totaled by falling rubble. He saw a dented sign on the heavily dust covered highway that read "Mt. Newnon Observatory, Next Exit". He drove to the next exit and down the interstate.

The once peaceful mountains known as the Rockies were now volcanic, dark and dangerous looking. The truck gas tank read full still, so he had plenty of gas. The grasslands around him had turned into dry deserts. As he passed he saw planes in flames, burnt corpses, and holes in the ground where meteors and space junk had hit.

He saw the roads were dangerous too. Parts of the roads had either sunk or rose due to the recent earthquake activity. Soon, he reached a large crater-like area. Smoke rose from the rubble of what looked like the remains of a town. He saw the legs of a sign sticking out of the ground and decided to investigate it. He dug out the sign, wiped away the dust and was shocked at what he saw. The sign said, "Welcome to Browning, California. Population: 15,674" He got back in his truck and continued until he got to Mount Newnon.

CHAPTER 3

Adam drove up to the observatory and saw that it was starting to slowly sink into the ground. The mountain had become unstable and the upper parts of the mountain were hollow. He looked in the back of the truck for something and found a large crowbar. He ran up to the observatory and wedged the crowbar in between the door and the door frame. The door snapped open and fell down. Adam reached into his book bag and grabbed a flashlight. The room was dark and damp, he heard crying coming from a catwalk above him and he decided to check it out.

He reached the top of the staircase and saw Dr. Sergei Kyvichsky lying dead on the floor with a bullet wound in his neck and a Russian-style gun in his hand. He looked up and saw a young woman sitting on the ground, crying. She was wearing a tan jacket and a blue suit dress underneath. Her long black hair was tied into a bun with two chopsticks in it. "Ma'am, are you alright?" Asked Adam, stepping over Dr. Kyvichsky's corpse. "Yes, I'm okay." Said the Asian woman. Adam realized that he was talking to Julie Wu, the news reporter.

"I have a truck; we can get out of here." He said and helped her up. They ran down the stairwell and before they could get out, the telescope tore through the ceiling and fell onto the doorway. "Come on!" Said Adam as he tried to climb the telescope. He jumped off the telescope and caught Julie as she jumped off, too. And they ran to the truck, got in and drove away.

They drove down the cracked and charred road and soon saw a crashed military helicopter, next to it was a pile of burning corpses and all the guns were taken. They continued down the road, eyes more aware. Suddenly, they saw an injured US military soldier, limping slowly down the road and Adam decided to stop. Julie immediately recognized the man and said, "That's my sister's fiancé, Roger Williams." Adam decided to help the man. There was a newly cut scar across Roger's face and his chest seemed to have been shot at. He was using his M16 gun as a crutch to walk.

They helped him into the back of the truck. Roger lay there quietly, breathing heavily. Julie, who was also sitting in the back, was helping Roger with his wounds. "So, where are you from?" Asked Adam, now missing his black jacket. "I was originally from Topeka, Kansas until I went to Iraq. Then I went to Las Vegas to live with my sister, Chrissie. I met and fell in love with Vanessa Wu, who was on vacation. We're engaged to be married. The wedding was supposed to be in a few weeks." Said Roger, with a higher strength in his voice. The truck continued down the road.

Suddenly the truck made a loud screeching sound and swerved to the left and came to a sudden halt. Adam, nerve-racked by what just happened, got out of the truck to see what happened. The tires were shredded to bits by a spike-strip just lying on the road. This was very odd, because spike-strips were not to be used outside of the city limits.

"Looks like we'll be walking," Said Adam to Julie. He picked up some of the supplies in the truck and placed them in a duffel bag. A flashlight, some canned food, a survival knife, and a few bottles of water. They then continued on foot. "I remember where we are. The helicopter was hit by something here. There should be a small town over the next ridge. Vanessa's cabin is about 45 miles from that town." Said Roger. "Good, maybe we can find a doctor there. We'll get you treated, then we'll go get Vanessa, then we'll head to Saint Louis." Said Julie. "Sounds like a plan." Roger said.

Adam's phone crackled to life, "This is a National Weather Service Update. It appears the worldwide chaos may be over, but that's not what's on the minds of Americans. People are wondering if the weather conditions are truly over, luckily we still have some satellites in the sky and keep anyone who can hear us updated. Right now Europe and Africa are being hit by fierce snowstorms and the Montreal-Toronto storm may be on the move." Said the phone before it went back to a low static.

Adam, Roger and Julie walked for what seemed like miles through the Sierra Nevada, pasting by the ruins of towns. They soon reached a small town that seemed to have been made for the ruins of a large chapel. A bizarre symbol

had been spray painted on it. The windows were shattered by what looked like vandals and some walls had caved in, but it was a perfectly useable structure.

“Thank the gods of Armageddon for having mercy on thy soul, body and mind.” Said a deep voice from inside the church. Adam slowly peeked inside and saw a middle-aged man in a torn robe standing in front of a group of about 20 to 30 people. All seemed to be praying.

“We’d better leave. Cults like these are dangerous.” Julie whispered. As they walked towards the exit, another man in torn robes stood in front of them.

“Where do you think you’re going?” Asked the man, Roger grabbed his gun, but the man in robes pulled out a small handgun and tried to shoot Roger. The man had very poor aim, however, and missed. Julie knocked the gun out of the man’s hands, grabbed it and shot him right between the eyes. The man fell, dead before he hit the ground. Everyone in the church cried out in horror.

“Seize them!” The leader yelled. Six people, two men and four women, angrily advanced towards the trio, each holding knives, but Roger quickly dispatched them and the cult leader with his M16. The congregation recoiled in horror, and then began to cry for vengeance.

“Let’s go!” Julie yelled.

The trio ran out the church and down the dark street.

Appendix B

Fatal love

Tina held the letter in trembling hand while a single tear slid down her cheek. She'd read it three times and still couldn't believe the words that stared back at her. For the third time in her life she'd been abandoned by someone she loved, or at least thought she loved. Ryan was a warm, caring, energetic man that made her laugh and forget her lonely past. He showed her that no matter where you came from, or who you came from, the future was an unwritten script that waiting to filled in and changed at your own will.

She actually started to believe him, to accept that her tragic past didn't have any bearing on her future. Hope began to bloom where once she felt barren. New dreams for a more promising life erupted from the dark shadows. She'd actually begun to feel human and understand how people could smile and laugh. That was until she found the letter on the floor of her small apartment. She didn't think much of it at first, her name was scrawled on the plain white envelope in Ryan's familiar hand writing.

They had a date tonight, nothing special, just a movie and some pizza. Ryan had called her last night to make sure she was still going. She could still hear his voice echoing in her ears.

"Just calling to make sure we're still on for tomorrow night." He said in his light, fun tone. "Can't wait to snuggle up while we watch aliens violate earth." He laughed.

She had decided at that moment that tonight would be the night she let go of that last thread that was holding her to her past. With that connection severed she could give herself to someone that genuinely cared for her, not just her heart but her body as well. Could he have sensed that? Could that be the reason he left this letter because he didn't want that from her?

"Nice job Tina, you scared him away." She whispered to herself. "You knew

you had no chance at happiness but you had to keep pushing it.” The tears streamed down her face now. Her heart felt empty, shriveled like a dry husk. One last time she read the letter through her tears.

Tina, I’m sorry but I can’t do this anymore. Don’t take it hard, we had fun. But fun was all it was about for me. Don’t try to look me up okay. It’ll be better if you don’t. Move on, I am.

Ryan

Tina looked around her one room apartment. The bright cheerful colors she and Ryan had painted it now look cruel and mocking. She would have been happy to leave it the dingy off white it had been when she rented it, but Ryan drug her off to the local hardware store and made her pick out bright colors she was partial to. When it was all finished she was glad she’d done it. Now, as she looked at it through watery eyes she wished she could smear mud and grime all over them. The need to erase away all memories of the last two months boiled up inside her.

The letter crumpled in her hands, her vision blurred then tunneled to a narrow point of white light. Pain ripped through her head making her brain swim. She felt like her body was floating above the floor. ‘Your not worthy of anyone’s love.’ rang inside her head. ‘No one will ever want you.’ Words she heard endlessly during her childhood but from who she couldn’t say.

The words began to run together, louder and louder until she thought her head would explode. The pain seeped through face into her neck then down her shoulders and arms. Pills, she needed her pills but she couldn’t move or even see to get to them. As the noise in her head grew to a thunderous level, white light exploded in her eyes.

When she woke she found herself in her bed naked and wrapped in her sheets. She was bathed in sweat and her muscles ached. A dull hum sounded in her ears. “Not again.” She moaned rubbing her eyes.

Another black out. God she hated when that happened. The loss of time, the uncertainty of how she got to where she was. The hang over without experiencing the traditional pleasure to earn it. What was the last thing she remembered she thought to herself as rubbed her temples.

The letter. The letter from Ryan telling her it was fun but it was time to move on. Tina groaned as a fresh wave of pain swept through her. She'd felt it before, that pain that hollowed out a soul. The first time she felt it was when the police came and said her mother was gone, that she would never see her again. They lied, she did see her again, in a box. Her face was painted up in heavy make-up. The smell from the flowers mixed with smell of the make-up made her sick to her stomach.

After, they bundled her into a car and drove for hours to a small dingy trailer outside the city. The man that answered the door frightened her. His t-shirt was stained and his jeans had huge rips in them. He smelled foul and most of his teeth were missing. She'd never forget the way her skin crawled as his eyes ran up and down her body. She was too young to understand the look he had in his eye at the time. Of course she learned what that look meant within days.

Then came the morning she woke up and he wasn't there. She waited all day for him to come home drunk, spitting curse words at her then hitting her until he was turned on enough by her pleading to torture her young body. But he never came. The hours passed and he never showed his gruesome face. When the knock on the door came, she immediately recognized the uniforms the men wore. As she stood looking at their solemn faces she prayed they would tell her that she would never see him again.

For the first time in her life her prayers were answered. The next eight years were a blur. To many homes, to many people claiming they would love her and take care of her only to shove her out the door months, sometimes weeks later. She supposed it was from those foster homes that she heard the words that echoed in her head before she had a black out.

Now Ryan had left her. Didn't anyone have the courage to tell her to her face why they were leaving? At least Ryan left a note. Her mother and the man they said was her father just died. Well, Ryan said she could write her own script for her future, and by God that's exactly what she was going to do. Maybe her mistake was expecting too much from people. If she was just in it for the fun like Ryan, she would never be hurt again.

Tina sat up in bed and rested her elbows on her knees. Did she have to have a serious relationship with someone? No. "Then it's time to start just experiencing life." She muttered to herself. "To hell with caring. It's overrated."

Throwing the sheet aside, she stepped from bed and shuffled to the bathroom. Her muscles still ached and her head pounded, but she knew it would ease with a nice hot shower and some pain killers. Maybe she would make an appointment with the doctor and see about getting a stronger prescription for her black outs.

The simple task of making plans for herself lifted her spirits. No one was telling her what she should do, she was telling herself for a change. The first paragraph in her life's script, and whole bunch of blank pages waiting to be filled in. As she pondered what she would do next, she turned the shower on hot and stepped in. Her skin came alive as the hot water pelted her achy skin. She could feel her blood pumping through her veins energizing her.

Refreshed, she stepped from the shower and took a long look at herself in the mirror. As looks went she wasn't bad. Her eyes were a light brown, nothing special but not plain. Her hair was getting out of hand, she hadn't had a cut in, well, she didn't know how long. Maybe she'd get a nice color job as well. Making a half turn she looked her body over. A little on the skinny side, she could see her ribs pressing against her skin. Time to start eating better she thought to herself, and some new clothes would help. The

days of looking dumpy were ending.

Content with her plans, she dressed then pulled a wooden box from its hiding place and pulled out her stash of money she'd saved. Money that was given to her when her mother died. She was always afraid of using it, fear that if she did something bad would happen always prevented her from touching it. Not anymore. Today she would spend it.

Tina felt light and happy when she returned to her apartment building. Her arms were loaded down with bags of new clothing and her new hair style bounced gaily around her face. She even managed to find a part time job at a corner deli. The man was desperate for the help and was quick to hire her when she inquired about a job. Things were looking up.

“To hell with Ryan. I don't need him. I don't need anyone. I can finally take care of myself.” She told herself as she trudged up the flight of stairs toward her apartment.

As she rounded the corner in the hallway, she stuttered to a halt. The bags in her arms dropped to the floor and her heart felt as though it were struggling to beat. Her body began to tremble. Standing at her door were two police officers. Her past experiences flooded through her system. The room began to spin.

“Keep it together Tina.” She muttered closing her eyes.

The sound of the dropping bags brought the officers attention directly to her. They looked at each other before the tallest one started walking toward her. The one that remained behind placed his hand on the butt of his gun and waited. Tina didn't notice the slight movement.

“Are you Tina Brasswell?” The officer asked as he approached.

“Yes. Is there a problem?” The words squeaked from her throat.

“We'd like to ask you some questions ma'am. Can we go inside please?”

“What’s happened?” She asked absently.

“I think we should talk inside ma’am. I’ll help you with your bags.” He said carefully bending to the floor and grasping the bags with one hand.

When he stood again he stepped to the side and waited for Tina to walk ahead of him. Her legs wobbled when she took her first step, but she pulled herself together and walked tall. Her hands trembled when she slid her key into the door, but once again she steeled herself and completed the minute task. The officers followed her inside and closed the door behind them.

“Can you tell me what this is all about now?” She asked holding her chin high.

“Do you recognize this man Miss Brasswell?” The tall officer asked as he held out a picture.

Tina sucked her breath between her teeth when she saw the picture of Ryan. It wasn’t a drivers license photo, or a general ID photo, but a photo that showed a once lively Ryan pale, with lifeless eyes.

“Miss Brasswell? Do you recognize him?” The officer asked again.

“Yes.” Her answer was barely audible. She felt herself begin to float, her vision was tinged with red, the picture began to drift away then all went black.

“No one will ever want you. He didn’t even want you. I’m the only one that will ever care about you.” Tina’s voice had changed, it became gruff and heavy. Her eyes had changed from a warm brown to a cold sadistic brown. Drool began to seep from the corners of her mouth.

“Miss Brasswell? Are you all right?” The officer asked placing his hand on the butt of his gun.

Tina reached out and snatched the photo from his hand, then proceeded to shred it. When she was finished she turned her eyes toward the two men standing in her apartment. "You think she cared about him? You think she needed him? He only hung around to get into her panties. When she didn't spread her legs after the second date he saw her as a damn challenge. He would have dumped her as soon as got what he wanted. I did her a favor." Tina started moving toward the men.

"Stay back Miss Brasswell." Both officers pulled their weapons and aimed them at her, backing away at the same time.

Tina pulled a knife from her back pocket and hurled it at the tall officer. Her aim was dead on, piercing the man in the throat. "I did her a favor with her mother and that piece of slime that called himself her father. Did anyone care when he was using her. Did anyone stop him when he was thrusting himself in her. No! I did. I protected her! I'm the only one she needs."

Tina reached behind her back again, only this time a shot rang out before she was able to bring her arm forward. Her body jerked back, the crazed look on her face slipped away but the wild look in her eyes remained. "They all hurt her." Blood oozed from her mouth as she spoke. "I'm the only one that ever loved her." She dropped to her knees then looked at the officer that was laying on the floor bleeding from his neck. She then looked down at her own blood spilling from her chest. Tina's eyes changed back to the warm brown that were her own.

"Why?" Was all she said before the darkness swallowed her.

"The pills they found in her apartment are for some sort of mental condition. The coroner will have to give us the facts on that. We ran her and came up with some interesting things." The officer told his superior. "Seems they believe she killed her mother when she was eight but couldn't prove it. They found the woman hacked and sliced, her eyes were dug out.

Rumors are the woman sold her to men.”

“Lovely.” The commander grunted then wiped his mouth with his handkerchief.

“When they took her to live with her father things only got worse. There was some talk of him molesting her, but of course no one bothered to question it.” The officer continued.

“Monsters creating monsters.” The commander growled.

“When they found the father in the same kind of condition the mother was in they suspected she did it, but again, they had no evidence. From there she was shuffled from foster family to foster family, never staying long. Finally someone wised up and got her some medical help. There isn’t anything from the time she turned eighteen till now.”

The commander looked down at the pretty face staring back at him from the body bag. Shame he thought to himself. Damn shame.

“We found a letter thrown in the garbage from the victim. At least that’s who we thought wrote it until we compared it with some other writing we found in the apartment. It’s hers. She wrote the damn note to herself.”

“Officer Strickland said she was talking like she was someone else. Saying that she was the only one that cared about Tina.” The commander told the officer. “I guess her medication wasn’t working all that well.”

“Hmm, well I don’t know about mental issues, but I do know she may have gotten away with it if she hadn’t left some of her purse contents behind. Lucky for us her address was on an envelope next to the body.”

Both men stood over the black body bag looking at the peaceful face. The commander couldn’t help wonder if it were the first time the poor girl looked peaceful in her life. “I hope to God peace has found you at last.”

The commander muttered before he left the apartment.

Appendix C

	24	26	27	
age	24	26	27	
sex	m	m	m	
occupation	design student	design student	phd student	
nationality	dutch	dutch	dutch	
reading rate	0.1 - 2	0.1 - 2	0.1 - 2	
location	train, living room	living room, garden, bed	train	
genre	fiction, non fiction, biography	crime, non fiction, sci-fi	non fiction	
language of reading	english	dutch	english	
level of english	expert	expert	intermediate	
experience with e readers	none	intermediate	none	
education	bachelor	bachelor	master	
extra remarks	sometimes read with music, some part where interatsing with sound, wroing timing of nusic makes it distracting, sometimes started to listen to music and not read, a bit too loud	especially secong one fit nicely with passage, no lyrics is good, plot become less surprising because of music but still there is tension, second text: expecting to hear music, music puts me into a certain mood so not necessary to think about how to feel, story was blend with no up and downs and no emotions	don't read this genre, movie type of story so easier to imagine, transitions not perfect but not distracting, soundtracks fit the mood of passage, if I have to re-read then the flow of music is lost; if the music continues and I am not reading it feels like the story continues and i miss it	

Appendix D

Please indicate how much you agree or disagree with each of the following statements by circling just one of the numbers using the 5-point scale below.

	(Strongly disagree)	(Disagree)	(Neither agree nor disagree)	(Agree)	(Strongly agree)
	1	2	3	4	5
1. While reading I had a vivid image of Tina.	1	2	3	4	5
2. While reading I had a vivid image of Tina's interaction with the environment.	1	2	3	4	5
3. I had a vivid image of the described environment.	1	2	3	4	5
4. While I was reading the story, I could easily picture the events in it taking place.	1	2	3	4	5
5. I could picture myself in the scene of the events described in the story.	1	2	3	4	5
6. After the story ended, I found it difficult to put it out of my mind.	1	2	3	4	5
7. While I was reading I wanted to learn how the story ends.	1	2	3	4	5
8. I was enjoying reading the story.	1	2	3	4	5
9. I found myself thinking of ways the story could have turned out differently.	1	2	3	4	5
10. While I was reading the story, I was distracted by activity going on in the room around me.	1	2	3	4	5
11. I was completely involved in the story while reading it.	1	2	3	4	5
12. I found my mind wandering while reading the story.	1	2	3	4	5

- | | | | | | |
|---|---|---|---|---|---|
| 13. I liked the way the story was written. | 1 | 2 | 3 | 4 | 5 |
| 14. I was sitting comfortably. | 1 | 2 | 3 | 4 | 5 |
| 15. The sensors on my fingers were distracting. | 1 | 2 | 3 | 4 | 5 |
| 16. I felt the presence of the sensors on my fingers throughout the whole time. | 1 | 2 | 3 | 4 | 5 |
| 17. I find soundtracks play an important role in how I experience a movie. | 1 | 2 | 3 | 4 | 5 |
| 18. The soundtrack was disturbing my reading. | 1 | 2 | 3 | 4 | 5 |

Extra remarks:

Appendix E

Age:.....

Sex:.....

Occupation:.....

Nationality:.....

Rate your average novel reading (hours per week)

- 0
- 0.1 – 2
- 2.1 – 4
- 4.1 – 6
- 6.1 – 8
- More than 8

Where do you like to read? (eg: living room, garden, train etc.)

.....

What genre do you like to read (you can circle more than one)?

- Crime
- Horror
- Thriller
- Comedy
- Sci-fi
- Romance
- Fiction
- Nonfiction
- Other.....

In what language do you usually read novels?

- English
- Dutch
- Other.....

Rate your level of understanding of the English Language?

- None
- Basic
- Intermediate
- Expert

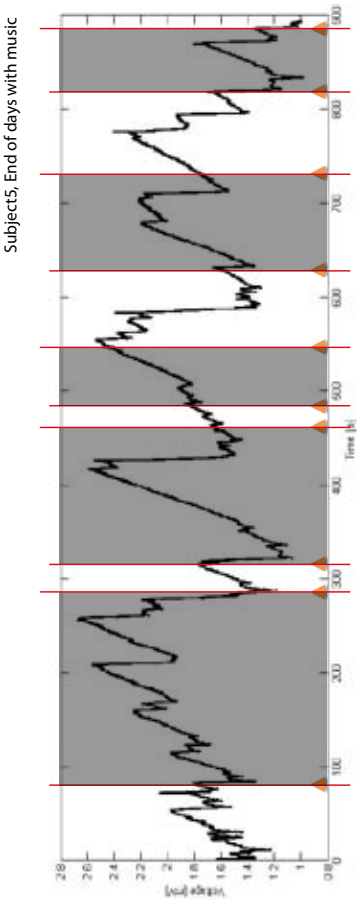
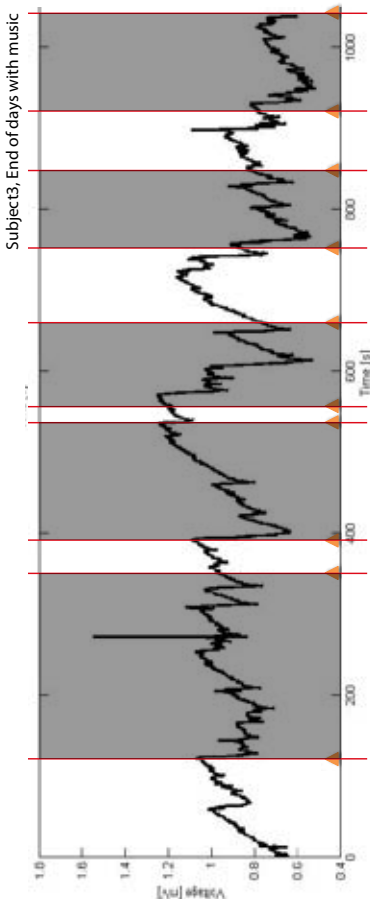
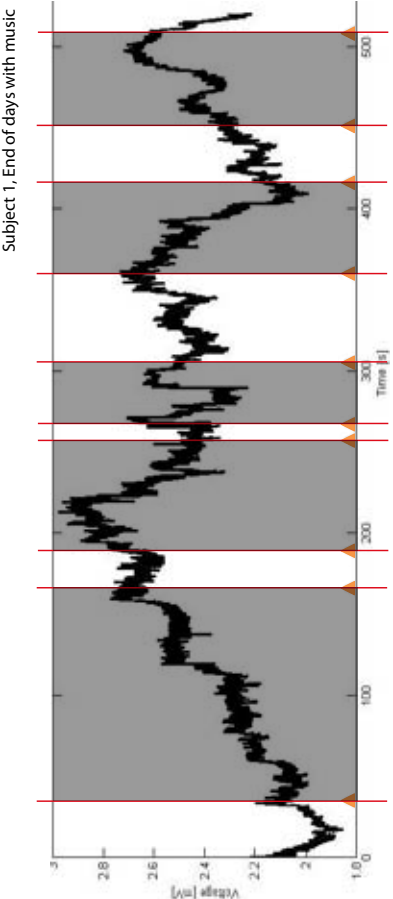
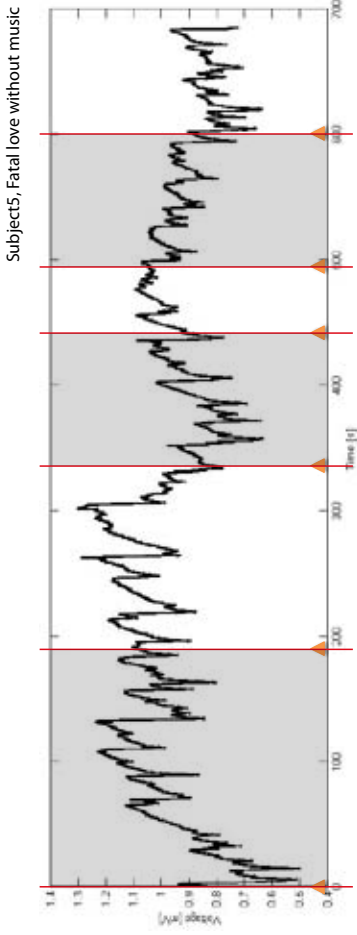
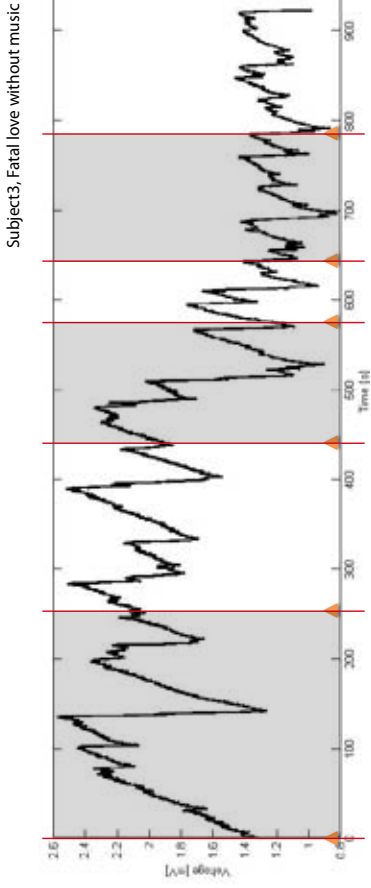
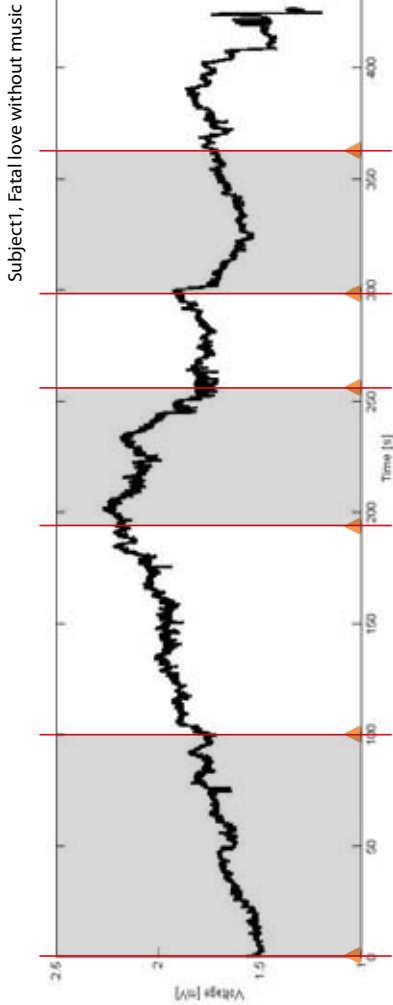
Rate your experience with e-readers?

- Non
- Basic
- Intermediate
- Expert

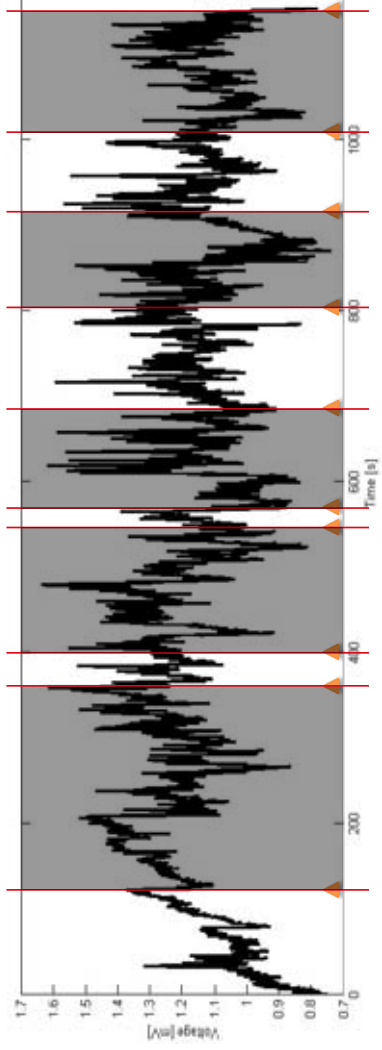
What is the highest educational level you achieved?

- Kinder garden
- High school (Middelbare school)
- MBO
- HBO
- University(WO) Bachelor
- University (WO) Master
- PHD
- Professor

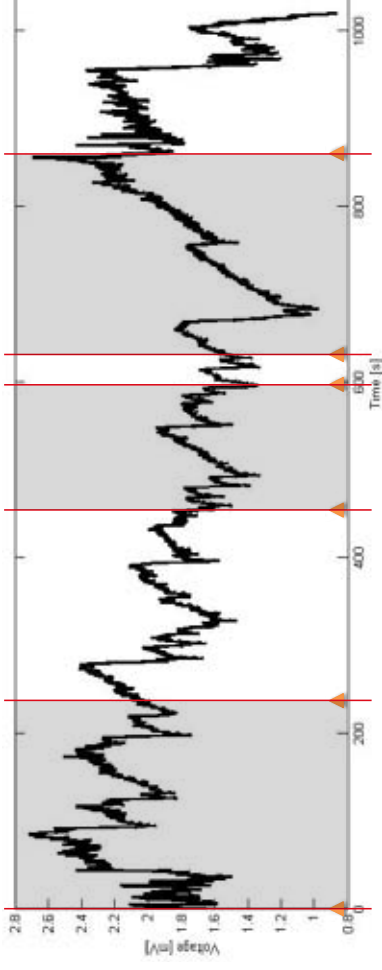
Appendix F



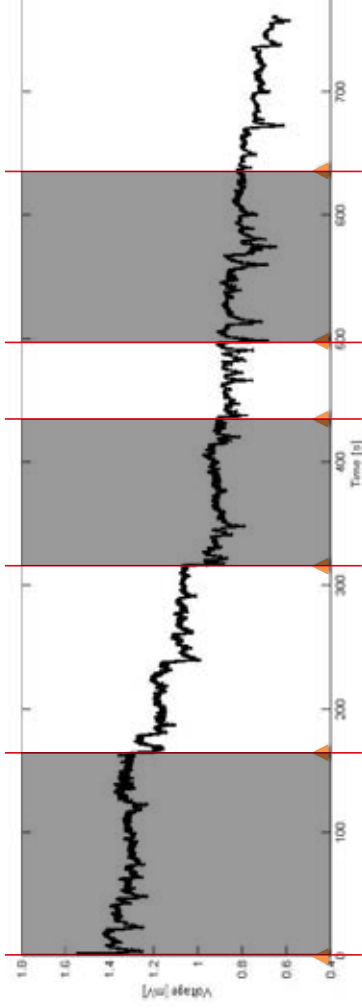
Subject7, End of days with music



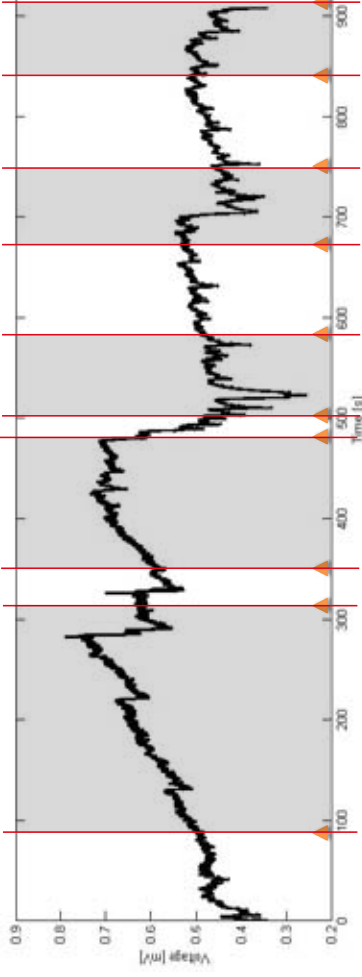
Subject7, Fatal love without music



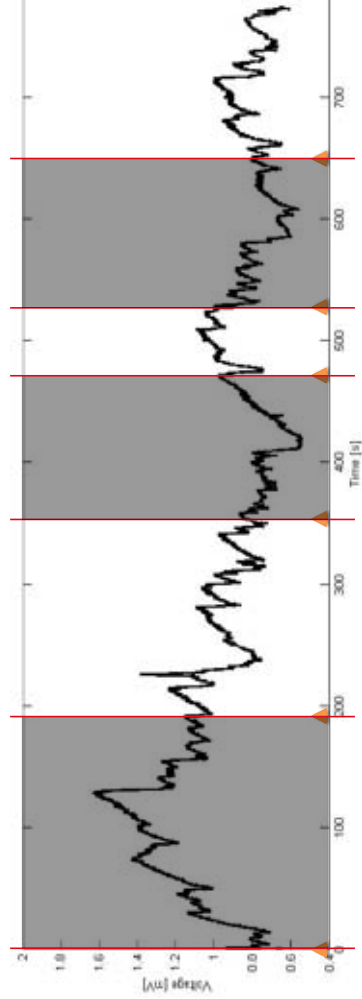
Subject2, Fatal love with music



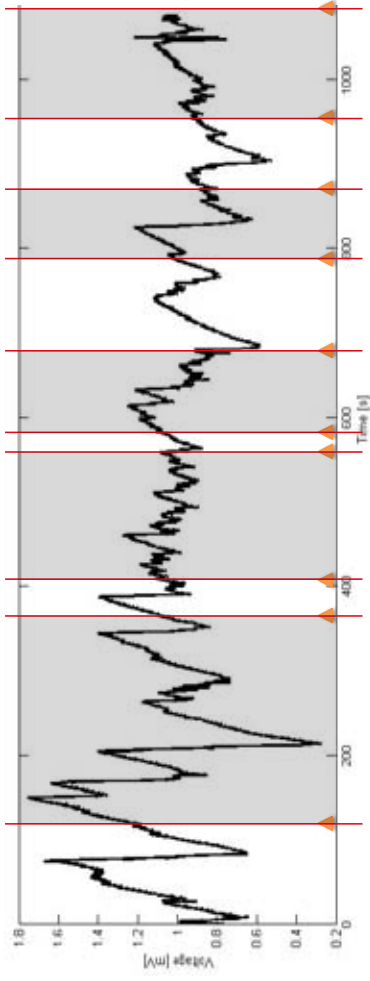
Subject2, End of days without music



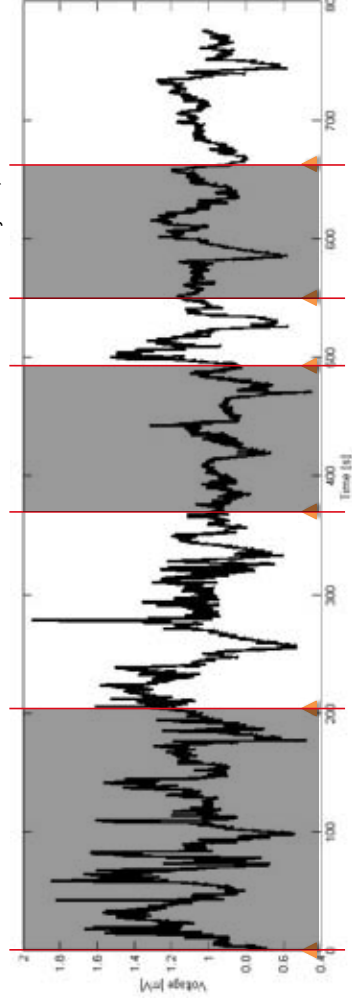
Subject4, Fatal love with music



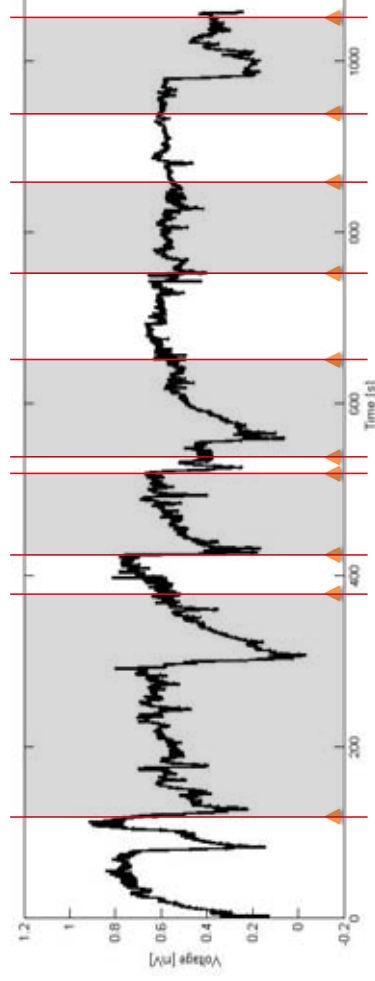
Subject4, End of days without music



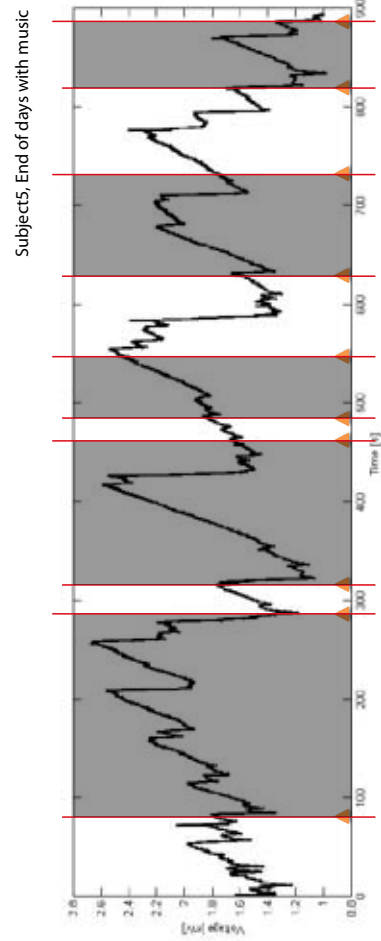
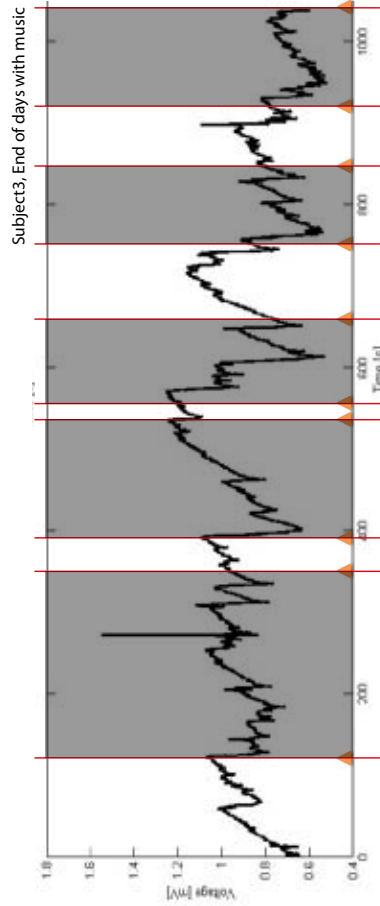
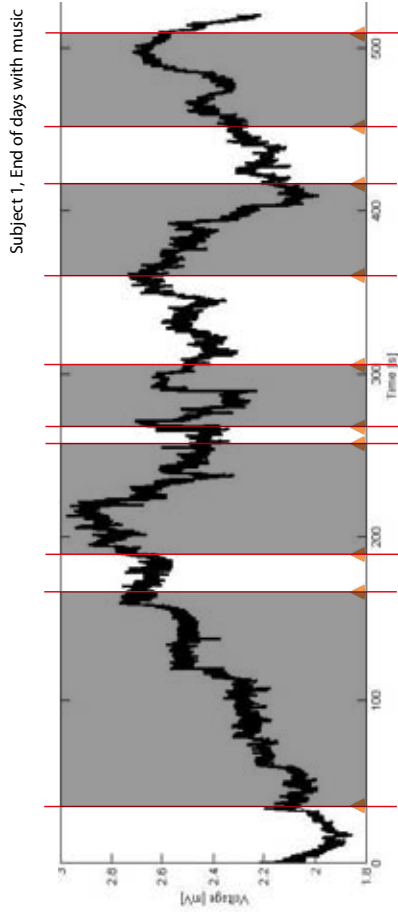
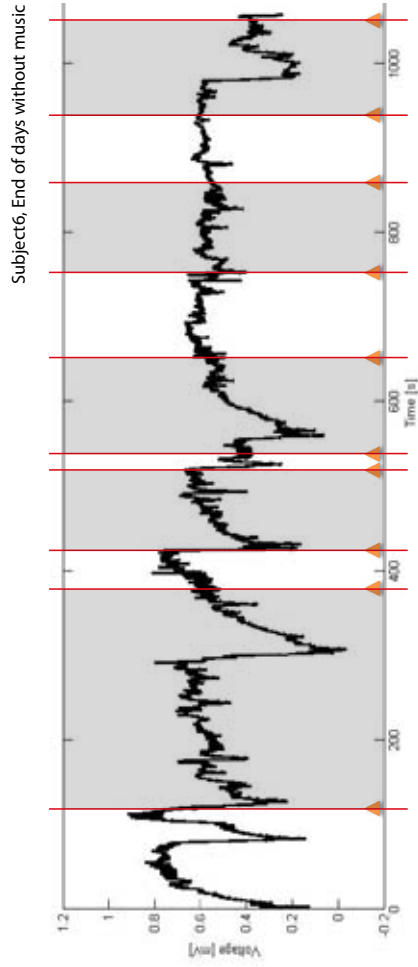
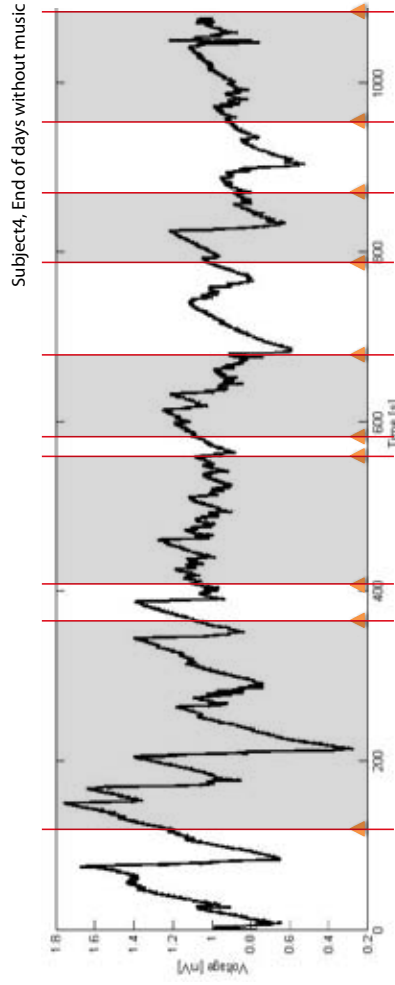
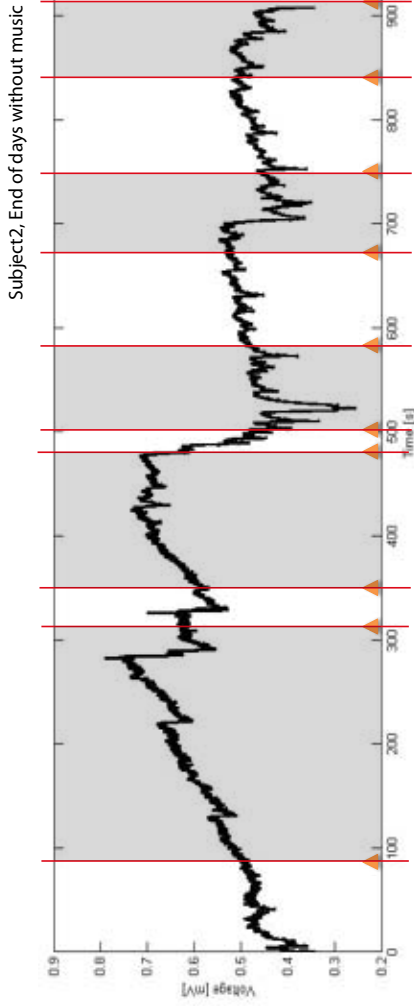
Subject6, Fatal love with music



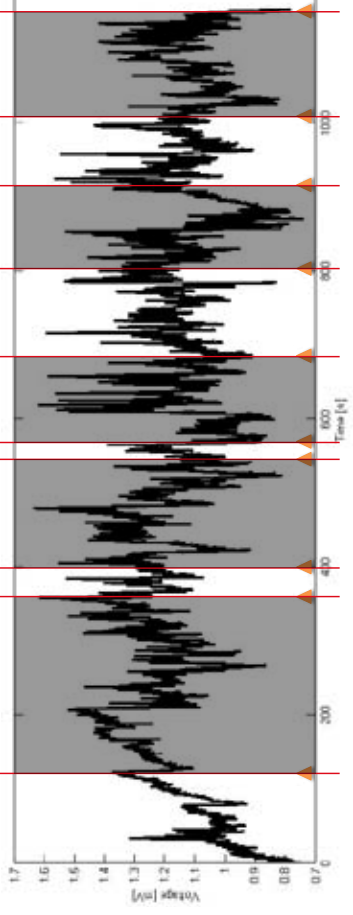
Subject6, End of days without music



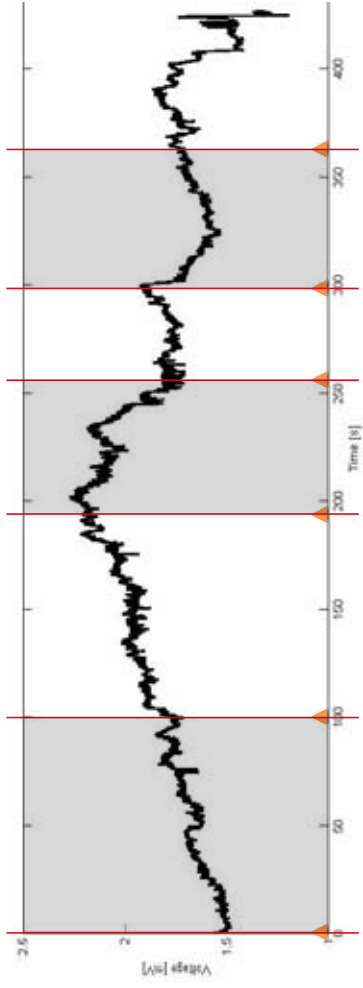
Appendix G



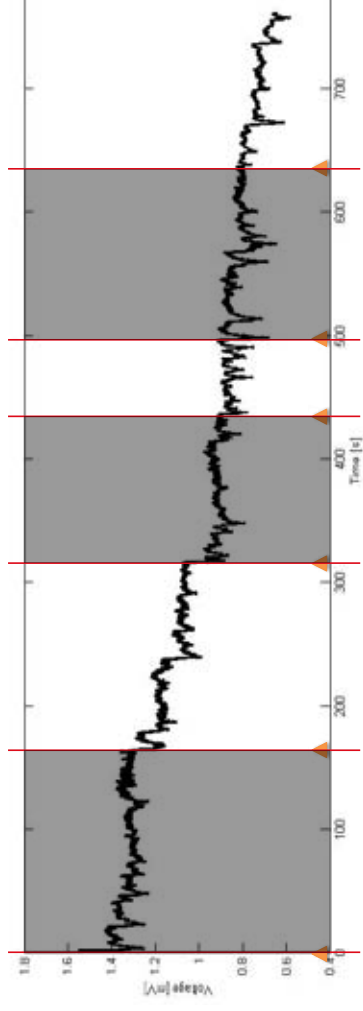
Subject7, End of days with music



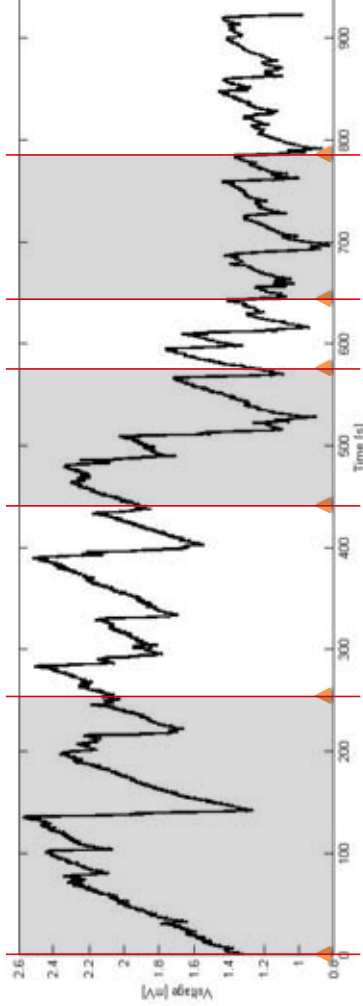
Subject1, Fatal love without music



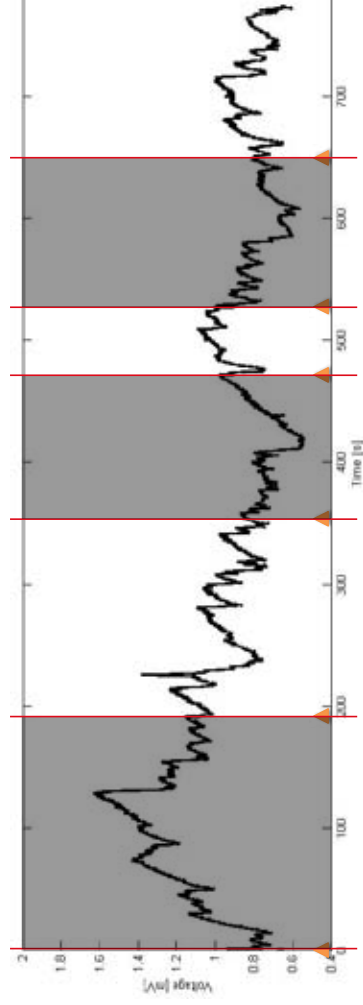
Subject2, Fatal love with music



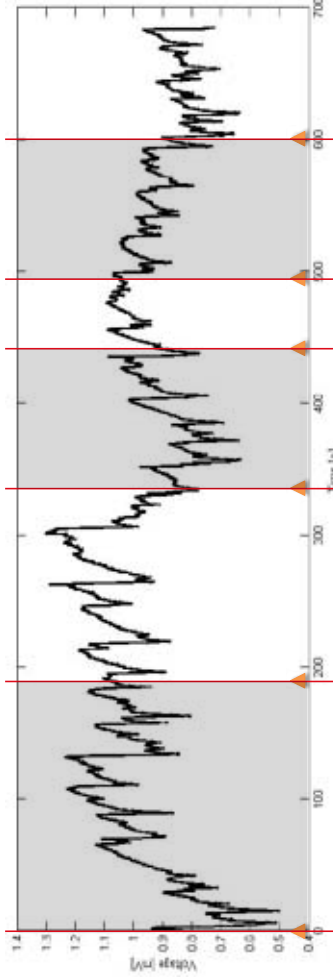
Subject3, Fatal love without music



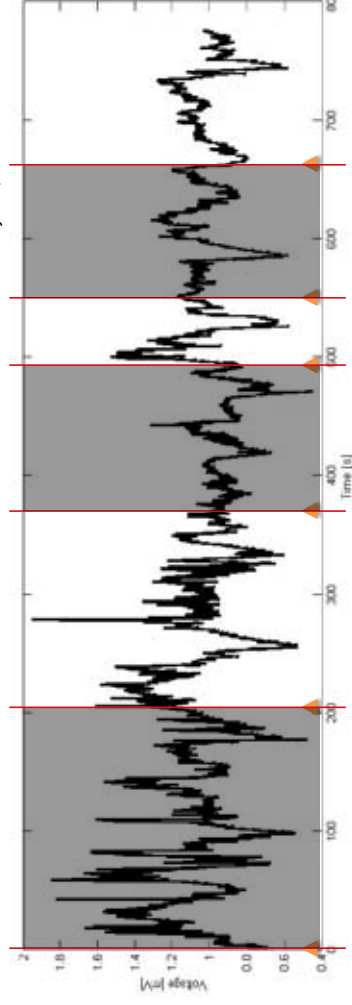
Subject4, Fatal love with music



Subject5, Fatal love without music



Subject6, Fatal love with music



Subject7, Fatal love without music

