



The Soundtrack of the *Sinister* Trailer

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Abstract. In this article, I analyse the soundtrack of the green band trailer for *Sinister* (Scott Derrickson, 2012), combining quantitative methods to analyse the soundtrack with formal analysis. I show that, even though *Sinister* is a narrative about a demon who lives in images, the horror in the soundtrack of this trailer is articulated through the sound design. I describe the structure of the soundtrack and analyse the distribution and organisation of dialogue, the use of different types of sound effects to create a connection between the viewer and the characters onscreen, as well as the use of specific localised sound events to organise attention and to frighten the viewer. I identify two features not previously discussed in relation to quantitative analysis of film soundtracks: an affective event based on reactions to a stimulus and the presence of nonlinear features in the sound envelopes of localised affective events. The sound design of this trailer is consistent with the principles of contemporary sound design in horror cinema, but also demonstrates some variation in its use of sound as a paratext to its parent film.

Keywords: horror cinema, film trailers, sound design, sound effects, computational film analysis.

Trailers are the most common way viewers learn about a film and have the strongest impact on movie choice for audiences (Hixson 2006; Karray and Deberntiz 2017). They exist as paratexts in relation to their reference films and combine cinematic pleasures with the marketing functions of advertising to create audience expectations (Johnston 2009; Gray 2010). Jensen (2014) argues that trailers prioritize genre by emphasising the dominant emotional tone of a film at the expense of narrative to create a prototype of the reference film with heightened emotional intensity and reduced narrative complexity. The emotional engagement of the viewer with a trailer arises through the use of an intensified visual and sonic style that combines discontinuity editing, changes in tempo and image brightness, the use of music, and features of the sound design (e.g. changes in volume, event onset, the use of overlapping sounds – Iida, Goto, Fukuchi and Amasaka 2012).

Deaville and Malkinson write that, of the formal resources available to trailer producers and consumers, sound is “arguably more dynamic, formative, and foregrounded in trailers than in feature film” (2014, 125) and takes on a range of functions: establishing the narrative coherence of the diegesis, creating sonic hooks for the audience through dialogue, maintaining textual continuity in relation to high levels of narrative and visual fragmentation, and creating an “aural continuum” that interweaves music, sound, and silence into a “continuous soundscape” (2014, 124). They argue that the organisation of these soundscapes varies according to genre, but note that there is little research focusing on specific sound practices in particular genres. Despite recent attention to sound design in horror cinema (see, for example, Bullins 2013; Collins 2009; Donnelly 2009; Whittington 2014), studies of sound design in horror film trailers are limited. Redfern (2020) analysed sound in trailers for fifty contemporary Hollywood horror films released between 2011 and 2015, finding that sound is organized in such a way that different elements of the soundtrack perform different functions, with dialogue being primarily responsible for presenting narrative information, while sound creates an emotional experience for the audience, and that the soundtracks feature a range of sonic affective events associated with different types of horror (e.g. surprise, apprehension).

In this article, I analyse the use of sound in the green band trailer for *Sinister* (Scott Derrickson, 2012). By focusing on a single trailer, I adopt a functional approach to style (see Carroll 1998) aiming to account for the sound design of this trailer and how its different elements work in order to achieve the different objectives of a film trailer – the presentation of narrative information to the viewer, the creation of an emotional experience characteristic of the genre, and the marketing of a film. Viewed against the contemporary norms of trailer sound design for this genre set out in Redfern (2020), this detailed analysis of a single trailer allows me to establish the specificity of sound practice for a particular trailer. I combine quantitative methods to analyse and visualize the soundtrack with formal analysis, looking at its large-scale structure and the structure and use of localized affective sound events, the role of dialogue, and the uses of different types of sound effects. The combination of methods makes it possible to go beyond the purely qualitative approach adopted by Deaville and Malkinson (2014), which identifies and defines the functions of relevant audio content in a trailer but tends towards a static description of a soundtrack, to provide a richer understanding of sound design in film trailers in which sound is a dynamic element of film style and where focusing on the shape of the audio envelope (attack, sustain, release, linearity v. non-linearity, etc.) can help us to understand

not only what sounds are present and the functions they fulfil, but also how and why the soundtrack was put together.

Structure

Nine months after the brutal murder of the previous residents, true-crime writer Ellison Oswalt moves his family – wife Tracy, and children Trevor and Ashley – into their new home. In the attic, Ellison discovers a box containing an 8 mm film projector as well as several films apparently depicting a series of grisly murders dating back to the 1960s, associated with child disappearances. Noticing the same pictogram and demonic figure in each film, Ellison consults with a local sheriff's deputy about the murders and is put in contact with Professor Jonas, an expert in occult phenomena. Jonas tells Ellison the demonic figure is Bughuul, a Babylonian deity who inhabits images and who kills entire families, taking one of the children so that he can consume their soul. One night, Ellison finds the missing children seated in the attic watching one of the films, and Bughuul appears on the screen before suddenly appearing in front of Ellison physically. Fearing for the life of his family, Ellison burns the films and moves everyone back to his old house only to re-discover the projector and films in his attic, this time with “extended cut endings” that show the killers in each of the murders were the missing children. Possessed by Bughuul, Ashley uses an axe to remove her father's head and dispatch her mother and brother, using their blood to paint on the walls. Bughuul carries Ashley into the film, and the movie ends with a new film in the projector box waiting for the next family.

The trailer for *Sinister* condenses the above narrative into 144.9 seconds, relating to the viewer the key facts omitting only the fact of the second house move and the final murders, whilst incorporating scenes from this part of the film, with some changes to the order and context of certain scenes. For example, in the trailer, Trevor's night terrors appear to be related to Bughuul and his growing threat to the family when in fact it is an unrelated nightmare that comes near the beginning of the film. Falsification in this trailer is, however, limited and the narrative follows the structure of the film in a straightforward manner without giving away the final twist. As *Sinister* is a horror film, the dominant emotional tone is fear, but this trailer employs a limited set of stylistic devices to emotionally affect the viewer. There is no gore or physical violence. The hanging of the previous occupants of the house is featured but kept largely off-screen (we see the whole event in the film); and though we see a car explode into flame,

we are unaware that a family is burning to death inside. We do not see Ashley decapitate her father; nor do we see the paintings she daubs on the wall in her family's blood. In the absence of many of the horrific stylistic devices used by this film, sound takes on the primary role of creating fear in the audience.

To visualize and analyse its structure and key features, I downloaded the trailer for *Sinister*¹ from YouTube as an MP4 file and removed the MPAA rating certificate from the beginning of the video file. I exported the soundtrack as a stereo 16-bit PCM wave file sampled at 48 kHz (see Figure 1.A). The soundtrack was loaded into Python (v.3.7.6) and analysed using the librosa package (v0.7.2; McFee, et al.: 2020). The short-time Fourier transform (STFT) is a common method used in time-frequency analysis to analyse non-stationary signals whose energy distributions vary with time and frequency (Goodwin 2008). This is visualized as a spectrogram with time on the horizontal axis, frequency on the vertical axis, and amplitude as colour. Figure 1.B presents the log amplitude spectrogram of the *Sinister* trailer's soundtrack remixed to mono at 48 kHz using librosa's `librosa.core.to_mono` module, which averages the two channels of the original stereo file. This step is necessary to produce the STFT and as there are only small differences between the left and right channels of the stereo sound file, averaging the channels does not have an impact on the analysis. I calculated the normalized aggregated power envelope by summing the amplitude values in the original STFT and dividing by the sum to normalize the envelope to a unit area (see Cortopassi 2006). I calculated the power envelope using the original STFT rather than the log amplitude spectrogram in Figure 1.B because, while summing the spectra in the log amplitude spectrogram produces the same time contour plot, the resulting plot is rendered with a linear y-axis that is potentially misleading. Redfern (n. d.) provides a detailed discussion of the methods used here along with code examples for audio analysis in Python. Figure 1.C presents the normalized aggregated power envelope with a fitted loess trendline.

The normalized aggregated power envelope (Figure 1.C) shows the trailer's soundtrack has three sections. The first section (0.0–50.7 seconds) front-loads narrative content to establish the premise of the film, define key locations, and introduce the principal characters. During this first section of the trailer, silence is a structural feature marking transitions in time. The silence at 8.9 s occurs after the news report that functions as false voice over narration describing the murder of the previous occupants of the Oswalds' house and accompanies a title card informing the viewer that it is now "9 months later." The aggregated power

1 See: <https://www.youtube.com/watch?v=rnDwBSVKgsM>. Last accessed 22. 09. 2020.

envelope after this silence shows no overall trend until 50.7 seconds when Ellison sets out to investigate the films of the murders he has discovered. The main part of the trailer (50.7–132.6 seconds) sees Ellison deepen his interest in the mysteries of the previous families and his growing obsession impact on his own family. Here the dominant emotional tone of the trailer takes over from narrative and there is an overall trend of increasing power to the peak at 132.6 seconds. In this section of the trailer, silence functions emotionally contributing to the creation of a state of fear in the viewer (this will be discussed below). The final part of the trailer runs from 132.6 to 144.9 seconds as the trailer plays out over title cards announcing the film's title, advertising the film's release social media information and, maintaining the motif from the opening of the trailer, the film of the trailer burns out. In this section the power of the soundtrack decreases rapidly.

Dialogue

The function of dialogue in the trailer is to unambiguously convey information to the viewer, establishing background information for the viewer, identifying characters, presenting narrative motivation, and narrative explication.

To transcribe and produce exact timings for dialogue, I uploaded the soundtrack as a mono 16-bit PCM wave file to Amazon Transcribe, a cloud-based automatic speech recognition service provided by Amazon Web Services, and then made final corrections to the data by hand, where words were incorrectly transcribed or missed. The dialogue in the trailer comprises 208 words in 33 sentences totalling 59.8 seconds, or 41.2% of the running time. Dialogue is spoken by seven different characters, though only two of those account for more than 10% of the dialogue. Ellison accounts for 103 words. Professor Jonas's function within the film and the trailer is narrative exposition, explaining the mythology of Bughuul, and as such has 47 words of dialogue. No other character has more than 19 words in total.

Figure 2 presents the distribution of dialogue in the trailer, which falls into three main clusters that convey different types of information to the viewer at different stages. The trailer opens with the off-screen voice of a news reporter, who establishes the key location of the film as the home of a family that was previously murdered. This is used as false narration to set up the central mystery of the film before we move forward several months. The first dialogue cluster (11.6–23.4 seconds) then establishes why the Oswalts have moved into their new home and sets up Ellison's job as a writer. Some characters (the sheriff, Trevor, Tracy) only function in the trailer to ask questions Ellison can respond to.

This results in a question-answer structure repeated throughout the trailer, with one character asking a question followed by a series of sentences that may be taken from different points in the film to provide a response that clarifies some aspect of the film. For example, the dialogue exchange comprising the second cluster (50.8–68.6 seconds) is triggered by the sheriff's question, which is then interpreted by Ellison and clarified by Professor Jonas:

Sheriff: Do you think these are serial murders?

Ellison: I don't know. First one I found dates back to the sixties. The only link between all these cases is the symbol.

Professor Jonas: The symbol is associated with a pagan deity named Bughuul. He consumes the souls of human children.

The final cluster (90.5–100.9 seconds) is organized thematically around the disappearance of children, beginning with Professor Jonas telling us that children are particularly vulnerable to Bughuul and moves straight into a dialogue exchange between Ellison, Ashley, and Tracy about Stephanie, one of the house's previous occupants, linking Ashley's strange behaviour with the missing girl. In this cluster, Ellison asks a question for the first time as things start to spin out of his control.

Alongside these clusters, there are also periods in the trailer where dialogue is sparse. Between the first and second sentence clusters there are only three sentences, in which Ellison's dialogue clarifies for the viewer what he has found in the attic and identifies the family in the home movie as he talks to himself. Similarly, between clusters two and three we have dialogue from Ellison commenting on the significance of his discovery ("I've never been onto something this big before") and Professor Jonas that contextualize the affective events that startle the viewer (see below). There is no dialogue in the final 27.3 seconds of the trailer as the sound design takes over to build towards an emotional climax.

Sound Design

The dominant theme of the film – namely, that dangerous things live in images – is, to a significant extent, articulated through the sound design of its trailer. The use of hard and Foley sound effects located within the narrative world of the film and the off-screen effects and designed sounds (Winters 2017) repeatedly draw attention to this idea at a meta-narrative level, linking the idea of watching films in two contexts: the horrific films that become Ellison's obsession and the viewer in the theatre.

The trailer presents itself to the viewer as a film. Against the flickering images of the production company's logo, the first sound heard – off-screen – is of a film projector starting up, placing the viewer in a position similar to Ellison's, who finds himself fascinated by the mysterious films he discovers in his attic: we are watching one of the films Bughuul inhabits and we are in danger. If only we understood our situation at this stage of the trailer, perhaps we would avert our eyes. The soundtrack uses designed sounds to reinforce this theme at key points in the trailer. Glitch effects – as though the trailer were being watched on videotape, at 3.4 and 5.0 seconds during the news report on the previous occupants of the Oswalts' new home – are associated with the intrusion of shots just a few frames in length into the flow of the trailer as though something were trying to break out of the trailer. The use of title cards during the trailer for promotional or emotional effect is accompanied by sound effects linked to viewing films. At 28.0 seconds, the white noise of an empty soundtrack as film runs through a projector is the only sound heard with the title card linking the producers to their earlier films. At 89.6 seconds the sound of a running projector plays under the title card confirming that once you have seen Bughuul “nothing can save you” and continues into the next shot as we see the projector in the foreground and we see Ashley watching one of the mysterious films. The trans-diegetic nature of the sound effects and the use of “you” in the title card, which may or may not be addressed directly to the viewer, blurs the boundaries between the space of the viewer in the cinema and the onscreen diegetic world to create uncertainty as to whether this trailer describes a set of events or is an imminent threat to the audience. The glitch effects return at 92.9 and 94.0 s and are again associated with momentary shots of leader film that interrupt the narrative flow as Ashley's behaviour becomes strange now that she is taken over by Bughuul. The trailer brings us back to this idea of watching a film in its final moments as the sound of the film projector recurs over the film's promotional title cards before the image and sound of a film burning out brings the trailer to a close allowing the viewer some relief.

The use of hard sound effects and foley sound effects in the trailer is limited to the theme of horrors lurking in image technologies. When Ellison handles the 8 mm films he has discovered in his attic – sorting through the film cans, loading and running the projector, burning the films – or when he sets up a digital projector and opens a QuickTime movie file to view a digitized version, his actions are accompanied with synchronized sounds that heighten the realism of the trailer. These sounds draw attention to the importance of images and image technologies, because these types of effects do not occur in any other context in the trailer – doors opening and closing make no noise; items being moved as the Oswalts move

into their new home are silent; Ellison's typing makes no sound when using the computer; and there are no footsteps as characters move around locations. The use of sound effects is limited specifically to the role of images as a source of horror.

This features in other elements of the sound design, too. Although *Sinister* is a film about a demonic spirit who uses images as portals to harvest the souls of children, it is through sound that Bughuul is brought to the Oswalts' (and the viewer's) world. These are indicated in Figure 1.B as features B.1, B.2, and B.3. There is a tone at ~1.62 kHz at 26 seconds, when Ellison discovers the box containing the projector and the films in the attic, and this recurs at 35.2 seconds, when he takes the first film from the box, presaging the arrival of the monster. Once this imminent threat arrives, and Bughuul features on screen for the first time, all other sounds drop away as a pure tone at 2.18 kHz dominates the soundtrack from 71.0 to 74.0 seconds. These are designed sounds that do not exist within the narrative world of the trailer. Alongside this thematic use of sound design, the trailer also uses designed sounds to create the overall atmosphere of the trailer. There is no music in the trailer and – in its absence – sound is used throughout to fulfil the functions traditionally associated with music. Low frequency drones run under dialogue to create suspense in the absence of underscore as we hear, for example, during the opening news report or running under the constructed family discussion about Ellison's new book that comprise the first, narrative section of the trailer. These sounds function structurally to impose unity on sequences created from different parts of the film in which there is no direct relationship between soundtrack and image or in which the dialogue is cut together from different parts of the film. Low frequency impacts draw attention to key pieces of information, such as at 40.7 s when one of the victim families appears on screen for the first time. As noted above, moments of horror, such as the images of this family's murder (at 46.5 s), are not shown on screen and are represented visually by Ellison's reactions to these images and sonically by distorted sounds that use a much broader range of frequencies. There is a clear distinction between the prolonged use of low frequencies in the sub-bass and bass ranges (0.02–0.25 kHz) to produce a fearful atmosphere that emotionally primes the viewer and the momentary use of a wider range of frequencies (up to 15 kHz) to produce intense and specific instances of terror.

Affective Events

The envelope of a sound event comprises three stages: the initial onset and increase in energy of the sound until a desired level of amplitude is reached

(*attack*); the maintenance of that level for a desired period of time (*sustain*); and the fading of the sound from its sustained level until it is no longer perceivable (*release*). Moncrieff, Dorai, and Venkatesh (2002) identified four specific envelopes associated with particular emotional states in horror cinema (Types 1–4). Looking at the sound events in the *Sinister* trailer we can add a fifth type of event with a rapid attack and long release stage where the affect is dominated by the viewer’s response to a horrifying stimulus rather than anticipation of that stimulus and which serves to maintain attention during the presentation of key narrative and marketing information. Table 1 summarizes the shapes and affects associated with these envelopes.

The *Sinister* trailer features twelve sound events that match the envelopes described in Table 1. These events serve two functions within the trailer: engaging and maintaining the viewer’s *attention* with the film’s narrative and its marketing information; and engaging the viewer *emotionally* to create a frightening experience. There is also one occasion where these functions are combined. Event C.5 uses a stutter edit over low frequency rhythmic beats increasing in power to produce a riser emphasizing the camera’s movement as our attention is focused on to an image of Bughuul on Ellison’s computer screen so that we see the demon move in the image. Table 2 summaries these events, which are labelled C.1 through C.12 in Figure 1.C.

The attentional function operates in the first and last events in the trailer. In the first Type 5 event in the trailer (C.1) the step edge attack occurs when Bughuul’s symbol (at this stage unknown to the viewer) interrupts a single shot of a house and precedes the false voice over narration of the news report, and the release stage of the event ties together images of the family and the house for which viewers have yet to define a context in which they can make sense of this information. The Type 5 event at 132.7 (C.11) provides the ultimate climax to the trailer as Bughuul suddenly appears in the foreground, invading Ellison’s (and our) personal space to provide the ultimate shock in its sudden onset, after which emotional engagement gives way to marketing as the release stage plays over the trailer’s marketing title cards that reveal the title of the film and its tag line (“Have you seen him?”) and social media information (Facebook site, etc.) to maintain viewers’ engagement with the primary function of the trailer – selling the film. This is then followed by a Type 1 event (C.12), re-engaging the viewer with the marketing information on screen as the title card “Coming soon” burns out to finally bring the trailer to an end. Given the diverse functions of the trailer, the startle event (Baird 2000) is as much about information as it is about fear as

these events attract attention through their step edge attack, their sudden bursts of sound triggering our bottom-up attention system without requiring us to be already orientated towards a stimulus (Kim et al. 2014), and their long release stage maintaining that attention to the key information the viewer is expected to acquire. Both C.1 and C.11 events exhibit approximately exponential release stages as the sound energy in these sections of the soundtrack declines nonlinearly. Moncrieff, Dorai, and Venkatesh (2002) did not note this nonlinearity in their discussion of affective events in horror soundtracks.

The uneven distribution of affective events maintains the clear distinction between narrative and emotion in the structure of the trailer. Other than event C.1, which calls the viewer to attend to the narrative information in the trailer, there are no affective events until Ellison sees for the first time a murder in the home movies (event C.2). This event marks the transition point between the first and second sections of the trailer, so that the establishment of the diegetic world of the film and the articulation of the dominant emotional tone of the trailer are discrete. Seven of the affective events in the movie occur in the final 45 seconds of the trailer as the viewer is moved through a sequence of shocks, and narrative information becomes increasingly fragmented and incoherent as the Oswalts react to their situation.

Event C.2 is predicated on the hanging of the previous occupants of the house, but this murder is not shown in the trailer and a cut to Ellison's shocked reaction as he recoils from the screen means the response of the viewer is to Ellison's reaction rather than to the horrifying event itself. This association of affective sound events with Ellison's reactions rather than the causes of those reactions recurs throughout the trailer. The onset of the attack of event C.4 is synchronized to the appearance of Bughuul in the garden of the Oswalts' home, but the peak in the envelope and the release occurs with the next shot as Ellison recoils from the window alarmed by what he has just seen. Other events (C.6, C.7, and C.8) are based around Ellison's reactions to the continuing intrusion of Bughuul into the family home as he comes to realize how much danger he and his family now face.

Affective events also occur in combination. The climax of the trailer builds through the sequencing of three events (C.9, C.10, and C.11). Event C.9 terminates the narrative progression of the trailer with a bass drop synchronized to another interruption of leader film into the image flow of the trailer. The Type 4 event at 119.0s (C.10) immediately follows over the course of a sequence of shots of film flicking through a projector, Ellison cowering in fear, an axe dragged across the floor, and Bughuul carrying a child into his realm that have no causal connection and are further fragmented by black frames. At this point the viewers are unable

to piece together what is happening as the narrative of the trailer breaks down and they are left only with fear. Combining Ellison's distorted screams with low frequency rhythmic booms and the repetitive sound of the loose film flicking through the projector, the resulting effect is a non-linear ticking riser that builds the tension of the trailer to a climax with an exponential increase in power. This climax is, however, delayed as the power of the soundtrack drops at 130.9 s for 1.8 seconds before the onset of event C.12. This gap in the soundtrack between these two events is a *valley of uncertainty* in which the apprehension of the viewer is extended by the delay of the trailer's climax. In contrast to the first section of the trailer when its function was structural, silence here functions emotionally to create a pause in the soundtrack where the viewer must hesitate before reacting.

Conclusion

Over the course of its two minutes and 25 seconds duration, the trailer for *Sinister* must establish the narrative of the film, introduce the main characters, and – above all – frighten the viewer. It must also communicate essential marketing information. Sound is fundamental to the effectiveness of this trailer in all these areas. The use of sound in this trailer is particularly interesting because sound is so dominant in a trailer for a film based in visual horror. While the trailer does create a monomaniac emotional prototype of the film, it is evident that narrative clarity is not sacrificed for emotional engagement, and that the soundtrack is organized in such a way that different functions are handled by different components and different segments of the soundtrack. Dialogue bears responsibility for what we know and sound design for what we feel. The structure of the soundtrack also shows a clear distinction between the different goals of the trailer, with a three-part structure in which a particular function dominates each part: narrative, emotional engagement, and marketing. This is consistent with the three-part structure of contemporary horror film trailers identified in Redfern (2020). Even though the theme of the film is that demons live in images, the horror in the trailer is articulated through the sound design, combining extra-diegetic designed sounds with hard and foley sound effects to reinforce the theme of watching films that link the viewer's position in the cinema to the characters' on the screen. The trailer also uses tones at specific frequencies in the absence of music to anticipate and introduce the film's monster. Affective events create specific moments of fear in a manner consistent with their use in horror feature films, but are also used in this trailer to organize the attention of the viewer to emphasize narrative and marketing information. In analysing the

structure of localized sound events, I also identified a fifth type of sound event not previously discussed in relation to quantitative analysis of film soundtracks and the use of nonlinear features as part of the sound design of the trailer. Overall, the sound design of this trailer is consistent with the principles of contemporary sound design in horror cinema, but also demonstrates some variation in its use of sound as a paratext to its parent film.

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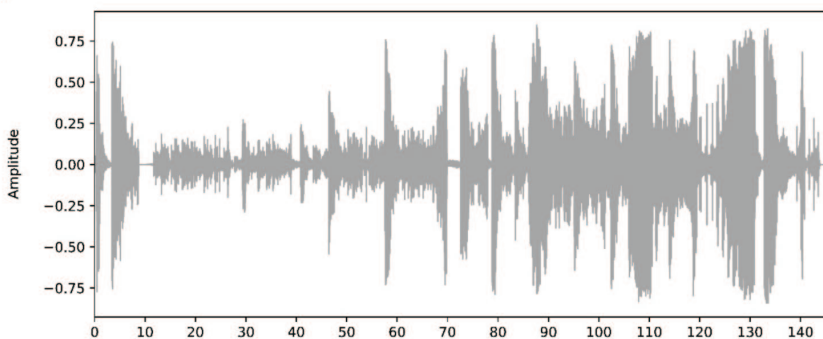
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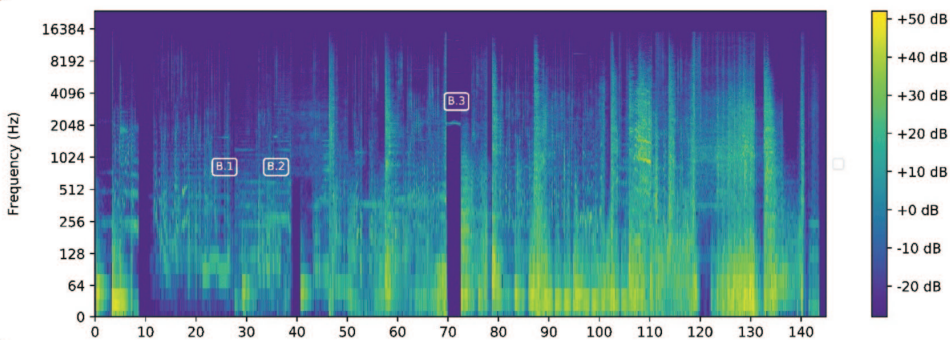
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Figure 1. The soundtrack of the trailer for *Sinister* (Scott Derrickson, 2012): A. The amplitude envelope of the waveform of the signal as a 16-bit stereo PCM wave sampled at 48 kHz. B. The log-amplitude spectrogram of the short-time Fourier transform of the waveform averaged to mono at 48 kHz, with a Hann window of length 2048 and a hop length of 512. C. The normalized aggregated power envelope, with fitted loess trendline.

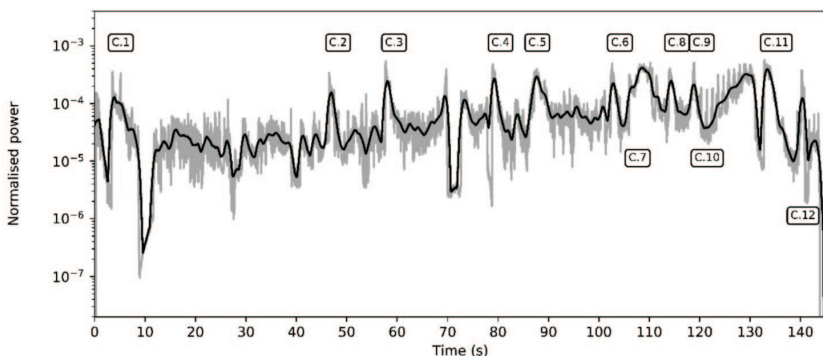
A



B



C



Event	Onset (s)	Type	Description
C.8	113.7	1	Ellison reacts on seeing Bughuul's symbol daubed in blood on the walls of his home
C.9	118.6	1	Bass drop over leader footage as the Oswalts flee their home
C.10	119.0	4	Non-linear ticking riser builds as Ellison climbs into the attic a final time to find the missing children watching a film with Bughuul on screen
C.11	132.7	5	Bughuul disappears from the screen and suddenly re-appears in the foreground followed by the film's title card and social media information
C.12	140.0	1	Late sting over "Coming soon" title card
